

**MARYLAND DEPARTMENT OF  
TRANSPORTATION**

**Office of Planning**

**Disadvantaged Business Enterprise  
Overall Goal Methodology for  
Federal Fiscal Years 2017 through 2019**

**January 2018**

The Maryland Department of Transportation – Office of Planning (“MDOT”) determined the Disadvantaged Business Enterprise (“DBE”) participation goals for Federal Fiscal Years (“FFY”) 2017, 2018, and 2019 in accordance with the procedures specified in 49 C.F.R. § 26.45. Separate goals are also determined for each of MDOT’s United States Department of Transportation (“USDOT”) assisted transportation business units: the Maryland Transit Administration (MTA), Maryland State Highway Administration (SHA) and the Maryland Aviation Administration (MAA).

## **STEP 1: DETERMINE BASELINE AVAILABILITY**

In Step 1 of the goal-setting process, MDOT determined the baseline availability in accordance with 49 C.F.R. § 26.45(c)(3) using data derived from the 2013 *Disadvantaged Business Enterprise Disparity Study* (“NERA 2013 DBE Study” - Attachment 1), which examined USDOT-assisted transportation projects administered by the MTA, SHA, and MAA. The NERA 2013 DBE Study is a companion to a statewide disparity study, *Business Disparities in Maryland Market Area* (NERA 2017 Statewide Study – Attachment 2) completed in February 2017. The NERA 2017 Statewide Study addresses all areas of State contracting and is relevant to Step 2 of the federal goal-setting methodology. These are the most recent studies of State and USDOT-assisted contracting available for Maryland.<sup>1</sup> A new DBE study is underway, and expected to be finalized in time to be available for the next 3-year goal setting process.

Specifically, for Step 1, MDOT collected and analyzed the budgets for the Unified Planning Work Programs (UPWPs) of each of the Metropolitan Planning Organizations (MPOs). To determine the opportunities for DBE participation, MDOT established which activities or dollars would be used for in-house staff salaries and which would be performed through procurement contracts. Only the dollars for procurement activity were analyzed for the purposes of goal setting. After analyzing the descriptions of the type of work to be performed by the MPO’s the *services* market was the most analogous the type of work to be performed. Using the descriptions of work provided by the MPO’s, the procurement activity was assigned NAICS codes and the corresponding availability in Maryland’s marketplace was determined using the NERA 2013 DBE Study. MDOT then utilized FTA’s Weighted Base Figure worksheet to calculate Base Availability Figure of 40.8%. (Attachment 3 – FTA Worksheet).

In Step 2 of the goal-setting process, MDOT considered, in accordance with 49 C.F.R. § 26.45(d), whether an adjustment of the baseline availability figure was needed by evaluating past DBE participation, current disparity studies and other relevant evidence. After careful consideration of all available evidence and the underlying legal principles, MDOT determined there was a need to adjust the MDOT Step 1 baseline availability figure to ensure that the overall aspirational goal would remedy discrimination, limit the burden on non-program participants, and reflect MDOT’s anticipated contracting over the next three years. MDOT is adopting this measure as its Step 1 baseline availability for FFY 2017 through 2019.

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<sup>1</sup> Both studies were performed by NERA Economic Consulting (“NERA”).

## STEP 2: ADJUSTMENT METHODOLOGY FOR DBE GOALS

According to 49 C.F.R. Part 26, recipients of USDOT assistance must consider whether an adjustment to the baseline availability figure would be necessary to approximate the amount of DBE availability that would be expected in a race-neutral market. After careful consideration of all available evidence and the underlying legal principles, MDOT determined there was a need to adjust the MTA Step 1 baseline goal to ensure that the overall aspirational goal would remedy discrimination and limit the burden on non-program participants.

The overall goal required by Part 26 is a prospective goal and is to be based on evidence of the availability of DBEs. 49 C.F.R. §26.45(b). In Step 2, however, Part 26 requires that recipients consider the current capacity of DBEs to perform work in the DBE Program, as measured by past performance. 49 C.F.R. §26.45(d)(1)(i).

**Past Participation.** As shown below in Table 2, the Step 1 baseline availability figure of 40.8 percent is higher than the median DBE participation level of 22.5 % achieved between 2014 and 2017.

Despite ample statistical evidence that might support a goal of 40 percent or perhaps even higher, MDOT also seeks to ensure that the DBE program is very narrowly tailored so that it strictly limits the burden on non-program participants. Thus, MDOT's objective is to establish goals that are not only grounded in statistical data, but also reflect a balanced approach to both eliminating discrimination and being as fair as possible to all contractors that do business with MDOT. As such, averaging MDOT's Step 1 figure of 40.8 percent with the median past participation of 22.5 percent results in 31.7 percent.

**Table 2. DBE Participation in Previous Years.**

<i><b>Federal Fiscal Year</b></i>	<i><b>DBE Participation</b></i>
2014	20.8 %
2015	16.2 %
2016	37.3 %
2017	24.2 %
<b>FFY 14-17 Median Participation</b>	<b>22.5 %</b>

Therefore, a Step 2 adjustment will be made, and the final FFY 2017 through 2019 overall DBE goal for MDOT is 31.7 %.

***Estimate of Race-Neutral Participation.*** MDOT will meet the maximum feasible portion of its overall aspirational goal through these race-neutral measures. As there was no formal overall DBE goal established for MDOT, to estimate the portions of the goal to be met through race-neutral measures, MDOT determined that it would be reasonable to utilize data from Maryland Transit Administration (MTA). As such, the most recent available data on past race-neutral DBE participation of the MTA was used to develop the race-neutral portion of the goal. MTA's median race-neutral utilization of DBEs between FFY 2012 and FFY 2016 was 5.0 %.

**Table 3. MDOT-MTA's Most Recent Race-Neutral DBE Utilization FFY 2012 - 2016**

<i><b>Federal Fiscal Year</b></i>	<i><b>Race-Neutral DBE Utilization</b></i>
2012	3.7%
2013	1.7%
2014	26.0%
2015	9.1%
2016	5.0%
<b>FFY 12-16 Median Race-Neutral Utilization</b>	<b>5.0%</b>

As both the DBE regulations and the underlying constitutional principles that apply to the DBE program, emphasize the use of race-neutral efforts to eliminate discrimination., MDOT will set a race-neutral goal of 5.0 % for the next three years

The differences between the race-neutral percentage and the Step 2 availability is the race conscious component of the DBE goal. The breakdown of race-conscious and race-neutral DBE goals appears below in Table 4.

**Table 4. FFY 2017-2019 Race-conscious and race neutral goals.**

<b>Race-conscious</b>	<b>Race-neutral</b>	<b>Total</b>
26.7 %	5.0 %	31.7 %

## **PUBLIC PARTICIPATION**

MDOT satisfied the public consultation requirements of 49 C.F.R. § 26.45(g)(1) through a 2017 electronic survey and public consultation meetings that gave interested parties an opportunity to provide feedback on several areas including:

- DBE/non-DBE availability in the local market;

- Effects of discrimination on opportunities for DBEs; and
- Suggestions regarding information that should be considered when setting overall goals.

The feedback received from participants in the survey and during the sessions was similar. While most participants believed that the minority business program goals for the State program were sufficient, a few asserted that both the goals should be increased as a way to increase available contract opportunities. In both sessions, discussions focused on programmatic improvements and efficiencies that the stakeholders would like implemented. Suggestions included an expansion in the marketing of opportunities as a way to connect prime and subcontractor communities; diversifying and expanding subcontracting opportunities in industries outside of construction; creating additional classifications of economic standards in certain industries, which could allow for more prime contracting opportunities for those minority firms on the cusp of graduating from the program. MDOT took all responses and comments into consideration when finalizing the herein proposed DBE goal. Based on its review of this data, MDOT determined that there was no need to make any additional adjustments to the Step 2 goal set forth above.

Pursuant to 49 C.F.R. § 26.45(g)(ii), MDOT published a notice announcing the proposed overall goal before submitting to the Federal Transit Administration. The notice was posted on MDOT's official website. If the proposed goal changes following review by the operating administration, the revised goal will be posted on MDOT's official website.



# **Disadvantaged Business Enterprise Disparity Study: Volume I**

Prepared for the Maryland Department of  
Transportation

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# Executive Summary

## A. Introduction

During the 2006 Session of the Maryland General Assembly, Senate Bill 884 and House Bill 869 reenacted the State of Maryland's Minority Business Enterprise Program ("MBE Program") for five years, until July 1, 2011. These two bills also provided for the State's certification agency, the Maryland Department of Transportation (MDOT), to commission a Study of the Minority Business Enterprise ("MBE") program to ensure compliance with constitutional mandates and programmatic best practices.

MDOT commissioned a team led by NERA Economic Consulting to conduct the Study. The results of NERA's Study, *The State of Minority- and Women-Owned Business Enterprise: Evidence from Maryland*,<sup>1</sup> provided the evidentiary record necessary for the State's consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in the State's contracting and procurement activities.

The 2011 Study found both statistical and anecdotal evidence of business discrimination against M/WBEs in the State's relevant market area. The present document, which is a continuation of that Study, provides additional detail on federally-assisted and state-funded contracting and subcontracting activity at MDOT's State Highway Administration (SHA), Maryland Transit Administration (MTA), and Maryland Aviation Administration (MAA).<sup>2</sup>

## B. Defining the Relevant Markets

Chapter I describes how the relevant geographic and product markets were defined for this Study. Five years of prime contract and subcontract records were analyzed to determine the geographic radius around SHA, MTA, and MAA (hereinafter collectively referred to as "MDOT")<sup>3</sup> that accounts for at least 75 percent of aggregate contract and subcontract spending. These records were also analyzed to determine those detailed industry categories that collectively account for over 99 percent of contract and subcontract spending in excess of \$25,000 in the relevant procurement categories, which were Construction, Architecture-Engineering and Other

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<sup>1</sup> NERA Economic Consulting (2011).

<sup>2</sup> With few exceptions, the underlying data in this document is drawn from the NERA's 2011 Study, including the results of the contract and subcontract data collection, telephone surveys, econometric analyses, mail surveys, and business owner interviews. Throughout this Study, results are documented for SHA, MTA, and MAA collectively in the "MDOT" tables as well as for each mode individually. With a few exceptions, individual tables for SHA, MTA, and MAA appear in Appendix III and Appendix IV.

<sup>3</sup> MDOT actually encompasses five modal administrations (SHA, MTA, MAA, the Maryland Port Administration, and the Motor Vehicle Administration) as well as the Maryland Transportation Authority. However, as used herein, the term MDOT refers only to SHA, MTA, and MAA, the three modal administrations that receive funding from the U.S. Department of Transportation.

Construction-Related Professional Services (“AE-CRS”), Maintenance, Information Technology (“IT”), Other Professional and General Services (“Services”), and Commodities, Supplies and Equipment (“CSE”).

MDOT’s relevant geographic market area was determined to be the State of Maryland, the State of Delaware, the District of Columbia, and the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

### **C. DBE Availability in MDOT’s Market Area**

Chapter II estimates the percentage of firms in MDOT’s relevant market area that are owned by minorities and/or women. For each industry category, DBE availability is defined as the number of DBEs divided by the total number of businesses in MDOT’s contracting market area, weighted by the dollars attributable to each detailed industry category. Determining the total number of businesses in the relevant markets is more straightforward than determining the number of minority-owned or women-owned businesses in those markets. The latter task has three main parts: (1) identifying all listed DBEs in the relevant market; (2) verifying the ownership status of listed DBEs; and (3) estimating the number of unlisted DBEs in the relevant market.

Tables A1 through A4 below provide an executive level summary of the current DBE availability estimates derived in the Study.<sup>4</sup> Corresponding tables for SHA, MTA, and MAA appear in Appendix III as Tables 2.23.A-2.26.A, 2.23.B-2.26.B, and 2.23.C-2.26.C, respectively.

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<sup>4</sup> In Tables A through D, and elsewhere in this Study, “Award” indicates that the availability measures are weighted according to dollars awarded and “Paid” indicates that the availability measures are weighted according to dollars paid. According to Md. Code Ann., State Fin. & Proc. §§ 14-301(j), “Black” or “African American” refers to an individual having origins in any of the Black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to an individual having origins in the Far East, Southeast Asia, or the Indian subcontinent; “Native American” refers to an individual having origins in any of the original peoples of North America other than Eskimos or Aleuts. In this report, businesses owned by members of these groups are collectively referred to as DBEs. There are some minor differences in the State’s definition of MBE and the federal definition of DBE, *see* 49 C.F.R. Part 26.5. For more on the interchangeability of the terms “DBE,” “MBE,” and “M/WBE” in this report, *see* Chapter II, Section A, below.

**Table A1. Estimated Availability for MDOT (Award Dollar Weights)—Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.88	3.20	4.88	0.36	18.32	15.17	33.49	66.51
AE-CRS	10.19	3.87	11.40	0.40	25.85	15.42	41.27	58.73
MAINTENANCE	13.47	4.84	4.42	0.27	23.01	14.92	37.92	62.08
IT	14.60	3.82	13.51	0.52	32.45	16.31	48.76	51.24
SERVICES	15.49	3.72	8.56	0.30	28.07	19.18	47.25	52.75
CSE	8.51	2.39	8.43	0.91	20.25	15.80	36.05	63.95
TOTAL	10.66	3.63	7.89	0.37	22.55	15.46	38.00	62.00

Source and Notes: See Table 2.17.

**Table A2. Estimated Availability for MDOT (Paid Dollar Weights)—Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.94	3.29	5.15	0.37	18.76	15.08	33.84	66.16
AE-CRS	10.52	3.83	11.33	0.40	26.08	15.74	41.82	58.18
MAINTENANCE	14.05	5.09	4.57	0.27	23.97	15.25	39.22	60.78
IT	13.36	3.70	13.19	0.47	30.71	16.67	47.39	52.61
SERVICES	15.81	3.43	8.53	0.28	28.05	19.84	47.89	52.11
CSE	8.51	2.39	8.43	0.91	20.25	15.80	36.05	63.95
TOTAL	10.76	3.60	7.37	0.38	22.10	15.54	37.64	62.36

Source and Notes: See Table 2.17.

**Table A3. Estimated Availability for MDOT (Award Dollar Weights)—Federally-Assisted Contracts Only, Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.97	3.10	5.07	0.36	18.49	15.57	34.07	65.93
AE-CRS	10.05	3.90	11.41	0.40	25.76	15.26	41.01	58.99
MAINTENANCE	8.15	3.19	2.82	0.27	14.42	12.19	26.61	73.39
IT	12.23	4.03	14.33	0.51	31.11	13.92	45.04	54.96
SERVICES	15.49	3.73	8.43	0.30	27.96	19.12	47.08	52.92
CSE	8.57	2.15	7.43	1.03	19.18	15.75	34.92	65.08
TOTAL	10.19	3.49	8.07	0.37	22.12	15.45	37.58	62.42

Source and Notes: See Table 2.17.

**Table A4. Estimated Availability for MDOT (Paid Dollar Weights)— Federally-Assisted Contracts Only, Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.03	3.16	5.43	0.36	18.97	15.59	34.56	65.44
AE-CRS	10.42	3.85	11.32	0.40	25.99	15.64	41.63	58.37
MAINTENANCE	8.08	3.22	2.90	0.30	14.49	12.65	27.15	72.85
IT	11.51	4.03	13.75	0.50	29.80	13.89	43.69	56.31
SERVICES	15.69	3.45	8.50	0.28	27.92	19.85	47.77	52.23
CSE	8.57	2.15	7.43	1.03	19.18	15.75	34.92	65.08
TOTAL	10.36	3.41	7.64	0.38	21.79	15.69	37.47	62.53

Source and Notes: See Table 2.17.

## D. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

Chapter III demonstrates that current DBE availability levels in MDOT's market area, as measured in Chapter II, are substantially lower than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner and that these levels are statistically significant.<sup>5</sup> In other words, minorities and women are substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics, including age, education, geographic location, and industry. We find that these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males, whether they work as employees or entrepreneurs.

For example, we found that annual average wages for African Americans (both genders) in 2006–2008, were 33 percent lower in the Maryland market area<sup>6</sup> than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, persons of mixed race, and nonminority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -23 percent for Hispanics to a high of -33 percent for African Americans and nonminority women. Similar results were observed when the analysis was restricted to the Construction and AE-CRS sector or to the Goods and Services sector. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for nonminority women. All wage and salary disparity analyses were then repeated to test whether observed disparities in the Maryland market area were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

This analysis demonstrates that minorities and women earn substantially and significantly less than their nonminority male counterparts. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduce the future availability of DBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere “societal discrimination” because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower DBE availability levels than would be observed in a race- and gender-neutral market area.

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<sup>5</sup> Typically, for a given disparity statistic to be considered “statistically significant” there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn. 72.*

<sup>6</sup> The MDOT market area is contiguous with the Maryland market area.

Next, we analyzed race and gender disparities in business owner earnings. We observed large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, and nonminority women consistent with the presence of discrimination in these markets. Large, adverse, and statistically significant business owner earnings disparities were observed overall as well as in the Construction and AE-CRS sector and in the Goods and Services sector. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Maryland market area differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects DBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of nonminority males, growth rates will slow, business failure rates will increase, and as demonstrated in this Chapter, business formation rates will decrease. Combined, these phenomena result in lower DBE availability levels than would otherwise be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business formation. As with earnings, in almost every case we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in the Construction and AE-CRS sector, and in the Goods and Services sector.<sup>7</sup> In every instance examined, business formation rates for African Americans, Hispanics, Asians, Native Americans, persons of mixed race, and nonminority women were substantially and statistically significantly lower than the corresponding nonminority male business formation rate.

Finally, as an additional check on the statistical findings in this Chapter, we examined evidence from the Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO). These data show large, adverse, and statistically significant disparities between DBEs' share of overall revenues and their share of overall firms in the U.S. as a whole, and in the State of Maryland.<sup>8</sup> The disparities facing minority- and women-owned firms in Maryland are, in general, adverse, large, and statistically significant. For example, although 20.1 percent of all firms in Maryland are owned by African Americans, they earned less than 3.5 percent of all sales and receipts. African American employer firms are 5.4 percent of the total but earned only 2.6 percent of sales and receipts. Disparities for women and for other minority groups are also very large in Maryland, as in the U.S. as a whole. Additionally, large, adverse, and statistically significant disparities are observed for each of these groups in the Construction and AE-CRS sector as well as in the Goods and Services sector.

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<sup>7</sup> The Construction and AE-CRS sectors were combined for the analyses in Chapter III, as were the Goods and Services sectors. Elsewhere in the Study they are analyzed separately.

<sup>8</sup> It is, in general, not possible with the SBO dataset to examine geographic divisions below the state level.

## **E. Statistical Disparities in Credit/Capital Markets**

In Chapter IV, we analyzed current and historical data from the Survey of Small Business Finances (“SSBF”), conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from nine customized matching mail surveys we have conducted throughout the nation since 1999. This data examines whether discrimination exists in the small business credit market. Credit market discrimination can have an important effect on the likelihood that DBEs will succeed. Moreover, discrimination in the credit market might even prevent such businesses from opening in the first place. This analysis has been held by the courts to be probative of a public entity’s compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that DBE firms, particularly African American-owned firms, suffer discrimination in this market.

The results are as follows:

- Minority-owned firms were particularly likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms did apply for a loan, their requests were substantially more likely to be denied than other groups, even after accounting for differences in factors like size and credit history.
- When minority-owned firms did receive a loan, they paid higher interest rates than comparable nonminority-owned firms.
- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for nonminority-owned firms.
- A greater share of minority-owned firms believed that the availability of credit was the most important issue likely to confront the firm in the near future.
- Judging from the analysis done using data from the SSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in the Maryland market area than in the nation as a whole. The evidence from NERA’s own credit surveys in a variety of states and metropolitan areas across the country is entirely consistent with the results from the SSBF.

We conclude that there is evidence of discrimination against DBEs in the Maryland market area in the small business credit market. This discrimination is particularly acute for African American-owned firms.

## F. DBE Public Sector Utilization vs. Availability in MDOT's Contracting and Procurement Markets

Chapter V analyzes the utilization of DBEs by MDOT from State Fiscal Years (“SFY”) 2005 through 2009 compared to their availability of DBEs in the relevant market area. Tables B1 through B4 provide summary the utilization findings by industry category and DBE type.

**Table B1. DBE Utilization at MDOT (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.42	3.30	3.45	3.62	9.75	0.00	4.06
Hispanic	2.67	1.42	1.80	0.00	1.30	0.00	2.04
Asian	0.55	10.68	0.09	14.75	1.00	0.70	2.40
Native American	2.28	0.00	0.00	0.00	0.00	0.00	1.28
Minority	8.93	15.40	5.34	18.37	12.05	0.70	9.78
Nonminority Female	18.08	8.85	12.08	2.30	3.28	0.00	12.98
DBE	27.01	24.25	17.42	20.66	15.33	0.70	22.76
Non-DBE	72.99	75.75	82.58	79.34	84.67	99.30	77.24
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	3,075,432,112	879,183,452	444,026,504	78,236,702	725,617,784	293,136,663	5,495,633,217

Source: NERA Master Contract/Subcontract Database.

**Table B2. DBE Utilization at MDOT (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.10	2.59	2.80	3.49	4.55	0.00	2.96
Hispanic	2.89	1.60	0.73	0.00	1.21	0.00	2.10
Asian	0.67	10.89	0.05	28.81	0.69	0.70	2.13
Native American	3.59	0.00	0.01	0.00	0.00	0.00	2.14
Minority	10.25	15.08	3.60	32.30	6.45	0.70	9.33
Nonminority Female	16.82	8.30	7.36	0.93	1.97	0.00	11.79
DBE	27.07	23.38	10.95	33.23	8.42	0.70	21.12
Non-DBE	72.93	76.62	89.05	66.77	91.58	99.30	78.88
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,261,152,910	418,487,243	316,620,043	51,483,005	459,433,787	293,136,663	3,800,313,651

Source: NERA Master Contract/Subcontract Database.

**Table B3. DBE Utilization at MDOT on Federally-Assisted Contracts (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.31	3.38	2.30	6.19	8.30	0.00	3.73
Hispanic	2.04	1.36	0.91	0.00	0.68	0.00	1.56
Asian	0.55	11.09	0.10	18.92	0.84	0.77	2.65
Native American	2.58	0.00	0.00	0.00	0.00	0.00	1.51
Minority	8.49	15.84	3.32	25.11	9.82	0.77	9.46
Nonminority Female	19.58	8.87	18.18	4.13	3.08	0.00	14.27
DBE	28.06	24.71	21.50	29.24	12.91	0.77	23.73
Non-DBE	71.94	75.29	78.50	70.76	87.09	99.23	76.27
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,681,516,219	824,480,482	196,690,221	43,208,653	565,349,612	266,458,652	4,577,703,839

Source: NERA Master Contract/Subcontract Database.

**Table B4. DBE Utilization at MDOT on Federally-Assisted Contracts (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	2.89	2.65	3.00	4.74	2.05	0.00	2.53
Hispanic	2.02	1.63	0.83	0.00	0.51	0.00	1.54
Asian	0.68	11.57	0.03	21.46	0.72	0.77	2.24
Native American	4.28	0.00	0.03	0.00	0.00	0.00	2.62
Minority	9.87	15.86	3.89	26.20	3.28	0.77	8.93
Nonminority Female	18.71	8.25	5.81	1.32	2.17	0.00	13.01
DBE	28.58	24.11	9.70	27.53	5.46	0.77	21.94
Non-DBE	71.42	75.89	90.30	72.47	94.54	99.23	78.06
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	1,882,836,340	377,959,231	147,766,024	35,167,198	367,542,921	266,458,652	3,077,730,366

Source: NERA Master Contract/Subcontract Database.

Comparable Tables for SHA, MTA, and MAA appear in Appendix III as Tables 5.1.A-5.4.A, 5.1.B-5.4.B, and 5.1.C-5.4.C, respectively.

Next, we compared MDOT's and its prime contractors' use of DBEs to our measure of DBE availability levels in the relevant market area. If DBE utilization is lower than measured availability in a given category, we report this result as a disparity. Tables C1 through C4 provide an executive level summary of our disparity findings for MDOT in Construction, AE-CRS, Maintenance, IT, Services, CSE, and overall contracting. We find substantial evidence of disparity in MDOT's contracting and procurement activity, despite the operation of the MBE and DBE programs.

**Table C1. Utilization, Availability, and Disparity Results for MDOT Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.42	9.88	34.63 ****
Hispanic	2.67	3.20	83.43
Asian/Pacific Islander	0.55	4.88	11.35 ****
Native American	2.28	0.36	
Minority-owned	8.93	18.32	48.72 ****
Nonminority female	18.08	15.17	
DBE total	27.01	33.49	80.64
AE-CRS			
African American	3.30	10.19	32.40 ****
Hispanic	1.42	3.87	36.85 ****
Asian/Pacific Islander	10.68	11.40	93.68
Native American	0.00	0.40	0.00 ****
Minority-owned	15.40	25.85	59.58 ****
Nonminority female	8.85	15.42	57.41 ****
DBE total	24.25	41.27	58.77 ****
Maintenance			
African American	3.45	13.47	25.61 ****
Hispanic	1.80	4.84	37.15 ****
Asian/Pacific Islander	0.09	4.42	2.14 ****
Native American	0.00	0.27	0.00 ****
Minority-owned	5.34	23.01	23.23 ****
Nonminority female	12.08	14.92	80.97
DBE total	17.42	37.92	45.94 ****

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
IT			
African American	3.62	14.60	24.77 ****
Hispanic	0.00	3.82	0.00 ****
Asian/Pacific Islander	14.75	13.51	
Native American	0.00	0.52	0.00 ****
Minority-owned	18.37	32.45	56.60 ****
Nonminority female	2.30	16.31	14.08 ****
DBE total	20.66	48.76	42.38 ****
Services			
African American	9.75	15.49	62.96 ***
Hispanic	1.30	3.72	34.86 ****
Asian/Pacific Islander	1.00	8.56	11.67 ****
Native American	0.00	0.30	1.19 ****
Minority-owned	12.05	28.07	42.94 ****
Nonminority female	3.28	19.18	17.10 ****
DBE total	15.33	47.25	32.45 ****
CSE			
African American	0.00	8.51	0.00 ****
Hispanic	0.00	2.39	0.00 ****
Asian/Pacific Islander	0.70	8.43	8.28 ****
Native American	0.00	0.91	0.00 ****
Minority-owned	0.70	20.25	3.45 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.70	36.05	1.94 ****
All Contracting			
African American	4.06	10.66	38.11 ****
Hispanic	2.04	3.63	56.23
Asian/Pacific Islander	2.40	7.89	30.48 ****
Native American	1.28	0.37	
Minority-owned	9.78	22.55	43.38 ****
Nonminority female	12.98	15.46	83.95
DBE total	22.76	38.00	59.88 ****

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe.

Note: (1) “\*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “\*\*” indicates the disparity is significant at a 10% level or better (90% confidence). “\*\*\*” indicates significance at a 5% level or better (95% confidence). “\*\*\*\*” indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

**Table C2. Utilization, Availability, and Disparity Results for MDOT Contracting, Overall and by Contracting Category (Dollars Paid)**

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
Construction			
African American	3.10	9.94	31.14 ****
Hispanic	2.89	3.29	87.98
Asian/Pacific Islander	0.67	5.15	13.07 ****
Native American	3.59	0.37	
Minority-owned	10.25	18.76	54.66 ****
Nonminority female	16.82	15.08	
DBE total	27.07	33.84	80.01 *
AE-CRS			
African American	2.59	10.52	24.60 ****
Hispanic	1.60	3.83	41.85 ***
Asian/Pacific Islander	10.89	11.33	96.11
Native American	0.00	0.40	0.00 ****
Minority-owned	15.08	26.08	57.82 ****
Nonminority female	8.30	15.74	52.74 ****
DBE total	23.38	41.82	55.91 ****
Maintenance			
African American	2.80	14.05	19.94 ****
Hispanic	0.73	5.09	14.39 ****
Asian/Pacific Islander	0.05	4.57	1.06 ****
Native American	0.01	0.27	5.44 ****
Minority-owned	3.60	23.97	15.00 ****
Nonminority female	7.36	15.25	48.23 ****
DBE total	10.95	39.22	27.92 ****
IT			
African American	3.49	13.36	26.15 ****
Hispanic	0.00	3.70	0.00 ****
Asian/Pacific Islander	28.81	13.19	
Native American	0.00	0.47	0.00 ****
Minority-owned	32.30	30.71	
Nonminority female	0.93	16.67	5.57 ****
DBE total	33.23	47.39	70.12 ****
Services			
African American	4.55	15.81	28.78 ****
Hispanic	1.21	3.43	35.25 ****
Asian/Pacific Islander	0.69	8.53	8.06 ****
Native American	0.00	0.28	1.01 ****
Minority-owned	6.45	28.05	22.99 ****
Nonminority female	1.97	19.84	9.93 ****
DBE total	8.42	47.89	17.58 ****

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
CSE			
African American	0.00	8.51	0.00 ****
Hispanic	0.00	2.39	0.00 ****
Asian/Pacific Islander	0.70	8.43	8.28 ****
Native American	0.00	0.91	0.00 ****
Minority-owned	0.70	20.25	3.45 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.70	36.05	1.94 ****
All Contracting			
African American	2.96	10.76	27.50 ****
Hispanic	2.10	3.60	58.44
Asian/Pacific Islander	2.13	7.37	28.92 ****
Native American	2.14	0.38	
Minority-owned	9.33	22.10	42.22 ****
Nonminority female	11.79	15.54	75.85
DBE total	21.12	37.64	56.10 ****

Source and Notes: See Table 5.5.

**Table C3. Utilization, Availability, and Disparity Results for Federally-Assisted MDOT Contracting, Overall and by Contracting Category (Dollars Awarded)**

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
<b>Construction</b>			
African American	3.31	9.97	33.23 ****
Hispanic	2.04	3.10	65.76
Asian/Pacific Islander	0.55	5.07	10.82 ****
Native American	2.58	0.36	
Minority-owned	8.49	18.49	45.88 ****
Nonminority female	19.58	15.57	
DBE total	28.06	34.07	82.38
<b>AE-CRS</b>			
African American	3.38	10.05	33.68 ****
Hispanic	1.36	3.90	35.01 ***
Asian/Pacific Islander	11.09	11.41	97.15
Native American	0.00	0.40	0.00 ****
Minority-owned	15.84	25.76	61.48 ****
Nonminority female	8.87	15.26	58.15 ***
DBE total	24.71	41.01	60.24 ****
<b>Maintenance</b>			
African American	2.30	8.15	28.25 ****
Hispanic	0.91	3.19	28.69 ****
Asian/Pacific Islander	0.10	2.82	3.58 ****
Native American	0.00	0.27	0.00 ****
Minority-owned	3.32	14.42	23.00 ****
Nonminority female	18.18	12.19	
DBE total	21.50	26.61	80.78
<b>IT</b>			
African American	6.19	12.23	50.62 ****
Hispanic	0.00	4.03	0.00 ****
Asian/Pacific Islander	18.92	14.33	
Native American	0.00	0.51	0.00 ****
Minority-owned	25.11	31.11	80.71
Nonminority female	4.13	13.92	29.65 ****
DBE total	29.24	45.04	64.92 ****
<b>Services</b>			
African American	8.30	15.49	53.56 ****
Hispanic	0.68	3.73	18.09 ****
Asian/Pacific Islander	0.84	8.43	10.00 ****
Native American	0.00	0.30	1.52 ****
Minority-owned	9.82	27.96	35.13 ****
Nonminority female	3.08	19.12	16.13 ****
DBE total	12.91	47.08	27.41 ****

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
CSE			
African American	0.00	8.57	0.00 ****
Hispanic	0.00	2.15	0.00 ****
Asian/Pacific Islander	0.77	7.43	10.34 ****
Native American	0.00	1.03	0.00 ****
Minority-owned	0.77	19.18	4.01 ****
Nonminority female	0.00	15.75	0.00 ****
DBE total	0.77	34.92	2.20 ****
All Contracting			
African American	3.73	10.19	36.61 ****
Hispanic	1.56	3.49	44.83 *
Asian/Pacific Islander	2.65	8.07	32.85 ****
Native American	1.51	0.37	
Minority-owned	9.46	22.12	42.76 ****
Nonminority female	14.27	15.45	92.33
DBE total	23.73	37.58	63.15 ****

Source and Notes: See Table 5.5.

**Table C4. Utilization, Availability, and Disparity Results for Federally-Assisted MDOT Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	2.89	10.03	28.80 ****
Hispanic	2.02	3.16	63.95
Asian/Pacific Islander	0.68	5.43	12.58 ****
Native American	4.28	0.36	
Minority-owned	9.87	18.97	52.02 ****
Nonminority female	18.71	15.59	
DBE total	28.58	34.56	82.68
AE-CRS			
African American	2.65	10.42	25.42 ****
Hispanic	1.63	3.85	42.45 **
Asian/Pacific Islander	11.57	11.32	
Native American	0.00	0.40	0.00 ****
Minority-owned	15.86	25.99	61.01 ****
Nonminority female	8.25	15.64	52.77 ****
DBE total	24.11	41.63	57.92 ****
Maintenance			
African American	3.00	8.08	37.19 ****
Hispanic	0.83	3.22	25.69 ****
Asian/Pacific Islander	0.03	2.90	0.92 ****
Native American	0.03	0.30	10.46 *
Minority-owned	3.89	14.49	26.83 ****
Nonminority female	5.81	12.65	45.94 ****
DBE total	9.70	27.15	35.74 ****
IT			
African American	4.74	11.51	41.16 ****
Hispanic	0.00	4.03	0.00 ****
Asian/Pacific Islander	21.46	13.75	
Native American	0.00	0.50	0.00 ****
Minority-owned	26.20	29.80	87.93
Nonminority female	1.32	13.89	9.53 ****
DBE total	27.53	43.69	63.00 ****
Services			
African American	2.05	15.69	13.04 ****
Hispanic	0.51	3.45	14.83 ****
Asian/Pacific Islander	0.72	8.50	8.51 ****
Native American	0.00	0.28	1.26 ****
Minority-owned	3.28	27.92	11.76 ****
Nonminority female	2.17	19.85	10.94 ****
DBE total	5.46	47.77	11.42 ****

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.57	0.00 ****
Hispanic	0.00	2.15	0.00 ****
Asian/Pacific Islander	0.77	7.43	10.34 ****
Native American	0.00	1.03	0.00 ****
Minority-owned	0.77	19.18	4.01 ****
Nonminority female	0.00	15.75	0.00 ****
DBE total	0.77	34.92	2.20 ****
All Contracting			
African American	2.53	10.36	24.47 ****
Hispanic	1.54	3.41	45.07
Asian/Pacific Islander	2.24	7.64	29.30 ****
Native American	2.62	0.38	
Minority-owned	8.93	21.79	40.99 ****
Nonminority female	13.01	15.69	82.95
DBE total	21.94	37.47	58.55 ****

Source and Notes: See Table 5.5.

Comparable Tables for SHA, MTA, and MAA appear in Chapter V as Tables 5.9-5.12, 5.13-5.16, and 5.17-5.20, respectively.

Finally, Chapter V compares current levels of DBE availability in MDOT's market area with what we would expect to observe in a race- and gender-neutral market area. If there is full parity in the relevant market area, then the expected DBE availability rate (that is, the DBE availability level that would be observed in a non-discriminatory market area) will be equal to the actual current DBE availability rate. If there are adverse disparities facing DBEs in the relevant market area, however, as documented in Chapters III, IV, V, and VI of this Study, then expected availability will *exceed* actual current availability. Expected availability percentages for MDOT's overall contracting and by major procurement category exceed actual current availability in every case observed.

## G. Anecdotal Evidence

Chapter VI presents the results of a large scale mail survey we conducted of DBEs and non-DBEs about their experiences and difficulties in obtaining contracts.<sup>9</sup> The survey quantified and compared anecdotal evidence on the experiences of DBEs and non-DBEs as a method to examine whether any differences might be due to discrimination.

We found that DBEs that have been hired in the past by non-DBE prime contractors to work on public sector contracts with goals are rarely hired—or even solicited—by these prime contractors to work on projects without goals. The relative lack of DBE hiring and, moreover, the relative lack of solicitation of DBEs in the absence of affirmative efforts by MDOT and other public entities in the Maryland market area shows that business discrimination continues to fetter DBE business opportunities in MDOT’s relevant markets.

We found that DBEs in MDOT’s market area report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-DBEs. These differences remain statistically significant when firm size and other “capacity-related” owner characteristics are held constant. We also find that DBEs in these markets are more likely than similarly situated non-DBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, and less likely than similarly situated non-DBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses.

Chapter VI also presents the results from a series of in-depth personal interviews conducted with DBE and non-DBE business owners in the Maryland market area. Similar to the survey responses, the interviews strongly suggest that DBEs continue to suffer discriminatory barriers to full and fair access to State of Maryland, MDOT, SHA, MTA, MAA, other public sector, and private sector contracts. Participants reported stereotyping, negative perceptions of DBE incompetence; subjection to higher performance standards; exclusion from industry networks; discrimination in access to commercial loans; barriers to obtaining public sector prime contracts and subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors or subcontractors.

We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination. The results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study’s extensive statistical evidence, the courts have found to be highly probative of whether, without affirmative interventions, MDOT would be a passive participant in a discriminatory local market area. It is also highly relevant for narrowly tailoring any DBE goals for its federally-assisted contracts.

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<sup>9</sup> Note that we use the term “DBE” interchangeably with “MBE” and “M/WBE” throughout this report. See the discussion of this point below in Chapter II, Section A.

## **H. Conclusion**

As summarized above, and based on the detailed findings below, we conclude that there is strong evidence of large, adverse, and frequently statistically significant disparities between minority and female participation in business enterprise activity in MDOT's relevant market area and the actual current availability of those businesses. We further conclude that these disparities cannot be explained solely, or even primarily, by differences between DBE and non-DBE business populations in factors untainted by discrimination, and that these differences therefore give rise to a strong inference of the continued presence of discrimination in MDOT's market area.

# I. Defining the Relevant Markets

## A. Preparing the Master Contract/Subcontract Database

### 1. Overview

In the *Croson* decision, the Supreme Court indicated that the *national* findings by Congress of minority business discrimination in construction and related industries were not specific enough, or “narrowly tailored” enough, standing alone, to support an MBE program in the City of Richmond. For this reason, the first step in our evaluation of Disadvantaged Business Enterprise (DBE) availability and participation for the Maryland Department of Transportation (MDOT) is to define the relevant market area for its contracting and procurement activity.

Markets have both a geographic dimension and a product, or industry, dimension. Both aspects of market definition are considered in this chapter.<sup>10</sup> For this Study, we define the relevant geographic market area based on the historical contracting and subcontracting records of MDOT’s three modal administrations that receive funding from the U.S. Department of Transportation: the State Highway Administration (SHA), the Maryland Transit Administration (MTA), and the Maryland Aviation Administration (MAA).<sup>11</sup> This market dimension is determined empirically by examining the zip code distribution of utilized contractors and subcontractors at each modal administration.

Narrow tailoring also applies to product markets. The extent of disparity may differ from industry to industry just as among geographic locations.<sup>12</sup> Documenting the specific industries that are involved in MDOT’s contracting activities and the relative importance of each to overall spending is important. A careful product market definition allows for (1) implementation of more narrowly tailored availability estimation methods, (2) contract-level goal-setting, and (3) overall DBE availability estimates that are a weighted average of underlying industry-level availability estimates, rather than a simple average. The weights used are the proportion of dollars spent within each industry and allow the overall availability measure to be influenced more heavily by availability in those industries where more contracting dollars are spent, and less heavily by availability in those industries where relatively few contracting dollars are spent.

We define the product market dimension by estimating which North American Industrial Classification System (NAICS) codes<sup>13</sup> best describe each identifiable contractor, subcontractor,

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<sup>10</sup> See, for example, Areeda, P., L. Kaplow, and A. Edlin (2004).

<sup>11</sup> In addition to the modes that receive federal funding, MDOT includes two additional modal administrations, the Maryland Port Administration (“MPA”) and the Motor Vehicle Administration (“MVA”), as well as the Maryland Transportation Authority (“MdTA”). MPA, MVA, and MdTA are part of the State’s 2011 Study, but they are not part of this Study.

<sup>12</sup> See Wainwright (2000), documenting that, in general, the similarities in the amount of discrimination present in different industries and geographic locations significantly outweighs the differences.

<sup>13</sup> See Executive Office of the President, Office of Management and Budget (2007).

subconsultant, or supplier in those records. In both cases, the definitions are weighted according to how many dollars were spent with business establishments from each zip code or NAICS code, respectively, so that locations and industries receiving relatively more contracting dollars receive relatively more weight in the estimation of DBE availability. Once the geographic and industry parameters of the market area have been defined, we can restrict our subsequent analyses to business enterprises and other phenomena within this market area. Restricting our analyses in this manner narrowly tailors our findings to the specific contracting circumstances of MDOT and its modal administrations.

## **2. MDOT Contracting**

With assistance from MDOT, NERA collected contract and purchase order data from SHA, MTA, and MAA on contracts that were active between July 1, 2004 and June 30, 2009<sup>14</sup> in six major procurement categories: Construction; Architecture-Engineering and Other Construction-Related Professional Services (“AE-CRS”); Maintenance; Information Technology (“IT”); Services; and Commodities, Supplies, and Equipment (“CSE”).<sup>15</sup> Thus, the study period covers State Fiscal Years (SFY) 2005-2009.<sup>16</sup> The six major procurement categories were assigned based on the State of Maryland’s major procurement classification categories.

We restricted our analysis to contracts and purchase orders of \$25,000 or more.<sup>17</sup> During the study period, there were 4,225 such contracts or purchase orders,<sup>18</sup> distributed among the six major procurement categories and three modal administrations as shown in Table 1.1. Overall, Table 1.1 shows that of the 4,225 prime contracts in the study universe for MDOT, approximately 16 percent of the contracts were for Construction, 10 percent were for AE-CRS, 26 percent were for Maintenance, 5 percent were for IT, 9 percent were for Services, and 33 percent were for CSE.<sup>19</sup> Table 1.1 also shows the distribution of contracts by major procurement category for SHA, MTA, and MAA.

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<sup>14</sup> Thus, the Study also includes some contracts that were initiated prior to July 2004 and were still active as of that time.

<sup>15</sup> See COMAR 21.01.02.01.

<sup>16</sup> These data were collected as part of the State of Maryland’s most recent Minority Business Enterprise availability and utilization disparity study. See NERA Economic Consulting (2011).

<sup>17</sup> \$25,000 is the Category III Small Procurement threshold pursuant to COMAR 21.05.07.04.

<sup>18</sup> A small number of contracts were excluded from this contract universe, either because no work was actually performed on them or because the prime contractor was another public entity.

<sup>19</sup> Contracts for CSE typically do not have subcontracting opportunities. Nor is it common to see subcontracting activity on contracts valued at less than \$50,000.

**Table 1.1. Distribution of MDOT Prime Contracts and Purchase Orders by Procurement Category**

	MDOT		SHA		MTA		MAA	
Procurement Category	Number of Contracts	Percent-age	Number of Contracts	Percent-age	Number of Contracts	Percent-age	Number of Contracts	Percent-age
Construction	688	16.28	569	22.57	52	4.24	67	13.99
AE-CRS	441	10.44	358	14.20	46	3.76	37	7.72
Maintenance	1,104	26.13	941	37.33	99	8.08	64	13.36
IT	214	5.07	136	5.39	76	6.20	2	0.42
Services	375	8.88	146	5.79	130	10.61	99	20.67
CSE	1,403	33.21	371	14.72	822	67.10	210	43.84
TOTAL	4,225	100.00	2,521	100.00	1,225	100.00	479	100.00

For each contract or purchase order from the study period, we obtained available data including the prime contractor name, address, and telephone number; contract or purchase description; contract or purchase order number; contractor race/ethnicity and gender; contract award or purchase date; total contracted dollar amount; and total paid amount.

MDOT's modal administrations did not maintain records of subcontracting activity during the study period sufficient for the disparity study assessment, particularly in the case of non-DBE subcontractors, subconsultants, and suppliers. To obtain this information, we selected a sample of prime contracts and purchase orders from each modal administration, and then worked with each one to obtain all missing subcontractor information from the relevant prime contractors or vendors. Information collected included subcontractor name and address, subcontractor gender and ethnicity, description of work performed, final award amount, and final amount paid. Contracts for CSE and contracts valued at under \$50,000 were not included in the subcontracting data collection sample since they typically do not have subcontracting opportunities.

For MDOT, the distribution of prime contracts and purchase orders into those with and without subcontracting opportunities appears in Table 1.2.<sup>20</sup> Table 1.2 shows that 2,330 of the 4,225

<sup>20</sup> The first row of figures within each major procurement category is the number of contracts. The second row contains the row percentages. For example, in Construction, 95.49 percent of contracts were in the sample universe and 4.51 percent were not. The third row contains the column percentages. For example, of the records in the sample universe, 28.20 percent are in Construction, 18.76 percent are in AE-CRS, 37.85 percent are in Maintenance, 3.30 percent are in IT, 11.89 percent are in Services, and 0.00 percent are in CSE.

MDOT contracts and purchase orders during the study period potentially had subcontracting opportunities. In other words, these contracts and purchase orders were “In the Sample Universe.” The remaining 1,895 contracts and purchase orders, the majority of which were for CSE, were not in the sample universe. This does not mean these contracts were not studied, only that no subcontracting information had to be collected from the prime contractors and vendors for these contracts and purchase orders.<sup>21</sup>

**Table 1.2. Distribution of MDOT Prime Contracts and Purchase Orders by Procurement Category and Subcontracting Opportunities**

Procurement Category	In the Sample Universe		Total
	No	Yes	
CONSTRUCTION	31	657	688
	4.51	95.49	100.00
	1.64	28.20	16.28
AE-CRS	4	437	441
	0.91	99.09	100.00
	0.21	18.76	10.44
MAINTENANCE	222	882	1,104
	20.11	79.89	100.00
	11.72	37.85	26.13
IT	137	77	214
	64.02	35.98	100.00
	7.23	3.30	5.07
SERVICES	98	277	375
	26.13	73.87	100.00
	5.17	11.89	8.88
CSE	1,403	0	1,403
	100.00	0.00	100.00
	74.04	0.00	33.21
TOTAL	1,895	2,330	4,225
	44.85	55.15	100.00
	100.00	100.00	100.00

The 2,330 contracts and purchase orders in the sample universe had a total awarded value, according to State records, of \$6.81B, and it was from this group of contracts and purchase orders that we drew our sample. We sampled the largest contracts and purchase orders with certainty, and sampled smaller contracts and purchase orders randomly with replacement. The

<sup>21</sup> Tables 1.2.A, 1.2.B, and 1.2.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

sample drawn included 649 of the 2,330 contracts and purchase orders in the sample universe, or 28 percent of the total; and accounted for \$5.50B of \$6.81B dollars, or 81 percent of the total.<sup>22</sup>

A companion sample of Commodities contracts, small contracts, and other contracts with a low likelihood of subcontracting activity was created from the remaining 1,895 contracts and purchase orders and included in the final file for analysis. These 1,895 contracts and purchase orders had a total awarded value of \$625.00M. Our sample from this group included 202 contracts, or 11 percent of the total, and \$485.22M, or 78 percent of the total.<sup>23</sup>

After an intensive data collection effort, and with the assistance of personnel at SHA, MTA, and MAA, we were ultimately able to obtain the associated subcontract information for 567 prime contracts, or 87 percent of all prime contracts sampled, and 5,112 associated subcontracts. The total dollar value of the 567 prime contracts, according to State records, was \$5.21B, or 95 percent of all dollars in the sample. Dollar values reported by prime contractors did not always match State records exactly. According to prime-reported amounts, the total dollar value of the 567 prime contracts was \$5.01B. In order to achieve consistency with the subcontract dollar values we collected, we will use prime reported dollar amounts for the remainder of the analyses in this report.

These percentages are sufficiently large to be well representative of the entire universe of SHA, MTA, and MAA contracts and subcontracts being examined for this Study. As mentioned above, we also included an additional 202 contracts and purchase orders worth \$485.22M, representing CSE contracts and contracts under \$50,000. Therefore, the full sample of contracts and subcontracts for the Study contains 769 contracts and purchase orders and 5,112 associated subcontracts, with an awarded dollar value of \$5.50B. Of these 769 contracts and purchase orders, 489, or 64 percent, had federal assistance. The total awarded dollar value of federally-assisted contracts and purchase orders by MDOT was \$4.58B, or 83 percent of the total awarded dollar value.

Together, as shown below in Tables 1.3 and 1.4, these 769 prime contracts and 5,112 associated subcontracts comprise the Master MDOT Contract/Subcontract Database compiled for this Study. Table 1.3 shows total number of prime contracts, subcontracts, and contract dollars awarded during the entire study period, by major procurement category. Table 1.4 shows total number of federally-assisted prime contracts, subcontracts, and contract dollars awarded during the entire study period, by major procurement category.<sup>24</sup>

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<sup>22</sup> “With replacement” means that it is possible for a given purchase order to be included in the sample more than once. In the present context, sampling with replacement has certain desirable statistical properties that sampling without replacement lacks. Of 637 contracts in the sample, 10 contracts were included twice, and one contract was included three times, raising the effective sample size to 649.

<sup>23</sup> This sample was drawn with replacement as well. Of 188 contracts in the sample, 12 were included twice, and one was included three times, bringing the effective sample size to 202.

<sup>24</sup> Tables 1.3.A-1.4.A, 1.3.B-1.4.B, and 1.3.C-1.4.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

**Table 1.3. Summary of Master Contract/Subcontract Database: MDOT Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i>CONSTRUCTION</i>			3,075,432,112	1,680,895,166
<i>Prime Contracts</i>	213	202	1,733,782,289	898,702,619
<i>Subcontracts</i>	2,955	2,595	1,341,649,823	782,192,547
<i>AE-CRS</i>			879,183,452	334,312,523
<i>Prime Contracts</i>	200	193	588,215,162	243,443,977
<i>Subcontracts</i>	1,116	1,024	290,968,290	90,868,546
<i>MAINTENANCE</i>			444,026,504	303,476,864
<i>Prime Contracts</i>	160	145	372,753,404	243,115,975
<i>Subcontracts</i>	517	460	71,273,100	60,360,889
<i>IT</i>			78,236,702	38,189,058
<i>Prime Contracts</i>	28	26	63,806,644	31,879,580
<i>Subcontracts</i>	37	18	14,430,058	6,309,478
<i>SERVICES</i>			725,617,784	433,717,768
<i>Prime Contracts</i>	106	103	633,212,983	391,067,809
<i>Subcontracts</i>	487	474	92,404,801	42,649,959
<i>CSE</i>			293,136,663	293,136,663
<i>Prime Contracts</i>	62	62	293,136,663	293,136,663
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			5,495,633,217	3,083,728,042
<i>Prime Contracts</i>	769	731	3,684,907,145	2,101,346,623
<i>Subcontracts</i>	5,112	4,571	1,810,726,072	982,381,419

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.4. Summary of Master Contract/Subcontract Database: Federally-Assisted MDOT Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i>CONSTRUCTION</i>			2,681,516,219	1,304,902,133
<i>Prime Contracts</i>	142	132	1,531,704,671	713,197,838
<i>Subcontracts</i>	2,023	1,682	1,149,811,548	591,704,295
<i>AE-CRS</i>			824,480,482	297,478,857
<i>Prime Contracts</i>	181	176	550,059,022	217,835,633
<i>Subcontracts</i>	889	819	274,421,460	79,643,224
<i>MAINTENANCE</i>			196,690,221	142,870,360
<i>Prime Contracts</i>	59	51	176,362,104	122,003,759
<i>Subcontracts</i>	237	201	20,328,117	20,866,601
<i>IT</i>			43,208,653	29,227,491
<i>Prime Contracts</i>	11	10	30,217,231	24,173,996
<i>Subcontracts</i>	25	7	12,991,422	5,053,495
<i>SERVICES</i>			565,349,612	343,017,226
<i>Prime Contracts</i>	55	53	506,213,053	320,097,299
<i>Subcontracts</i>	437	430	59,136,559	22,919,927
<i>CSE</i>			266,458,652	266,458,652
<i>Prime Contracts</i>	41	41	266,458,652	266,458,652
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			4,577,703,839	2,383,954,719
<i>Prime Contracts</i>	489	463	3,061,014,733	1,663,767,177
<i>Subcontracts</i>	3,611	3,139	1,516,689,106	720,187,542

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

## B. Geographic Market Definition for Contracting and Procurement

To determine the geographic dimension of MDOT's contracting and procurement markets, we used the Master Contract/Subcontract Database to obtain the zip codes and thereby the county and state for each contractor and subcontractor establishment identified in our sample. Using this location information, we then calculated the percentage of contract and subcontract dollars awarded by MDOT to businesses by state and county during the study period.

The geographic market area is defined as that region which accounts for at least 75 percent of overall contracting and procurement spending by a given government entity. Contractors with locations within the States of Maryland, Delaware or within the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area (MSA) account for the vast majority of contracting and procurement expenditures by MDOT and its prime contractors during the study period.

As shown in Table 1.5, the overall share of MDOT expenditures inside this market area is 87.9 percent of dollars awarded and 83.8 percent of dollars paid.<sup>25</sup> In Construction, the shares are 90.9 percent and 87.5 percent, respectively. In AE-CRS, the shares are 90.7 percent and 92.1 percent, respectively. In Maintenance, the shares are 91.3 percent and 90.3 percent, respectively. In IT, the shares are 85.2 percent and 86.4 percent, respectively. In Services, the shares are 82.4 percent and 75.7 percent, respectively. In CSE, the share is 57.8 percent.<sup>26</sup>

For the purpose of this Study, we therefore define the primary geographic market area to be the State of Maryland, the State of Delaware, the District of Columbia, and the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.<sup>27</sup>

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<sup>25</sup> Tables 1.5.A, 1.5.B, and 1.5.C in Appendix III show comparable results for SHA, MTA, and MAA, respectively.

<sup>26</sup> For informational purposes, Table 1.5 also shows the share of awards and payments inside and outside the State of Maryland.

<sup>27</sup> Outside of Maryland and District of Columbia, the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA includes Arlington County, VA; Clarke County, VA; Fairfax County, VA; Fauquier County, VA; Loudoun County, VA; Prince William County, VA; Spotsylvania County, VA; Stafford County, VA; Warren County, VA; Alexandria City, VA; Fairfax City, VA; Falls Church City, VA; Fredericksburg City, VA; Manassas City, VA; Manassas Park City, VA; and Jefferson County, WV.

**Table 1.5. Distribution of MDOT Contracting and Procurement Dollars by Geographic Location**

<b>Location</b>	<b>Construc- tion (%)</b>	<b>AE-CRS (%)</b>	<b>Main- tenance (%)</b>	<b>IT (%)</b>	<b>Services (%)</b>	<b>CSE (%)</b>	<b>Overall (%)</b>
	<b>Awarded Dollars</b>						
Inside MDOT Market Area	90.9	90.7	91.3	85.2	82.4	57.8	87.9
Outside MDOT Market Area	9.1	9.3	8.7	14.8	17.6	42.2	12.1
Inside State of Maryland	84.7	88.0	81.5	78.0	80.7	57.3	82.9
Outside State of Maryland	15.3	12.0	18.5	22.0	19.3	42.7	17.1
	<b>Paid Dollars</b>						
Inside MDOT Market Area	87.5	92.1	90.3	86.4	75.7	57.8	83.8
Outside MDOT Market Area	12.5	7.9	9.7	13.6	24.3	42.2	16.2
Inside State of Maryland	82.5	89.6	79.1	75.3	74.1	57.3	79.3
Outside State of Maryland	17.5	10.4	20.9	24.7	25.9	42.7	20.7

Source: See Table 1.3.

Within the market area, the geographic distribution of contract and procurement dollars across all procurement categories is shown in Table 1.6.<sup>28</sup>

**Table 1.6. Distribution of MDOT Prime Contract and Subcontract Award Dollars by State and County, 2005-2009**

STATE	COUNTY	AMOUNT	PERCENT	CUMULATIVE PERCENT
MD	Baltimore City	\$1,018,003,908	30.02	30.02
MD	Baltimore	\$547,841,775	16.16	46.18
MD	Montgomery	\$467,433,954	13.79	59.96
MD	Anne Arundel	\$366,395,181	10.81	70.77
MD	Howard	\$256,357,418	7.56	78.33
MD	Frederick	\$148,230,816	4.37	82.70
MD	Prince Georges	\$137,532,223	4.06	86.76
MD	Kent	\$53,869,402	1.59	88.35
MD	Harford	\$44,814,401	1.32	89.67
MD	Carroll	\$44,481,559	1.31	90.98
MD	Wicomico	\$38,931,708	1.15	92.13
DC	District of Columbia	\$36,918,600	1.09	93.22
VA	Fairfax	\$32,189,067	0.95	94.16
MD	Charles	\$29,204,510	0.86	95.03
MD	Garrett	\$23,879,869	0.70	95.73
DE	New Castle	\$23,139,948	0.68	96.41
VA	Prince William	\$16,938,597	0.50	96.91
VA	Arlington	\$16,674,155	0.49	97.40
MD	Washington	\$16,491,728	0.49	97.89
MD	Allegany	\$14,932,514	0.44	98.33
VA	Falls Church City	\$8,837,942	0.26	98.59
VA	Loudoun	\$8,531,993	0.25	98.84
MD	Queen Annes	\$6,975,436	0.21	99.05
Balance (17 counties)		\$32,258,604	0.95	100.00

<sup>28</sup> Tables 1.6.A, 1.6.B, and 1.6.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

Outside the geographic market, areas that received a significant amount of MDOT spending activity (defined somewhat arbitrarily, as counties that accounted for more than approximately 0.25% of total spending among three or more vendors) included:

CONSTRUCTION

York County, PA  
Lancaster County, PA  
Allegheny County, PA  
Chester County, PA

AE-CRS

Philadelphia County, PA  
Hamilton County, OH  
New York County, NY  
Allegheny County, PA  
Cook County, IL

MAINTENANCE

York County, PA  
Henrico County, VA  
Lauderdale County, AL  
Cook County, IL

SERVICES

Canada  
Essex County, NJ  
Middlesex County, MA

For SHA, significant counties outside the market area included:

CONSTRUCTION

York County, PA  
Lancaster County, PA  
Chester County, PA  
Allegheny County, PA

AE-CRS

Philadelphia County, PA  
Allegheny County, PA

MAINTENANCE

York County, PA  
Lauderdale County, AL  
Fulton County, GA

SERVICES

Essex County, NJ  
Mecklenberg County, NC

For MTA, significant counties outside the market area included:

CONSTRUCTION

Cook County, IL

AE-CRS

Philadelphia County, PA

SERVICES

Canada

Essex County, NJ

For MAA, significant counties outside the market area included:

AE-CRS

Hamilton County, OH

Cook County, IL

Tarrant County, TX

Middlesex County, MA

## **C. Product Market Definition for Contracting and Procurement**

Using the major procurement categories for each prime contract and the primary NAICS codes assigned by NERA to each prime contractor and subcontractor in the Master Contract/Subcontract Database, we identified the most important Industry Sub-sectors within each contracting and procurement category, as measured by total dollars awarded.<sup>29</sup>

The relevant NAICS codes and their associated dollar weights appear below in Tables 1.7 through 1.12 for Construction, AE-CRS, Maintenance, IT, Services, and CSE, respectively.<sup>30</sup> It is clear from these six tables that, although numerous Industry Sub-sectors play a role in MDOT's contracting activities, actual contracting and subcontracting opportunities are not distributed evenly among them.

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<sup>29</sup> Calculations were also made using dollars actually paid (as opposed to dollars awarded) as the measure. The results, not shown here, were similar.

<sup>30</sup> Tables 1.7.A-1.12.A, 1.7.B-1.12.B, and 1.7.C-1.12.C, in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

In Construction, for example, we see from Table 1.7 that four Industry Sub-sectors account for almost four-fifths of all contract and subcontract dollars, six Sub-sectors account for over 90 percent, and the remainder is distributed among 39 additional Industry Sub-sectors. In AE-CRS (Table 1.8), we see an even more concentrated pattern—one Industry Sub-sector (NAICS 541) accounts for over 97 percent of all contract and subcontract dollars, with the balance distributed among another 29 Sub-sectors. In Maintenance (Table 1.9), seven Industry Sub-sectors together account for four-fifths of all contract and subcontract dollars, 11 Sub-sectors account for 90 percent, and the balance is distributed among another 28 Sub-sectors. In IT (Table 1.10), two Sub-sectors accounts for more than 90 percent of all contract and subcontract dollars and the balance is distributed among 11 others. In Services (Table 1.11), two Industry Sub-sectors accounts for three-fourths of all contract and subcontract dollars, five Sub-sectors account for over 90 percent, and the balance is distributed among another 47 Sub-sectors. Finally, in CSE (Table 1.12), two Sub-sectors account for more than four-fifths of all contract and subcontract dollars, five Sub-sectors account for 90 percent, and the balance is distributed among another 12 Sub-sectors.

Each Industry Sub-sector (three-digit NAICS) identified in Tables 1.7 through 1.12 consists of several more detailed Industry Groups (four-digit NAICS) and Industries (five-digit and six-digit NAICS).

- Overall, MDOT contract and subcontract awards occur in 66 NAICS Industry Sub-sectors, 166 NAICS Industry Groups, and 329 NAICS Industries.
- In Construction, MDOT contracting and subcontracting occurs across 45 NAICS Industry Sub-sectors, 107 NAICS Industry Groups, and 187 NAICS Industries.
- In AE-CRS, MDOT contracting and subcontracting occurs across 36 NAICS Industry Sub-sectors, 68 NAICS Industry Groups, and 104 NAICS Industries.
- In Maintenance, MDOT contracting and subcontracting occurs across 39 NAICS Industry Sub-sectors, 83 NAICS Industry Groups, and 128 NAICS Industries.
- In IT, MDOT contracting and subcontracting occurs across 13 NAICS Industry Sub-sectors, 20 NAICS Industry Groups, and 25 NAICS Industries.
- In Services, MDOT contracting and subcontracting occurs across 52 NAICS Industry Sub-sectors, 103 NAICS Industry Groups, and 160 NAICS Industries.
- In CSE, MDOT contracting and subcontracting occurs across 17 NAICS Industry Sub-sectors, 27 NAICS Industry Groups, and 32 NAICS Industries.

The resulting percentage weights from these NAICS Industries are used in Chapter II to calculate average DBE availability figures for Construction, AE-CRS, Maintenance, IT, Services, and CSE.<sup>31</sup>

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<sup>31</sup> After re-normalizing the percentage weights to sum to 100.

Now that the geographic and industry parameters of MDOT's contracting and procurement market area have been established, we will restrict our subsequent analyses to business enterprises and other phenomena within this specific market area in order to narrowly tailor our findings to the specific contracting circumstances of MDOT and its modal administrations.

**Table 1.7. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
237	Heavy and Civil Engineering Construction	46.71	46.71
238	Specialty Trade Contractors	14.59	61.30
236	Construction of Buildings	9.96	71.26
332	Fabricated Metal Product Manufacturing	9.38	80.64
541	Professional, Scientific, and Technical Services	6.31	86.95
327	Nonmetallic Mineral Product Manufacturing	4.24	91.19
561	Administrative and Support Services	2.62	93.81
423	Merchant Wholesalers, Durable Goods	1.80	95.60
484	Truck Transportation	1.64	97.24
531	Real Estate	0.44	97.68
339	Miscellaneous Manufacturing	0.40	98.08
518	Data Processing, Hosting and Related Services	0.34	98.43
444	Building Material and Garden Equipment and Supplies Dealers	0.28	98.71
324	Petroleum and Coal Products Manufacturing	0.23	98.94
115	Support Activities for Agriculture and Forestry	0.22	99.16
	Balance of industries (30 industry sub-sectors)	0.84	100.00
	<i>TOTAL - \$3,075,432,112</i>		

Source: See Table 1.3.

**Table 1.8. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: AE-CRS**

<b>NAICS Sub-sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
541	Professional, Scientific, and Technical Services	97.24	97.24
238	Specialty Trade Contractors	0.83	98.06
561	Administrative and Support Services	0.48	98.54
334	Computer and Electronic Product Manufacturing	0.33	98.87
236	Construction of Buildings	0.28	99.15
	Balance of industries (31 industry sub-sectors)	0.85	100.00
	<i>TOTAL - \$879,183,452</i>		

Source: See Table 1.3.

**Table 1.9. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: Maintenance**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
561	Administrative and Support Services	23.24	23.24
238	Specialty Trade Contractors	19.67	42.90
237	Heavy and Civil Engineering Construction	17.51	60.41
811	Repair and Maintenance	5.72	66.13
236	Construction of Buildings	5.71	71.85
485	Transit and Ground Passenger Transportation	5.47	77.31
541	Professional, Scientific, and Technical Services	3.59	80.90
336	Transportation Equipment Manufacturing	3.09	83.99
221	Utilities	2.71	86.70
488	Support Activities for Transportation	1.79	88.50
624	Social Assistance	1.66	90.15
339	Miscellaneous Manufacturing	1.65	91.80
562	Waste Management and Remediation Services	1.55	93.35
484	Truck Transportation	1.25	94.60
335	Electrical Equipment, Appliance, and Component Manufacturing	0.93	95.53
334	Computer and Electronic Product Manufacturing	0.92	96.46
423	Merchant Wholesalers, Durable Goods	0.83	97.29
447	Gasoline Stations	0.61	97.90
621	Ambulatory Health Care Services	0.57	98.47
812	Personal and Laundry Services	0.34	98.80
327	Nonmetallic Mineral Product Manufacturing	0.24	99.05
	Balance of industries (18 industry sub-sectors)	0.93	100.00
	<i>TOTAL - \$444,026,504</i>		

Source: See Table 1.3.

**Table 1.10. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: IT**

NAICS Sub- sector	NAICS Description	Percentage	Cumulative Percentage
541	Professional, Scientific, and Technical Services	86.42	86.42
511	Publishing Industries (except Internet)	5.08	91.49
334	Computer and Electronic Product Manufacturing	4.37	95.87
423	Merchant Wholesalers, Durable Goods	2.00	97.87
453	Miscellaneous Store Retailers	0.83	98.69
443	Electronics and Appliance Stores	0.50	99.19
	Balance of industries (7 industry sub-sectors)	0.81	100.00
<i>TOTAL - \$78,236,702</i>			

Source: See Table 1.3.

**Table 1.11. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
485	Transit and Ground Passenger Transportation	52.95	52.95
482	Rail Transportation	22.04	74.99
541	Professional, Scientific, and Technical Services	8.74	83.73
561	Administrative and Support Services	5.95	89.68
532	Rental and Leasing Services	2.10	91.78
423	Merchant Wholesalers, Durable Goods	1.32	93.10
522	Credit Intermediation and Related Activities	1.08	94.18
424	Merchant Wholesalers, Nondurable Goods	0.71	94.89
488	Support Activities for Transportation	0.64	95.54
238	Specialty Trade Contractors	0.62	96.16
721	Accommodation	0.54	96.70
453	Miscellaneous Store Retailers	0.43	97.13
524	Insurance Carriers and Related Activities	0.39	97.52
811	Repair and Maintenance	0.39	97.91
624	Social Assistance	0.29	98.20
621	Ambulatory Health Care Services	0.28	98.48
221	Utilities	0.19	98.67
337	Furniture and Related Product Manufacturing	0.19	98.86
336	Transportation Equipment Manufacturing	0.15	99.01
	Balance of industries (33 industry sub-sectors)	0.99	100.00
	<i>TOTAL - \$725,617,784</i>		

Source: See Table 1.3.

**Table 1.12. Distribution of MDOT Contract and Subcontract Dollars Awarded by Industry Sub-sector: CSE**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
336	Transportation Equipment Manufacturing	74.75	74.75
441	Motor Vehicle and Parts Dealers	6.07	80.82
423	Merchant Wholesalers, Durable Goods	4.47	85.29
334	Computer and Electronic Product Manufacturing	2.54	87.84
541	Professional, Scientific, and Technical Services	1.91	89.75
811	Repair and Maintenance	1.86	91.61
448	Clothing and Clothing Accessories Stores	1.74	93.34
331	Primary Metal Manufacturing	1.30	94.64
333	Machinery Manufacturing	1.14	95.78
325	Chemical Manufacturing	0.97	96.75
532	Rental and Leasing Services	0.78	97.54
424	Merchant Wholesalers, Nondurable Goods	0.68	98.22
323	Printing and Related Support Activities	0.62	98.83
332	Fabricated Metal Product Manufacturing	0.41	99.24
	Balance of industries (3 industry sub-sectors)	0.76	100.00
	<i>TOTAL - \$293,136,663</i>		

Source: See Table 1.3.



## II. DBE Availability in MDOT's Market Area

### A. Introduction

Estimates of DBE availability are important elements of a disparity study since they provide benchmarks for assessing the effectiveness of efforts to encourage DBE participation in public contracting. Furthermore, they provide data that may help establish goals for DBE participation that are tailored to the relevant market area for MDOT's three federally-funded modal administrations: SHA, MTA, and MAA.

For this study, NERA used M/WBE availability as a proxy for DBE availability. The M/WBE and DBE populations have a high degree of correlation and overlap. There are two differences worth noting, however. First, to be certified as a DBE a business owner's personal net worth cannot exceed \$1,320,000, exclusive of equity in the owner's primary residence and in the business seeking certification.<sup>32</sup> Hence, not all M/WBEs can become DBEs. In practice, however, very few households—especially minority households—have net worth levels in excess of \$1,320,000. According to the Federal Reserve's *2003 Survey of Small Business Finances* (the most recent available), about 1.4 percent of nonminority female-owned small businesses, and 4.2 percent of minority-owned small businesses have business equity in excess of \$1,320,000.<sup>33</sup> Census Bureau data from 2004 (the most recent available), for example, show that the median net worth of African American and Hispanic households is much less than the median for nonminority households. Very few African American or Hispanic households have net worth levels above even \$500,000. Only 3.2 percent of African American households and 4.0 percent of Hispanic households have a net worth greater than \$500,000—compared to a figure of 14.3 percent for nonminority households. Overall, the median net worth for nonminority households is over 11 times higher than that of African American households and over seven times higher than that of Hispanic households.<sup>34</sup> More recent data also document that the net worth of nonminority households is much greater than that of African American or Hispanic households. Furthermore, the recent recession has reduced minority household wealth disproportionately more than nonminority household wealth. According to a 2011 Pew Research Center Study, using data from the Census Bureau's *Survey of Income and Program Participation*, the median net worth of nonminority households fell 16.2 percent between 2005 and 2009. For African American households, the decline was 53.2 percent, while for Hispanic households the decline was 65.5 percent.<sup>35</sup>

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<sup>32</sup> 49 C.F.R. § 26.67.

<sup>33</sup> Calculations by NERA from 2003 SSBF data.

<sup>34</sup> See U.S. Census Bureau (2004a) and (2004b).

<sup>35</sup> See Taylor, et al. (2011).

Second, it is possible for businesses owned by nonminority males to become certified DBEs if they can establish that they are socially and economically disadvantaged under the regulations.<sup>36</sup> Hence, not all DBEs are necessarily M/WBEs. On balance, since so few M/WBEs have net worth levels in excess of \$1,320,000 and since a significant number of businesses owned by socially and economically disadvantaged nonminority males could potentially seek DBE certification (e.g., disabled persons, nonminority residents of Labor Surplus Areas, nonminority residents of HUB Zones), NERA's method may actually understate DBE availability to a small degree.<sup>37</sup>

NERA's approach to availability measurement reflects USDOT's own compliance advice. According to the USDOT's guidance, "... if you have data about the number of minority and women-owned businesses (regardless of whether they are certified as DBEs) in your market area, or DBEs in your market area that are in other recipients' Directories but not yours, you can supplement your Directory data with this information. *Doing so may provide a more complete picture of the availability of firms to work on your contracts than the data in your Directory alone.*"<sup>38</sup>

Many approaches to estimating availability suffer from internal inconsistency since the data employed to construct the availability numerator (i.e., the total number of DBE establishments in the market area) are measured differently than the data employed to construct the availability denominator (i.e., the total number of establishments in the market area). For example, the numerator might be drawn from an agency's internal list of certified DBEs while the denominator might be drawn from Census data. Since the methods used to identify and certify firms as DBEs are different from the methods used by the Census Bureau to count business establishments, such approaches inevitably compare "apples to oranges."

In this Study, we employ a method for measuring availability that ensures an "apples to apples" comparison between the availability numerator and denominator. This "Custom Census" method was pioneered by NERA and has been favorably reviewed by each court that has examined it to date. The Tenth Circuit found the custom census approach to be "a more sophisticated method to calculate availability than the earlier studies."<sup>39</sup> Likewise, this method was successful in the defense of the DBE programs for Minnesota DOT<sup>40</sup> and Illinois DOT,<sup>41</sup> as well as the M/WBE

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<sup>36</sup> 49 C.F.R. § 26.67 and Appendix E.

<sup>37</sup> For ease of exposition, we shall use the term DBE throughout the remainder of the report.

<sup>38</sup> See INTERNET: <http://www.osdbu.dot.gov/dbeprogram/hottips.cfm> (emphasis added). This information was released as official guidance by USDOT at 49 C.F.R. §26.9. See also Wainwright and Holt (2010), pp. 33-44.

<sup>39</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 966 (10<sup>th</sup> Cir. 2003) ("*Concrete Works IV*"), cert. denied, 540 U.S. 1027 (2003).

<sup>40</sup> *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8<sup>th</sup> Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

<sup>41</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007).

construction program for the City of Chicago.<sup>42</sup>

In addition to its favorable reception in the courts, when properly executed, NERA's Custom Census method is superior to other approaches for at least three reasons. First, it provides an internally consistent and rigorous "apples to apples" comparison between establishments in the availability numerator and those in the denominator. Second, it comports with the remedial nature of most DBE policies by measuring overall DBE availability in the relevant market area as opposed to only those businesses currently certified by an agency.<sup>43</sup> Third, when properly executed, the Custom Census is less likely to be tainted by the effects of past and present discrimination than other methods.<sup>44</sup>

NERA's Custom Census method has seven steps. These are:

1. Create a database of representative, recent, and complete MDOT contracts and purchases;
2. Identify MDOT's relevant geographic market from this database;
3. Identify MDOT's relevant product market from this database;
4. Count all business establishments in the relevant market area;
5. Identify listed DBE establishments in the relevant market area;
6. Verify the ownership status of listed DBEs; and
7. Verify the ownership status of all other firms in the relevant market area.

Steps 1-3 were described above in Chapter I. Steps 4-7 are described in more detail below.

## **B. Identifying Businesses in the Relevant Markets**

DBE availability is defined as the number of DBEs divided by the total number of businesses in MDOT's contracting market area—what we will refer to as the Baseline Business Universe—weighted by the dollars attributable to each detailed industry category.<sup>45</sup> Determining the total number of businesses in the relevant markets, however, is more straightforward than determining the number of minority- or women-owned businesses in those markets. The latter task has three main parts: (1) identify all listed DBEs in the relevant market; (2) verify the ownership status of

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<sup>42</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

<sup>43</sup> *See Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 at 723 (7<sup>th</sup> Cir. 2007) ("We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net").

<sup>44</sup> *See* Section B.4., below, "Understanding 'Capacity'" for further discussion of this point.

<sup>45</sup> To yield a percentage, the resulting figure is multiplied by 100.

listed DBEs; and (3) estimate the number of unlisted DBEs in the relevant market. This section describes how these tasks were accomplished.

It is important to note that NERA's availability analysis is free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. "Capacity" factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the market area. Despite the obvious relationship, some commentators argue that disparities should only be assessed between firms with similar "capacities."<sup>46</sup> However, courts in our view have properly refused to make the results of discrimination the benchmarks for non-discrimination. They have acknowledged that DBEs may be smaller, newer, and otherwise less competitive than non-DBEs because of the very discrimination sought to be remedied by race-conscious contracting programs.<sup>47</sup> Racial and gender differences in these capacity factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as control variables in a disparity study.<sup>48</sup>

## **1. Estimate the Total Number of Businesses in the Market**

We used data supplied by Dun & Bradstreet's Hoover's subsidiary to determine the total number of businesses operating in the relevant geographic and product markets (these markets were discussed in the previous section). Dun & Bradstreet produces the most comprehensive publicly available database of businesses in the U.S. This database contains over 15 million records and is updated continuously. Each record in Dun & Bradstreet represents a business or business establishment and includes the business name, address, telephone number, NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet) and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include, among others, annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U. S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

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<sup>46</sup> See, e.g., La Noue (2006). Most of La Noue's expert report in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002), including his views on "capacity," was rejected by the court on the basis that it was legal opinion and not expert analysis. According to the court, "[legal analysis] is an issue solely for the Court and not for the presentation of expert testimony...." (see Defendants-Appellees' Brief, *Gross Seed Company v. Nebraska Department of Roads*, on appeal to the Eight Circuit Court of Appeals).

<sup>47</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 981, 983 (10<sup>th</sup> Cir. 2003), cert. denied, 124 S.Ct. 556 (2003) (emphasis in the original) ("MWBE construction firms are generally smaller and less experienced because of discrimination.... Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a particular contract.")

<sup>48</sup> See also, Wainwright and Holt (2010), Appendix B "Understanding Capacity."

We used the Dun & Bradstreet database to determine the total number of businesses in each NAICS code that was identified as part of the MDOT product market. Table 2.1 shows the number of businesses identified in each NAICS sub-sector within the Construction category, along with the associated industry weight according to dollars awarded. Tables 2.2 through 2.6 repeat this information, respectively, for AE-CRS, Maintenance, IT, Services, and CSE.<sup>49</sup>

**Table 2.1. Construction—Number of Businesses and Industry Weight, by NAICS Code**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	872	45.39	45.39
2362	Nonresidential Building Construction	3007	9.32	54.72
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	8.93	63.65
2381	Foundation, Structure, and Building Exterior Contractors	5046	6.37	70.02
5413	Architectural, Engineering, and Related Services	9207	5.66	75.68
2382	Building Equipment Contractors	9373	5.33	81.01
3273	Cement and Concrete Product Manufacturing	247	4.20	85.21
5614	Business Support Services	16807	1.94	87.15
2389	Other Specialty Trade Contractors	5383	1.92	89.07
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	1.32	90.39
2371	Utility System Construction	531	1.24	91.63
4842	Specialized Freight Trucking	855	1.03	92.66
2383	Building Finishing Contractors	5931	0.98	93.63
2361	Residential Building Construction	16765	0.64	94.27
4841	General Freight Trucking	3643	0.61	94.88
5416	Management, Scientific, and Technical Consulting Services	30840	0.60	95.48
5312	Offices of Real Estate Agents and Brokers	10717	0.43	95.91
3323	Architectural and Structural Metals Manufacturing	471	0.43	96.34
5617	Services to Buildings and Dwellings	9843	0.43	96.77
3399	Other Miscellaneous Manufacturing	1083	0.40	97.17
5182	Data Processing, Hosting, and Related Services	1340	0.34	97.51
4442	Lawn and Garden Equipment and Supplies Stores	474	0.27	97.78
4233	Lumber and Other Construction Materials Merchant Wholesalers	1399	0.27	98.05
3241	Petroleum and Coal Products Manufacturing	102	0.23	98.28
1151	Support Activities for Crop Production	74	0.22	98.50
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.12	98.61
5612	Facilities Support Services	311	0.11	98.73
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2459	0.11	98.84

<sup>49</sup> Tables 2.1.A-2.6.A, 2.1.B-2.6.B, and 2.1.C-2.6.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2123	Nonmetallic Mineral Mining and Quarrying	85	0.08	98.91
5619	Other Support Services	1147	0.07	98.99
8111	Automotive Repair and Maintenance	4675	0.07	99.06
4889	Other Support Activities for Transportation	1164	0.07	99.13
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.06	99.19
3351	Electric Lighting Equipment Manufacturing	21	0.05	99.25
8114	Personal and Household Goods Repair and Maintenance	3000	0.05	99.30
2372	Land Subdivision	1480	0.05	99.35
5616	Investigation and Security Services	2115	0.05	99.40
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.05	99.45
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.04	99.49
8112	Electronic and Precision Equipment Repair and Maintenance	691	0.04	99.53
5415	Computer Systems Design and Related Services	12903	0.03	99.56
4543	Direct Selling Establishments	308	0.03	99.59
3271	Clay Product and Refractory Manufacturing	12	0.03	99.61
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.02	99.64
3339	Other General Purpose Machinery Manufacturing	128	0.02	99.66
3279	Other Nonmetallic Mineral Product Manufacturing	76	0.02	99.68
5622	Waste Treatment and Disposal	300	0.02	99.70
2379	Other Heavy and Civil Engineering Construction	118	0.02	99.72
5629	Remediation and Other Waste Management Services	382	0.02	99.74
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	439	0.02	99.76
4471	Gasoline Stations	1925	0.02	99.78
4539	Other Miscellaneous Store Retailers	3201	0.02	99.80
4441	Building Material and Supplies Dealers	1807	0.02	99.81
3365	Railroad Rolling Stock Manufacturing	13	0.01	99.83
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.84
5418	Advertising, Public Relations, and Related Services	891	0.01	99.85
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	597	0.01	99.86
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	0.01	99.87
3372	Office Furniture (including Fixtures) Manufacturing	26	0.01	99.88
5311	Lessors of Real Estate	4578	0.01	99.89
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.01	99.90
4422	Home Furnishings Stores	792	0.01	99.91
3329	Other Fabricated Metal Product Manufacturing	79	0.01	99.92
5322	Consumer Goods Rental	383	0.01	99.92
5613	Employment Services	2505	0.01	99.93
5419	Other Professional, Scientific, and Technical Services	4015	0.01	99.93
3325	Hardware Manufacturing	35	0.00	99.94
8139	Business, Professional, Labor, Political, and Similar Organizations	1733	0.00	99.94

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3315	Foundries	4	0.00	99.95
4884	Support Activities for Road Transportation	853	0.00	99.95
6211	Offices of Physicians	15872	0.00	99.96
5179	Other Telecommunications	1387	0.00	99.96
3332	Industrial Machinery Manufacturing	37	0.00	99.97
3219	Other Wood Product Manufacturing	16	0.00	99.97
2211	Electric Power Generation, Transmission and Distribution	38	0.00	99.97
3353	Electrical Equipment Manufacturing	46	0.00	99.98
3149	Other Textile Product Mills	78	0.00	99.98
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.00	99.98
4242	Drugs and Druggists' Sundries Merchant Wholesalers	312	0.00	99.98
5321	Automotive Equipment Rental and Leasing	417	0.00	99.98
5414	Specialized Design Services	1717	0.00	99.99
1119	Other Crop Farming	2303	0.00	99.99
4232	Furniture and Home Furnishing Merchant Wholesalers	897	0.00	99.99
3231	Printing and Related Support Activities	1206	0.00	99.99
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.00	99.99
3326	Spring and Wire Product Manufacturing	31	0.00	99.99
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	127	0.00	99.99
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	99.99
5221	Depository Credit Intermediation	488	0.00	100.00
5171	Wired Telecommunications Carriers	124	0.00	100.00
2213	Water, Sewage and Other Systems	142	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	21	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	0.00	100.00
3335	Metalworking Machinery Manufacturing	29	0.00	100.00
5152	Cable and Other Subscription Programming	257	0.00	100.00
2212	Natural Gas Distribution	87	0.00	100.00
5621	Waste Collection	190	0.00	100.00
3261	Plastics Product Manufacturing	139	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	332	0.00	100.00
8129	Other Personal Services	9147	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	89	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	13	0.00	100.00

Source: Dun & Bradstreet/Hoover's; DBE business directory information compiled by NERA; Master Contract/Subcontract Database. Note: the dollar-based industry weight and cumulative industry weight are expressed as percentages.

**Table 2.2. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	9463	81.60	81.60
5416	Management, Scientific, and Technical Consulting Services	34151	12.16	93.76
5415	Computer Systems Design and Related Services	13366	2.25	96.01
2382	Building Equipment Contractors	9288	0.75	96.76
5418	Advertising, Public Relations, and Related Services	2550	0.66	97.41
5614	Business Support Services	16807	0.44	97.85
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	183	0.31	98.16
2362	Nonresidential Building Construction	385	0.28	98.45
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	4999	0.25	98.69
2371	Utility System Construction	420	0.18	98.87
5411	Legal Services	14396	0.15	99.02
5419	Other Professional, Scientific, and Technical Services	5748	0.14	99.17
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	21	0.11	99.28
8134	Civic and Social Organizations	4249	0.06	99.34
3231	Printing and Related Support Activities	911	0.06	99.40
4885	Freight Transportation Arrangement	598	0.05	99.45
2389	Other Specialty Trade Contractors	5383	0.05	99.51
5629	Remediation and Other Waste Management Services	349	0.05	99.55
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1611	0.04	99.60
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.04	99.64
2373	Highway, Street, and Bridge Construction	872	0.04	99.68
2381	Foundation, Structure, and Building Exterior Contractors	1015	0.03	99.71
5417	Scientific Research and Development Services	3568	0.03	99.73
8114	Personal and Household Goods Repair and Maintenance	1333	0.02	99.76
4532	Office Supplies, Stationery, and Gift Stores	386	0.02	99.78
5182	Data Processing, Hosting, and Related Services	1340	0.02	99.80
5613	Employment Services	1184	0.02	99.82
4821	Rail Transportation	55	0.02	99.83
3341	Computer and Peripheral Equipment Manufacturing	123	0.01	99.85
5616	Investigation and Security Services	1444	0.01	99.86
5611	Office Administrative Services	1035	0.01	99.87
5622	Waste Treatment and Disposal	300	0.01	99.88
4812	Nonscheduled Air Transportation	84	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.90
4431	Electronics and Appliance Stores	1303	0.01	99.91
4841	General Freight Trucking	2725	0.01	99.92
6215	Medical and Diagnostic Laboratories	539	0.01	99.93
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	565	0.01	99.93
5313	Activities Related to Real Estate	800	0.01	99.94

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.01	99.95
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	858	0.01	99.95
5112	Software Publishers	1070	0.01	99.96
5322	Consumer Goods Rental	383	0.01	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	1188	0.01	99.97
6117	Educational Support Services	812	0.00	99.97
5612	Facilities Support Services	311	0.00	99.98
2123	Nonmetallic Mineral Mining and Quarrying	34	0.00	99.98
4543	Direct Selling Establishments	205	0.00	99.98
3271	Clay Product and Refractory Manufacturing	12	0.00	99.98
2383	Building Finishing Contractors	3272	0.00	99.99
8111	Automotive Repair and Maintenance	940	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	11	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	99.99
1151	Support Activities for Crop Production	74	0.00	99.99
3273	Cement and Concrete Product Manufacturing	215	0.00	100.00
3342	Communications Equipment Manufacturing	67	0.00	100.00
6211	Offices of Physicians	15872	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	893	0.00	100.00
5619	Other Support Services	1147	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	612	0.00	100.00
7115	Independent Artists, Writers, and Performers	1269	0.00	100.00
2131	Support Activities for Mining	18	0.00	100.00
4854	School and Employee Bus Transportation	164	0.00	100.00
3219	Other Wood Product Manufacturing	16	0.00	100.00
5617	Services to Buildings and Dwellings	3782	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.00	100.00
4441	Building Material and Supplies Dealers	501	0.00	100.00
3399	Other Miscellaneous Manufacturing	9	0.00	100.00

Source: See Table 2.1.

**Table 2.3. Maintenance—Number of Businesses and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5617	Services to Buildings and Dwellings	11251	18.42	18.42
2373	Highway, Street, and Bridge Construction	872	17.14	35.56
2382	Building Equipment Contractors	9373	12.47	48.04
4851	Urban Transit Systems	150	5.46	53.49
2362	Nonresidential Building Construction	3007	4.21	57.71
2381	Foundation, Structure, and Building Exterior Contractors	1148	3.44	61.15
8114	Personal and Household Goods Repair and Maintenance	1333	3.12	64.27
3365	Railroad Rolling Stock Manufacturing	13	3.09	67.36
5616	Investigation and Security Services	2007	2.79	70.15
5416	Management, Scientific, and Technical Consulting Services	32120	2.72	72.87
2211	Electric Power Generation, Transmission and Distribution	4	2.71	75.58
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	2.45	78.03
2383	Building Finishing Contractors	4109	2.22	80.26
4881	Support Activities for Air Transportation	63	1.79	82.04
3399	Other Miscellaneous Manufacturing	608	1.65	83.69
6241	Individual and Family Services	589	1.54	85.23
2389	Other Specialty Trade Contractors	5383	1.53	86.76
2361	Residential Building Construction	16365	1.50	88.26
5622	Waste Treatment and Disposal	46	1.49	89.75
4841	General Freight Trucking	3639	1.25	91.00
5613	Employment Services	2532	0.97	91.97
3351	Electric Lighting Equipment Manufacturing	51	0.93	92.90
5611	Office Administrative Services	1035	0.90	93.79
5413	Architectural, Engineering, and Related Services	7420	0.64	94.44
3342	Communications Equipment Manufacturing	343	0.63	95.07
4471	Gasoline Stations	1925	0.61	95.68
6212	Offices of Dentists	5627	0.56	96.24
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1967	0.51	96.75
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.29	97.04
2371	Utility System Construction	531	0.28	97.32
8129	Other Personal Services	299	0.25	97.57
3339	Other General Purpose Machinery Manufacturing	130	0.20	97.77
5415	Computer Systems Design and Related Services	12903	0.19	97.96
3271	Clay Product and Refractory Manufacturing	12	0.18	98.14
4233	Lumber and Other Construction Materials Merchant Wholesalers	1399	0.18	98.32
1151	Support Activities for Crop Production	74	0.16	98.48
5619	Other Support Services	1147	0.14	98.62

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
8111	Automotive Repair and Maintenance	4524	0.14	98.76
6243	Vocational Rehabilitation Services	783	0.11	98.87
4821	Rail Transportation	55	0.11	98.98
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1443	0.11	99.09
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.09	99.18
2379	Other Heavy and Civil Engineering Construction	118	0.09	99.27
8123	Drycleaning and Laundry Services	31	0.08	99.35
3259	Other Chemical Product and Preparation Manufacturing	89	0.08	99.43
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	0.06	99.49
3273	Cement and Concrete Product Manufacturing	215	0.06	99.55
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.06	99.61
5629	Remediation and Other Waste Management Services	274	0.06	99.66
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	0.05	99.72
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.05	99.76
2123	Nonmetallic Mineral Mining and Quarrying	77	0.04	99.81
4431	Electronics and Appliance Stores	1144	0.03	99.83
5614	Business Support Services	16807	0.02	99.86
5418	Advertising, Public Relations, and Related Services	151	0.02	99.88
8112	Electronic and Precision Equipment Repair and Maintenance	39	0.02	99.90
4921	Couriers and Express Delivery Services	249	0.01	99.91
4451	Grocery Stores	3432	0.01	99.92
4842	Specialized Freight Trucking	336	0.01	99.92
4543	Direct Selling Establishments	560	0.01	99.93
4884	Support Activities for Road Transportation	75	0.01	99.94
4853	Taxi and Limousine Service	664	0.01	99.95
5171	Wired Telecommunications Carriers	124	0.01	99.95
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.01	99.96
5322	Consumer Goods Rental	383	0.01	99.96
5417	Scientific Research and Development Services	1781	0.01	99.97
3323	Architectural and Structural Metals Manufacturing	84	0.00	99.97
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.00	99.98
5241	Insurance Carriers	250	0.00	99.98
6211	Offices of Physicians	15872	0.00	99.99
7211	Traveler Accommodation	2047	0.00	99.99
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	70	0.00	99.99
3353	Electrical Equipment Manufacturing	46	0.00	99.99
4441	Building Material and Supplies Dealers	501	0.00	99.99

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Estab-lishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5179	Other Telecommunications	782	0.00	100.00
5321	Automotive Equipment Rental and Leasing	417	0.00	100.00
4539	Other Miscellaneous Store Retailers	3201	0.00	100.00
5323	General Rental Centers	14	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	16	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	25	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	100.00

Source: See Table 2.1.

**Table 2.4. IT—Number of Businesses and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	13062	60.04	60.04
5416	Management, Scientific, and Technical Consulting Services	12573	15.88	75.91
5413	Architectural, Engineering, and Related Services	7312	10.50	86.41
5112	Software Publishers	1070	5.08	91.48
3342	Communications Equipment Manufacturing	253	4.23	95.72
4236	Electrical and Electronic Goods Merchant Wholesalers	569	1.27	96.98
4532	Office Supplies, Stationery, and Gift Stores	386	0.83	97.81
4431	Electronics and Appliance Stores	1303	0.50	98.31
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	833	0.50	98.81
4232	Furniture and Home Furnishing Merchant Wholesalers	398	0.23	99.04
4821	Rail Transportation	55	0.20	99.24
3353	Electrical Equipment Manufacturing	46	0.19	99.43
5613	Employment Services	1184	0.15	99.58
3341	Computer and Peripheral Equipment Manufacturing	94	0.14	99.72
3333	Commercial and Service Industry Machinery Manufacturing	50	0.09	99.81
5614	Business Support Services	16807	0.08	99.89
3323	Architectural and Structural Metals Manufacturing	317	0.07	99.96
4543	Direct Selling Establishments	457	0.02	99.99
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.01	100.00

Source: See Table 2.1.

**Table 2.5. Services—Number of Businesses and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4851	Urban Transit Systems	150	26.62	26.62
4821	Rail Transportation	55	22.04	48.66
4859	Other Transit and Ground Passenger Transportation	361	12.69	61.35
4855	Charter Bus Industry	143	8.82	70.17
5613	Employment Services	2505	5.60	75.77
4854	School and Employee Bus Transportation	164	3.64	79.41
5413	Architectural, Engineering, and Related Services	9207	2.99	82.39
5418	Advertising, Public Relations, and Related Services	3100	2.15	84.54
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	860	2.08	86.63
5416	Management, Scientific, and Technical Consulting Services	33957	1.83	88.46
5415	Computer Systems Design and Related Services	13207	1.49	89.95
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	1.30	91.25
4853	Taxi and Limousine Service	370	1.18	92.43
5221	Depository Credit Intermediation	2782	1.08	93.51
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.70	94.22
4885	Freight Transportation Arrangement	598	0.58	94.80
2381	Foundation, Structure, and Building Exterior Contractors	2338	0.55	95.35
7211	Traveler Accommodation	2047	0.54	95.89
4532	Office Supplies, Stationery, and Gift Stores	2781	0.42	96.31
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.39	96.70
8111	Automotive Repair and Maintenance	5464	0.37	97.07
6213	Offices of Other Health Practitioners	2528	0.28	97.35
6242	Community Food and Housing, and Emergency and Other Relief Services	15	0.28	97.63
5617	Services to Buildings and Dwellings	8129	0.20	97.83
2212	Natural Gas Distribution	87	0.19	98.01
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	57	0.18	98.20
5419	Other Professional, Scientific, and Technical Services	3057	0.15	98.35
3365	Railroad Rolling Stock Manufacturing	13	0.15	98.50
2362	Nonresidential Building Construction	3007	0.14	98.64
3231	Printing and Related Support Activities	1478	0.11	98.75
4543	Direct Selling Establishments	205	0.11	98.86
5616	Investigation and Security Services	925	0.09	98.95
4471	Gasoline Stations	1925	0.08	99.03
2373	Highway, Street, and Bridge Construction	872	0.07	99.10
5417	Scientific Research and Development Services	3568	0.07	99.16
4889	Other Support Activities for Transportation	1164	0.06	99.22
2382	Building Equipment Contractors	9288	0.06	99.28
5614	Business Support Services	17099	0.05	99.33
4921	Couriers and Express Delivery Services	249	0.05	99.38
3353	Electrical Equipment Manufacturing	95	0.04	99.43

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.04	99.47
4812	Nonscheduled Air Transportation	84	0.04	99.51
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	239	0.04	99.54
5121	Motion Picture and Video Industries	1644	0.03	99.58
5622	Waste Treatment and Disposal	168	0.03	99.61
8129	Other Personal Services	299	0.02	99.63
5311	Lessors of Real Estate	3726	0.02	99.65
5191	Other Information Services	812	0.02	99.67
5322	Consumer Goods Rental	867	0.02	99.69
3399	Other Miscellaneous Manufacturing	640	0.02	99.72
8139	Business, Professional, Labor, Political, and Similar Organizations	3582	0.02	99.73
2389	Other Specialty Trade Contractors	5383	0.02	99.75
4236	Electrical and Electronic Goods Merchant Wholesalers	1188	0.02	99.77
3271	Clay Product and Refractory Manufacturing	1	0.01	99.78
5171	Wired Telecommunications Carriers	124	0.01	99.80
6243	Vocational Rehabilitation Services	783	0.01	99.81
3133	Textile and Fabric Finishing and Fabric Coating Mills	230	0.01	99.82
8112	Electronic and Precision Equipment Repair and Maintenance	691	0.01	99.83
2371	Utility System Construction	420	0.01	99.84
3351	Electric Lighting Equipment Manufacturing	51	0.01	99.86
5111	Newspaper, Periodical, Book, and Directory Publishers	982	0.01	99.87
8114	Personal and Household Goods Repair and Maintenance	1164	0.01	99.88
5411	Legal Services	14396	0.01	99.89
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.01	99.90
5414	Specialized Design Services	2265	0.01	99.90
5511	Management of Companies and Enterprises	1001	0.01	99.91
4842	Specialized Freight Trucking	406	0.01	99.92
6113	Colleges, Universities, and Professional Schools	1040	0.01	99.93
4441	Building Material and Supplies Dealers	1684	0.01	99.94
4431	Electronics and Appliance Stores	1685	0.01	99.94
4539	Other Miscellaneous Store Retailers	3201	0.01	99.95
5122	Sound Recording Industries	419	0.01	99.95
3372	Office Furniture (including Fixtures) Manufacturing	53	0.01	99.96
2213	Water, Sewage and Other Systems	6	0.01	99.97
8123	Drycleaning and Laundry Services	31	0.01	99.97
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1249	0.00	99.98
7223	Special Food Services	960	0.00	99.98
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	122	0.00	99.98
3359	Other Electrical Equipment and Component Manufacturing	14	0.00	99.99
4241	Paper and Paper Product Merchant Wholesalers	112	0.00	99.99
5179	Other Telecommunications	1387	0.00	99.99

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3323	Architectural and Structural Metals Manufacturing	33	0.00	99.99
7111	Performing Arts Companies	1081	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	100.00
5239	Other Financial Investment Activities	2194	0.00	100.00
5223	Activities Related to Credit Intermediation	166	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	89	0.00	100.00
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	69	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	7	0.00	100.00
5615	Travel Arrangement and Reservation Services	1624	0.00	100.00
3341	Computer and Peripheral Equipment Manufacturing	94	0.00	100.00
7115	Independent Artists, Writers, and Performers	1269	0.00	100.00
3219	Other Wood Product Manufacturing	161	0.00	100.00
2383	Building Finishing Contractors	837	0.00	100.00
3315	Foundries	5	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	893	0.00	100.00
3339	Other General Purpose Machinery Manufacturing	100	0.00	100.00
4232	Furniture and Home Furnishing Merchant Wholesalers	499	0.00	100.00
3369	Other Transportation Equipment Manufacturing	15	0.00	100.00
3326	Spring and Wire Product Manufacturing	3	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	1	0.00	100.00
4246	Chemical and Allied Products Merchant Wholesalers	282	0.00	100.00

Source: See Table 2.1.

**Table 2.6. CSE—Number of Businesses and Industry Weight, by NAICS Code**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3362	Motor Vehicle Body and Trailer Manufacturing	19	42.31	42.31
3365	Railroad Rolling Stock Manufacturing	13	30.70	73.01
4411	Automobile Dealers	1267	5.20	78.21
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1741	2.71	80.92
3342	Communications Equipment Manufacturing	343	2.54	83.46
8111	Automotive Repair and Maintenance	3735	1.86	85.32
4481	Clothing Stores	793	1.74	87.06
5413	Architectural, Engineering, and Related Services	5431	1.48	88.54
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	1.30	89.84
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	893	1.24	91.08
3369	Other Transportation Equipment Manufacturing	15	1.06	92.14
4413	Automotive Parts, Accessories, and Tire Stores	1051	0.88	93.02
3259	Other Chemical Product and Preparation Manufacturing	89	0.72	93.73
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	54	0.68	94.42
4241	Paper and Paper Product Merchant Wholesalers	332	0.68	95.10
3363	Motor Vehicle Parts Manufacturing	67	0.68	95.78
3231	Printing and Related Support Activities	911	0.62	96.40
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	181	0.60	97.00
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	833	0.51	97.51
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	0.45	97.97
5416	Management, Scientific, and Technical Consulting Services	219	0.43	98.39
3329	Other Fabricated Metal Product Manufacturing	5	0.41	98.80
5179	Other Telecommunications	1387	0.29	99.10
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	69	0.26	99.35
2362	Nonresidential Building Construction	2622	0.25	99.60
4811	Scheduled Air Transportation	85	0.21	99.82
5321	Automotive Equipment Rental and Leasing	413	0.18	100.00

Source: See Table 2.1.

## 2. *Identify Listed DBEs*

While extensive, Dun & Bradstreet does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in Dun & Bradstreet, experience has demonstrated that many are also missed. For this reason, several

additional steps were required to identify the appropriate percentage of DBEs in the relevant market.

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Maryland and surrounding states. Beyond the information already in Dun & Bradstreet/Hoover's, NERA collected lists of minority- and women-owned firms from other public and private entities. Specifically, directories were included from: Maryland Department of Transportation, American Minority Contractors & Businesses Association, Anne Arundel County, Baltimore County Chamber of Commerce, Business Research Services, Calvert County Minority Business Alliance, Carroll County, Charles County, City of Baltimore, Delaware DOT, Diversity Business.com, Diversity Information Resources, Frederick County Department of Human Relations, Garrett County, Governor's Commission on Asian Pacific American Affairs, Hagerstown/Washington Economic Development Commission, Howard County, Maryland Governor's Office of Minority Affairs, Maryland R\*STARS Database, Maryland Washington Minority Contractors Association, Maryland-National Capital Park & Planning Commission, Metro Washington, Metropolitan Washington Airports Authority, U.S. Department of Commerce Minority Business Development Agency, Minority Business Network, Montgomery County, National Association of Women in Construction, National Center for American Indian Enterprise Development, Richmond International Airport, Small Business Administration Dynamic Small Business Search, Tri-County Council of Southern Maryland, UIDA Business Services, Virginia Department of Minority Business Enterprise, West Virginia Department of Transportation, and Women's Business Enterprise National Council.<sup>50</sup>

The DBEs identified in this manner are referred to as "listed" DBEs. Table 2.7 shows the number of listed DBEs identified in each NAICS sub-sector within the Construction category, along with the associated industry weight according to dollars awarded—the same industry weight as used in corresponding Table 2.1. Comparable data for AE-CRS, Maintenance, IT, Services, and CSE appear in Tables 2.8–2.12, respectively.<sup>51</sup>

If the listed DBEs identified in the Tables 2.7–2.12 are, in fact, *all* DBEs and are the *only* DBEs among all the businesses identified in Tables 2.1–2.6, then an estimate of "listed" DBE availability is simply the number of listed DBEs divided by the total number of businesses in the relevant market. However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring DBE availability.

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<sup>50</sup> We also obtained information from certain entities that was duplicative of either Dun & Bradstreet or one or more of the other sources listed above. These entities are listed below in Appendix II. We were unable to obtain relevant lists or directories from a number of entities. The reasons for this include: (1) the entity did not have a list or the entity's list did not include race and sex information; (2) the entity was unresponsive to repeated attempts at contacts; or, (3) the entity simply declined to provide us the list. These entities, as well, are listed in Appendix II.

<sup>51</sup> Tables 2.7.A-2.12.A, 2.7.B-2.12.B, and 2.7.C-2.12.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

There are two reasons for this. First, it is likely that some of the DBEs listed in Tables 2.7–2.12 are not actually minority-owned or woman-owned. Second, it is likely that there are additional “unlisted” DBEs among all the businesses included in Tables 2.1–2.6. Such businesses may not appear in any of the directories we gathered and are therefore not included among the listed DBEs. Additional steps are required to test these two conditions and to arrive at a more accurate representation of DBE availability within the Baseline Business Universe. We discuss these steps in Sections 3.A and 3.B below.

**Table 2.7. Construction—Number of Listed DBEs and Industry Weight, by NAICS Code**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	135	45.39	45.39
2362	Nonresidential Building Construction	618	9.32	54.72
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	8.93	63.65
2381	Foundation, Structure, and Building Exterior Contractors	562	6.37	70.02
5413	Architectural, Engineering, and Related Services	1667	5.66	75.68
2382	Building Equipment Contractors	885	5.33	81.01
3273	Cement and Concrete Product Manufacturing	21	4.20	85.21
5614	Business Support Services	1989	1.94	87.15
2389	Other Specialty Trade Contractors	525	1.92	89.07
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	1.32	90.39
2371	Utility System Construction	68	1.24	91.63
4842	Specialized Freight Trucking	160	1.03	92.66
2383	Building Finishing Contractors	607	0.98	93.63
2361	Residential Building Construction	1029	0.64	94.27
4841	General Freight Trucking	494	0.61	94.88
5416	Management, Scientific, and Technical Consulting Services	8380	0.60	95.48
5312	Offices of Real Estate Agents and Brokers	1138	0.43	95.91
3323	Architectural and Structural Metals Manufacturing	57	0.43	96.34
5617	Services to Buildings and Dwellings	1884	0.43	96.77
3399	Other Miscellaneous Manufacturing	226	0.40	97.17
5182	Data Processing, Hosting, and Related Services	379	0.34	97.51
4442	Lawn and Garden Equipment and Supplies Stores	69	0.27	97.78
4233	Lumber and Other Construction Materials Merchant Wholesalers	122	0.27	98.05
3241	Petroleum and Coal Products Manufacturing	10	0.23	98.28
1151	Support Activities for Crop Production	13	0.22	98.50
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.12	98.61
5612	Facilities Support Services	118	0.11	98.73
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	279	0.11	98.84
2123	Nonmetallic Mineral Mining and Quarrying	7	0.08	98.91
5619	Other Support Services	269	0.07	98.99
8111	Automotive Repair and Maintenance	261	0.07	99.06

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4889	Other Support Activities for Transportation	118	0.07	99.13
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.06	99.19
3351	Electric Lighting Equipment Manufacturing	5	0.05	99.25
8114	Personal and Household Goods Repair and Maintenance	322	0.05	99.30
2372	Land Subdivision	62	0.05	99.35
5616	Investigation and Security Services	428	0.05	99.40
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.05	99.45
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.04	99.49
8112	Electronic and Precision Equipment Repair and Maintenance	67	0.04	99.53
5415	Computer Systems Design and Related Services	4564	0.03	99.56
4543	Direct Selling Establishments	25	0.03	99.59
3271	Clay Product and Refractory Manufacturing	3	0.03	99.61
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.02	99.64
3339	Other General Purpose Machinery Manufacturing	9	0.02	99.66
3279	Other Nonmetallic Mineral Product Manufacturing	12	0.02	99.68
5622	Waste Treatment and Disposal	41	0.02	99.70
2379	Other Heavy and Civil Engineering Construction	25	0.02	99.72
5629	Remediation and Other Waste Management Services	59	0.02	99.74
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	79	0.02	99.76
4471	Gasoline Stations	138	0.02	99.78
4539	Other Miscellaneous Store Retailers	393	0.02	99.80
4441	Building Material and Supplies Dealers	154	0.02	99.81
3365	Railroad Rolling Stock Manufacturing	3	0.01	99.83
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.84
5418	Advertising, Public Relations, and Related Services	227	0.01	99.85
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	61	0.01	99.86
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	0.01	99.87
3372	Office Furniture (including Fixtures) Manufacturing	12	0.01	99.88
5311	Lessors of Real Estate	222	0.01	99.89
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.01	99.90
4422	Home Furnishings Stores	168	0.01	99.91
3329	Other Fabricated Metal Product Manufacturing	9	0.01	99.92
5322	Consumer Goods Rental	46	0.01	99.92
5613	Employment Services	706	0.01	99.93
5419	Other Professional, Scientific, and Technical Services	519	0.01	99.93
3325	Hardware Manufacturing	2	0.00	99.94
8139	Business, Professional, Labor, Political, and Similar Organizations	12	0.00	99.94
3315	Foundries	0	0.00	99.95
4884	Support Activities for Road Transportation	63	0.00	99.95
6211	Offices of Physicians	1232	0.00	99.96

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5179	Other Telecommunications	154	0.00	99.96
3332	Industrial Machinery Manufacturing	3	0.00	99.97
3219	Other Wood Product Manufacturing	2	0.00	99.97
2211	Electric Power Generation, Transmission and Distribution	0	0.00	99.97
3353	Electrical Equipment Manufacturing	6	0.00	99.98
3149	Other Textile Product Mills	22	0.00	99.98
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.00	99.98
4242	Drugs and Druggists' Sundries Merchant Wholesalers	65	0.00	99.98
5321	Automotive Equipment Rental and Leasing	11	0.00	99.98
5414	Specialized Design Services	811	0.00	99.99
1119	Other Crop Farming	76	0.00	99.99
4232	Furniture and Home Furnishing Merchant Wholesalers	149	0.00	99.99
3231	Printing and Related Support Activities	228	0.00	99.99
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.00	99.99
3326	Spring and Wire Product Manufacturing	3	0.00	99.99
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	20	0.00	99.99
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	99.99
5221	Depository Credit Intermediation	0	0.00	100.00
5171	Wired Telecommunications Carriers	14	0.00	100.00
2213	Water, Sewage and Other Systems	5	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	5	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.00	100.00
3335	Metalworking Machinery Manufacturing	6	0.00	100.00
5152	Cable and Other Subscription Programming	13	0.00	100.00
2212	Natural Gas Distribution	4	0.00	100.00
5621	Waste Collection	33	0.00	100.00
3261	Plastics Product Manufacturing	15	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	114	0.00	100.00
8129	Other Personal Services	1430	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	14	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	2	0.00	100.00

Source: See Table 2.1.

**Table 2.8. AE-CRS—Number of Listed DBEs and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	1683	81.60	81.60
5416	Management, Scientific, and Technical Consulting Services	9310	12.16	93.76
5415	Computer Systems Design and Related Services	4737	2.25	96.01
2382	Building Equipment Contractors	870	0.75	96.76
5418	Advertising, Public Relations, and Related Services	665	0.66	97.41
5614	Business Support Services	1989	0.44	97.85
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	34	0.31	98.16
2362	Nonresidential Building Construction	54	0.28	98.45
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	922	0.25	98.69
2371	Utility System Construction	46	0.18	98.87
5411	Legal Services	1078	0.15	99.02
5419	Other Professional, Scientific, and Technical Services	830	0.14	99.17
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	2	0.11	99.28
8134	Civic and Social Organizations	26	0.06	99.34
3231	Printing and Related Support Activities	171	0.06	99.40
4885	Freight Transportation Arrangement	106	0.05	99.45
2389	Other Specialty Trade Contractors	525	0.05	99.51
5629	Remediation and Other Waste Management Services	50	0.05	99.55
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	169	0.04	99.60
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.04	99.64
2373	Highway, Street, and Bridge Construction	135	0.04	99.68
2381	Foundation, Structure, and Building Exterior Contractors	144	0.03	99.71
5417	Scientific Research and Development Services	669	0.03	99.73
8114	Personal and Household Goods Repair and Maintenance	181	0.02	99.76
4532	Office Supplies, Stationery, and Gift Stores	93	0.02	99.78
5182	Data Processing, Hosting, and Related Services	379	0.02	99.80
5613	Employment Services	286	0.02	99.82
4821	Rail Transportation	1	0.02	99.83
3341	Computer and Peripheral Equipment Manufacturing	29	0.01	99.85
5616	Investigation and Security Services	291	0.01	99.86
5611	Office Administrative Services	180	0.01	99.87
5622	Waste Treatment and Disposal	41	0.01	99.88
4812	Nonscheduled Air Transportation	7	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.90
4431	Electronics and Appliance Stores	197	0.01	99.91
4841	General Freight Trucking	357	0.01	99.92
6215	Medical and Diagnostic Laboratories	59	0.01	99.93

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	39	0.01	99.93
5313	Activities Related to Real Estate	102	0.01	99.94
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.01	99.95
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	216	0.01	99.95
5112	Software Publishers	166	0.01	99.96
5322	Consumer Goods Rental	46	0.01	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.01	99.97
6117	Educational Support Services	291	0.00	99.97
5612	Facilities Support Services	118	0.00	99.98
2123	Nonmetallic Mineral Mining and Quarrying	1	0.00	99.98
4543	Direct Selling Establishments	19	0.00	99.98
3271	Clay Product and Refractory Manufacturing	3	0.00	99.98
2383	Building Finishing Contractors	354	0.00	99.99
8111	Automotive Repair and Maintenance	70	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	0	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	99.99
1151	Support Activities for Crop Production	13	0.00	99.99
3273	Cement and Concrete Product Manufacturing	18	0.00	100.00
3342	Communications Equipment Manufacturing	7	0.00	100.00
6211	Offices of Physicians	1232	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	66	0.00	100.00
5619	Other Support Services	269	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	92	0.00	100.00
7115	Independent Artists, Writers, and Performers	518	0.00	100.00
2131	Support Activities for Mining	2	0.00	100.00
4854	School and Employee Bus Transportation	42	0.00	100.00
3219	Other Wood Product Manufacturing	2	0.00	100.00
5617	Services to Buildings and Dwellings	307	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.00	100.00
4441	Building Material and Supplies Dealers	33	0.00	100.00
3399	Other Miscellaneous Manufacturing	4	0.00	100.00

Source: See Table 2.1.

**Table 2.9. Maintenance—Number of Listed DBEs and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5617	Services to Buildings and Dwellings	2033	18.42	18.42
2373	Highway, Street, and Bridge Construction	135	17.14	35.56
2382	Building Equipment Contractors	885	12.47	48.04
4851	Urban Transit Systems	33	5.46	53.49
2362	Nonresidential Building Construction	618	4.21	57.71
2381	Foundation, Structure, and Building Exterior Contractors	171	3.44	61.15
8114	Personal and Household Goods Repair and Maintenance	181	3.12	64.27
3365	Railroad Rolling Stock Manufacturing	3	3.09	67.36
5616	Investigation and Security Services	465	2.79	70.15
5416	Management, Scientific, and Technical Consulting Services	8865	2.72	72.87
2211	Electric Power Generation, Transmission and Distribution	0	2.71	75.58
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	2.45	78.03
2383	Building Finishing Contractors	462	2.22	80.26
4881	Support Activities for Air Transportation	4	1.79	82.04
3399	Other Miscellaneous Manufacturing	133	1.65	83.69
6241	Individual and Family Services	13	1.54	85.23
2389	Other Specialty Trade Contractors	525	1.53	86.76
2361	Residential Building Construction	993	1.50	88.26
5622	Waste Treatment and Disposal	4	1.49	89.75
4841	General Freight Trucking	494	1.25	91.00
5613	Employment Services	719	0.97	91.97
3351	Electric Lighting Equipment Manufacturing	11	0.93	92.90
5611	Office Administrative Services	180	0.90	93.79
5413	Architectural, Engineering, and Related Services	1336	0.64	94.44
3342	Communications Equipment Manufacturing	61	0.63	95.07
4471	Gasoline Stations	138	0.61	95.68
6212	Offices of Dentists	488	0.56	96.24
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	208	0.51	96.75
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.29	97.04
2371	Utility System Construction	68	0.28	97.32
8129	Other Personal Services	48	0.25	97.57
3339	Other General Purpose Machinery Manufacturing	16	0.20	97.77
5415	Computer Systems Design and Related Services	4564	0.19	97.96
3271	Clay Product and Refractory Manufacturing	3	0.18	98.14
4233	Lumber and Other Construction Materials Merchant Wholesalers	122	0.18	98.32
1151	Support Activities for Crop Production	13	0.16	98.48
5619	Other Support Services	269	0.14	98.62
8111	Automotive Repair and Maintenance	244	0.14	98.76
6243	Vocational Rehabilitation Services	77	0.11	98.87
4821	Rail Transportation	1	0.11	98.98

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	169	0.11	99.09
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.09	99.18
2379	Other Heavy and Civil Engineering Construction	25	0.09	99.27
8123	Drycleaning and Laundry Services	5	0.08	99.35
3259	Other Chemical Product and Preparation Manufacturing	14	0.08	99.43
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	0.06	99.49
3273	Cement and Concrete Product Manufacturing	18	0.06	99.55
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.06	99.61
5629	Remediation and Other Waste Management Services	26	0.06	99.66
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	0.05	99.72
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.05	99.76
2123	Nonmetallic Mineral Mining and Quarrying	7	0.04	99.81
4431	Electronics and Appliance Stores	97	0.03	99.83
5614	Business Support Services	1989	0.02	99.86
5418	Advertising, Public Relations, and Related Services	26	0.02	99.88
8112	Electronic and Precision Equipment Repair and Maintenance	2	0.02	99.90
4921	Couriers and Express Delivery Services	51	0.01	99.91
4451	Grocery Stores	324	0.01	99.92
4842	Specialized Freight Trucking	79	0.01	99.92
4543	Direct Selling Establishments	101	0.01	99.93
4884	Support Activities for Road Transportation	8	0.01	99.94
4853	Taxi and Limousine Service	69	0.01	99.95
5171	Wired Telecommunications Carriers	14	0.01	99.95
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.01	99.96
5322	Consumer Goods Rental	46	0.01	99.96
5417	Scientific Research and Development Services	322	0.01	99.97
3323	Architectural and Structural Metals Manufacturing	7	0.00	99.97
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.00	99.98
5241	Insurance Carriers	18	0.00	99.98
6211	Offices of Physicians	1232	0.00	99.99
7211	Traveler Accommodation	159	0.00	99.99
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	0.00	99.99
3353	Electrical Equipment Manufacturing	6	0.00	99.99
4441	Building Material and Supplies Dealers	33	0.00	99.99
5179	Other Telecommunications	81	0.00	100.00
5321	Automotive Equipment Rental and Leasing	11	0.00	100.00
4539	Other Miscellaneous Store Retailers	393	0.00	100.00
5323	General Rental Centers	2	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	1	0.00	100.00

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3255	Paint, Coating, and Adhesive Manufacturing	2	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	100.00

Source: See Table 2.1.

**Table 2.10. IT—Number of Listed DBEs and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	4618	60.04	60.04
5416	Management, Scientific, and Technical Consulting Services	3684	15.88	75.91
5413	Architectural, Engineering, and Related Services	1309	10.50	86.41
5112	Software Publishers	166	5.08	91.48
3342	Communications Equipment Manufacturing	48	4.23	95.72
4236	Electrical and Electronic Goods Merchant Wholesalers	83	1.27	96.98
4532	Office Supplies, Stationery, and Gift Stores	93	0.83	97.81
4431	Electronics and Appliance Stores	197	0.50	98.31
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	214	0.50	98.81
4232	Furniture and Home Furnishing Merchant Wholesalers	77	0.23	99.04
4821	Rail Transportation	1	0.20	99.24
3353	Electrical Equipment Manufacturing	6	0.19	99.43
5613	Employment Services	286	0.15	99.58
3341	Computer and Peripheral Equipment Manufacturing	13	0.14	99.72
3333	Commercial and Service Industry Machinery Manufacturing	7	0.09	99.81
5614	Business Support Services	1989	0.08	99.89
3323	Architectural and Structural Metals Manufacturing	44	0.07	99.96
4543	Direct Selling Establishments	95	0.02	99.99
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.01	100.00

Source: See Table 2.1.

**Table 2.11. Services—Number of Listed DBEs and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4851	Urban Transit Systems	33	26.62	26.62
4821	Rail Transportation	1	22.04	48.66
4859	Other Transit and Ground Passenger Transportation	94	12.69	61.35
4855	Charter Bus Industry	43	8.82	70.17
5613	Employment Services	706	5.60	75.77
4854	School and Employee Bus Transportation	42	3.64	79.41
5413	Architectural, Engineering, and Related Services	1667	2.99	82.39
5418	Advertising, Public Relations, and Related Services	784	2.15	84.54
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	62	2.08	86.63
5416	Management, Scientific, and Technical Consulting Services	9283	1.83	88.46
5415	Computer Systems Design and Related Services	4683	1.49	89.95
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	1.30	91.25
4853	Taxi and Limousine Service	29	1.18	92.43
5221	Depository Credit Intermediation	25	1.08	93.51
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.70	94.22
4885	Freight Transportation Arrangement	106	0.58	94.80
2381	Foundation, Structure, and Building Exterior Contractors	300	0.55	95.35
7211	Traveler Accommodation	159	0.54	95.89
4532	Office Supplies, Stationery, and Gift Stores	738	0.42	96.31
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.39	96.70
8111	Automotive Repair and Maintenance	314	0.37	97.07
6213	Offices of Other Health Practitioners	543	0.28	97.35
6242	Community Food and Housing, and Emergency and Other Relief Services	2	0.28	97.63
5617	Services to Buildings and Dwellings	1646	0.20	97.83
2212	Natural Gas Distribution	4	0.19	98.01
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	10	0.18	98.20
5419	Other Professional, Scientific, and Technical Services	553	0.15	98.35
3365	Railroad Rolling Stock Manufacturing	3	0.15	98.50
2362	Nonresidential Building Construction	618	0.14	98.64
3231	Printing and Related Support Activities	304	0.11	98.75
4543	Direct Selling Establishments	19	0.11	98.86
5616	Investigation and Security Services	194	0.09	98.95
4471	Gasoline Stations	138	0.08	99.03
2373	Highway, Street, and Bridge Construction	135	0.07	99.10
5417	Scientific Research and Development Services	669	0.07	99.16
4889	Other Support Activities for Transportation	118	0.06	99.22
2382	Building Equipment Contractors	870	0.06	99.28
5614	Business Support Services	2024	0.05	99.33
4921	Couriers and Express Delivery Services	51	0.05	99.38
3353	Electrical Equipment Manufacturing	13	0.04	99.43

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.04	99.47
4812	Nonscheduled Air Transportation	7	0.04	99.51
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	27	0.04	99.54
5121	Motion Picture and Video Industries	370	0.03	99.58
5622	Waste Treatment and Disposal	27	0.03	99.61
8129	Other Personal Services	48	0.02	99.63
5311	Lessors of Real Estate	130	0.02	99.65
5191	Other Information Services	41	0.02	99.67
5322	Consumer Goods Rental	75	0.02	99.69
3399	Other Miscellaneous Manufacturing	145	0.02	99.72
8139	Business, Professional, Labor, Political, and Similar Organizations	26	0.02	99.73
2389	Other Specialty Trade Contractors	525	0.02	99.75
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.02	99.77
3271	Clay Product and Refractory Manufacturing	0	0.01	99.78
5171	Wired Telecommunications Carriers	14	0.01	99.80
6243	Vocational Rehabilitation Services	77	0.01	99.81
3133	Textile and Fabric Finishing and Fabric Coating Mills	94	0.01	99.82
8112	Electronic and Precision Equipment Repair and Maintenance	67	0.01	99.83
2371	Utility System Construction	46	0.01	99.84
3351	Electric Lighting Equipment Manufacturing	11	0.01	99.86
5111	Newspaper, Periodical, Book, and Directory Publishers	136	0.01	99.87
8114	Personal and Household Goods Repair and Maintenance	73	0.01	99.88
5411	Legal Services	1078	0.01	99.89
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.01	99.90
5414	Specialized Design Services	852	0.01	99.90
5511	Management of Companies and Enterprises	31	0.01	99.91
4842	Specialized Freight Trucking	72	0.01	99.92
6113	Colleges, Universities, and Professional Schools	4	0.01	99.93
4441	Building Material and Supplies Dealers	138	0.01	99.94
4431	Electronics and Appliance Stores	150	0.01	99.94
4539	Other Miscellaneous Store Retailers	393	0.01	99.95
5122	Sound Recording Industries	93	0.01	99.95
3372	Office Furniture (including Fixtures) Manufacturing	11	0.01	99.96
2213	Water, Sewage and Other Systems	1	0.01	99.97
8123	Drycleaning and Laundry Services	5	0.01	99.97
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	143	0.00	99.98
7223	Special Food Services	228	0.00	99.98
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	25	0.00	99.98
3359	Other Electrical Equipment and Component Manufacturing	1	0.00	99.99
4241	Paper and Paper Product Merchant Wholesalers	13	0.00	99.99
5179	Other Telecommunications	154	0.00	99.99

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3323	Architectural and Structural Metals Manufacturing	2	0.00	99.99
7111	Performing Arts Companies	193	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	100.00
5239	Other Financial Investment Activities	116	0.00	100.00
5223	Activities Related to Credit Intermediation	11	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	14	0.00	100.00
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	0	0.00	100.00
5615	Travel Arrangement and Reservation Services	376	0.00	100.00
3341	Computer and Peripheral Equipment Manufacturing	13	0.00	100.00
7115	Independent Artists, Writers, and Performers	518	0.00	100.00
3219	Other Wood Product Manufacturing	20	0.00	100.00
2383	Building Finishing Contractors	108	0.00	100.00
3315	Foundries	0	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	66	0.00	100.00
3339	Other General Purpose Machinery Manufacturing	8	0.00	100.00
4232	Furniture and Home Furnishing Merchant Wholesalers	72	0.00	100.00
3369	Other Transportation Equipment Manufacturing	2	0.00	100.00
3326	Spring and Wire Product Manufacturing	0	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	0	0.00	100.00
4246	Chemical and Allied Products Merchant Wholesalers	36	0.00	100.00

Source: See Table 2.1.

**Table 2.12. CSE—Number of Listed DBEs and Industry Weight, by NAICS Code**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3362	Motor Vehicle Body and Trailer Manufacturing	2	42.31	42.31
3365	Railroad Rolling Stock Manufacturing	3	30.70	73.01
4411	Automobile Dealers	51	5.20	78.21
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	217	2.71	80.92
3342	Communications Equipment Manufacturing	61	2.54	83.46
8111	Automotive Repair and Maintenance	191	1.86	85.32
4481	Clothing Stores	186	1.74	87.06
5413	Architectural, Engineering, and Related Services	1087	1.48	88.54
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	1.30	89.84
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	56	1.24	91.08
3369	Other Transportation Equipment Manufacturing	2	1.06	92.14
4413	Automotive Parts, Accessories, and Tire Stores	60	0.88	93.02
3259	Other Chemical Product and Preparation Manufacturing	14	0.72	93.73
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	8	0.68	94.42
4241	Paper and Paper Product Merchant Wholesalers	114	0.68	95.10
3363	Motor Vehicle Parts Manufacturing	4	0.68	95.78
3231	Printing and Related Support Activities	171	0.62	96.40
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	14	0.60	97.00
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	214	0.51	97.51
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.45	97.97
5416	Management, Scientific, and Technical Consulting Services	44	0.43	98.39
3329	Other Fabricated Metal Product Manufacturing	2	0.41	98.80
5179	Other Telecommunications	154	0.29	99.10
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20	0.26	99.35
2362	Nonresidential Building Construction	564	0.25	99.60
4811	Scheduled Air Transportation	1	0.21	99.82
5321	Automotive Equipment Rental and Leasing	11	0.18	100.00

Source: See Table 2.1.

### **3. *Verify Listed DBEs and Estimate Unlisted DBEs***

It is likely that information on minority and female ownership from Dun & Bradstreet and other directories is not correct in all instances. Phenomena such as ownership changes, associate status, mentor status, recording errors, or even misrepresentation will lead to businesses being listed as DBEs in a particular directory even though they may actually be owned by nonminority males.

Other things equal, this type of error would cause our availability estimate to be biased upward from the actual availability number.

The second likelihood that must be addressed is that not all DBE businesses are necessarily listed—either in Dun & Bradstreet or in any of the other directories we collected. Such firms may appear to be non-DBEs when, in fact, they are not. Such phenomena as geographic relocation, ownership changes, directory compilation errors, fear of discrimination, and limitations in DBE outreach could all lead to DBEs being unlisted. Other things equal, this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. We corrected for the effect of these biases using statistical sampling procedures. We surveyed a large, stratified random sample of 8,500 establishments drawn from the Baseline Business Universe and measured how often they were misclassified (or unclassified) by race and/or gender.<sup>52</sup>

Strata were defined according to NAICS sub-sectors code and listed DBE status.<sup>53</sup> In the phone survey, up to 10 attempts were made to reach each business and speak with an appropriate respondent. Attempts were scheduled for a mix of day and evening, weekdays and weekends, and appointments were scheduled for callbacks when necessary. Of the 8,500 firms in our sample, 4,590 (54.0%) were listed DBEs and 3,910 (46.0%) were unclassified by race or gender. Of these 8,500 firms, however, 674 were excluded as “unable to contact.” Exclusions resulted primarily from firms that were no longer in business.<sup>54</sup> Of the remaining 7,826 firms, 4,265 (54.5%) were listed DBEs and the remaining 3,561 establishments (45.5%) were unclassified.

The first part of the survey tested whether our sample of listed DBEs was correctly classified by race and/or gender. The second part of the survey tested whether the unclassified firms could all be properly classified as non-DBEs. Both elements of the survey are described in more detail below.

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<sup>52</sup> A similar method was employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Surveys of Small Business Finances for 1993 and 1998. See Catherine Haggerty, Karen Grigorian, Rachel Harter and John D. Wolken. “The 1998 Survey of Small Business Finances: Sampling and Level of Effort Associated with Gaining Cooperation from Minority-Owned Business,” *Proceedings of the Second International Conference on Establishment Surveys*, Buffalo, NY, June 17-21, 2000.

<sup>53</sup> Eighteen separate industry strata were created based on NAICS code and on whether a particular NAICS code was among those NAICS codes accounting for the top 90 percent of state contract and subcontract spending or not. All 18 strata were then split according to listed DBE status to create a total of 36 strata. Generally, listed DBEs were sampled at a higher rate than unclassified establishments.

<sup>54</sup> A Fisher’s Exact Test to check if putative DBEs were more likely to be affected by this than non-DBEs was not statistically significant.

### ***a. Survey of Listed DBEs***

We selected a stratified random sample of 4,590 listed DBEs to verify the race and gender status of their owner(s). Of these, 325 (7.1%) were excluded as “unable to contact.” Of the 4,265 remaining establishments, we obtained complete interviews from 1,979, for a response rate of 46.4 percent.

Of the 1,979 establishments interviewed, 256 (12.9 percent) were owned by nonminority males. Misclassification was observed in every NAICS stratum, ranging from a high of 40.0 percent in NAICS 11 and 22 (Agriculture and Utilities, Group A) to a low of 5.5 percent in NAICS 8 (Other Services, Group B) as shown in Table 2.13. As shown in Table 2.14, misclassification varied by putative race and gender as well.<sup>55</sup> It was highest among putative Native American firms, followed by Hispanics, nonminority women, Asians, and finally African Americans.<sup>56</sup>

The race and gender status of the listed DBEs responding to the survey was changed, if necessary, according to the survey results. For example, if a business originally listed as a nonminority female-owned was actually nonminority male-owned, then that business was counted as nonminority male-owned for purposes of calculating DBE availability. But what about the remaining putatively nonminority female-owned establishments that we did not interview? For these businesses, we estimate the race and gender of their ownership based on the amount of misclassification we observed among the nonminority female-owned firms that we did interview. In this example, our interviews show that 71.8 percent of these firms are indeed actually nonminority female-owned, 16.6 percent are actually nonminority male-owned, and 11.6 percent are actually minority-owned (see Table 2.14). Therefore, we assign each of the remaining putative nonminority female firms a 71.8 percent probability of actually being nonminority female-owned, a 16.6 percent probability of actually being nonminority male-owned, and a 11.6 percent probability of being minority-owned. We repeated this procedure within each sample stratum and for all putative race and gender categories.

### ***b. Survey of Unclassified Businesses***

In a manner exactly analogous to our survey of listed DBEs, in the second part of our survey we examined unclassified businesses, *i.e.* any business that was not originally identified as a DBE, either in Dun & Bradstreet/Hoover's or in one or more of the other directories, and that would otherwise appear to be a non-DBE.

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<sup>55</sup> By “putative,” we mean the race and gender that we initially assigned to each firm based on the information provided in State records, by Dun & Bradstreet/Hoover's, by our master DBE directory, or from other sources.

<sup>56</sup> For this study, “Black” or “African American” refers to an individual having origins in any of the Black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to an individual having origins in the Far East, Southeast Asia, or the Indian subcontinent; “Native American” refers to an individual having origins in any of the original peoples of North America other than Eskimos or Aleuts.

We selected a stratified random sample of 3,910 unclassified businesses from the Baseline Business Universe to verify the race and gender status of their owner(s). Of these, 349 (8.9%) were excluded as “unable to contact.” Of the 3,561 remaining establishments, we obtained 1,437 complete interviews, for a response rate of 40.4 percent.

Of the 1,437 establishments interviewed, 1,059 (73.7%) were owned by nonminority males, 166 (11.6%) by nonminority females, and 212 (14.8%) by minorities, as shown in Table 2.16. A similar phenomenon was observed within each industry stratum, as shown in Table 2.15.

As with the survey of listed DBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For example, if an interviewed business that was originally unclassified indicated that it was actually nonminority male-owned, then that business was counted as nonminority male-owned for purposes of the DBE availability calculation. If it indicated it was nonminority female-owned, it was counted as nonminority female, and so on. For unclassified businesses that were not interviewed, we assigned probability values (probability actually nonminority male-owned, probability actually nonminority female-owned, probability actually African American-owned, etc.) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

Clearly, a large majority of unclassified businesses in the Baseline Business Universe (73.7 percent overall) are nonminority male-owned. Nevertheless, this means that 26.3 percent were *not* nonminority male-owned. Among the latter, the largest group was nonminority female-owned, with descending size shares accounted for by African American-owned, Asian-owned, Hispanic-owned, and finally Native American-owned. Table 2.16 shows the unclassified business survey results by race and gender.

**Table 2.13. Listed DBE Survey—Amount of Misclassification, by NAICS Code Grouping**

<b>Listed DBE By NAICS Code Grouping</b>	<b>Misclassification (Percentage Nonminority Male)</b>	<b>Percentage Actually DBE-owned</b>	<b>Number of Businesses Interviewed</b>
NAICS 236-A	13.5	86.5	222
NAICS 237-A	13.7	86.3	139
NAICS 238-A	18.2	81.8	236
NAICS 30 or 42-A	15.8	84.2	133
NAICS 48-49-A	8.9	91.1	112
NAICS 44-45-A	14.4	85.6	97
NAICS 54-A	10.2	89.8	216
NAICS 5 but not 54-A	6.0	94.0	100
NAICS 6-7-A	6.5	93.5	108
NAICS 8-A	13.4	86.6	134
NAICS 11 or 22-A	40.0	60.0	5
NAICS 1 or 2-B	22.6	77.4	62
NAICS 3 or 42-B	19.7	80.3	66
NAICS 44-45-B	12.1	87.9	58
NAICS 48-49-B	17.4	82.6	86
NAICS 5-B	7.8	92.2	64
NAICS 6-7-B	8.8	91.2	68
NAICS 8-B	5.5	94.5	73
All NAICS Codes	12.9	87.1	1,979

Source: NERA telephone surveys.

Note: Two groupings of strata, A and B, were created. NAICS codes reflecting approximately 90 percent of all contract and subcontract spending were stratified into group A with the balance stratified into group B.

**Table 2.14. Listed DBE Survey—Amount of Misclassification, by Putative DBE Type**

<b>Putative Race/Gender</b>	<b>Misclassi- fication (Percentage Nonminority Male)</b>	<b>Misclassification (Percentage Other DBE Type)</b>	<b>Percentage Correctly Classified</b>	<b>Number of Businesses Interviewed</b>
African American (either gender)	3.4	4.4	92.2	499
Hispanic (either gender)	19.2	10.3	70.4	203
Asian (either gender)	10.6	7.7	81.7	246
Native American (either gender)	23.8	21.4	54.8	42
Nonminority Female	16.6	11.6	71.8	989
All DBE Types	12.9	9.4	77.7	1,979

Source and Notes: See Table 2.13. Similar calculations, not shown here, were performed for each stratum.

**Table 2.15. Unclassified Businesses Survey —By NAICS Code Grouping**

Listed DBE By SIC Code Grouping	Percentage Actually Nonminority Male-owned	Percentage DBE	Number of Businesses Interviewed
NAICS 236-A	79.8	20.2	173
NAICS 237-A	87.4	12.6	167
NAICS 238-A	83.3	16.7	168
NAICS 30 or 42-A	73.4	26.6	128
NAICS 48-49-A	56.7	43.3	90
NAICS 44-45-A	64.8	35.2	105
NAICS 54-A	73.3	26.7	146
NAICS 5 but not 54-A	68.0	32.0	50
NAICS 6-7-A	58.8	41.2	51
NAICS 8-A	75.3	24.7	73
NAICS 11 or 22-A	86.8	13.2	38
NAICS 1 or 2-B	82.1	17.9	39
NAICS 3 or 42-B	72.1	27.9	43
NAICS 44-45-B	56.8	43.2	37
NAICS 48-49-B	68.6	31.4	35
NAICS 5-B	59.5	40.5	37
NAICS 6-7-B	61.0	39.0	41
NAICS 8-B	50.0	50.0	16
All NAICS Codes	73.7	26.3	1,437

Source and Notes: See Table 2.13.

**Table 2.16. Unclassified Businesses Survey—By Race and Gender**

Verified Race/Gender	Number of Businesses Interviewed	Percentage of Total
Nonminority male	1,059	73.7
Nonminority female	166	11.6
African American (either gender)	104	7.2
Hispanic (either gender)	36	2.5
Asian (either gender)	68	4.7
Native American (either gender)	4	0.3
TOTAL	1,437	100.0

Source and Notes: See Table 2.13. Similar calculations, not shown here, were performed within each stratum.

#### **4. Understanding “Capacity”**

As noted in the beginning of this chapter, some observers, primarily opponents of efforts to address discrimination in contracting, have argued that, in order to be accurate, availability estimates must be adjusted for “capacity.” These assertions are rarely accompanied by specific suggestions about how such adjustments could be made consistent with professional social science standards. This Study does adjust for certain appropriate characteristics of firms related to capacity (such as industry affiliation, geographic location, owner labor market experience, and educational attainment), however, we are careful to not adjust for capacity factors that are themselves likely to be influenced by discrimination. In our view, all of the “capacity” indicators recommended by program opponents (*e.g.*, firm age, revenues, number of employees, largest contract received, bonding limits) are subject to the impact of discrimination.

Further, the reality is that large, adverse statistical disparities between minority-owned or women-owned businesses and nonminority male-owned businesses have been documented in numerous research studies and reports since *Croson*.<sup>57</sup> Business outcomes, however, can be influenced by multiple factors, and it is important that disparity studies examine the likelihood of whether discrimination is an important contributing factor to observed disparities.

<sup>57</sup> Enchautegui, et al. (1996). More recently, see Wainwright (2012), Wainwright (2010).

Moreover, terms such as “capacity,” “qualifications,” and “ability” are not well defined in any statistical sense. Does “capacity” mean revenue level, employment size, bonding limits, or number of contracts bid or awarded? Does “qualified” or “able” mean possession of a business license, certain amounts of training, types of work experience, or the number of contracts a firm can perform at a given moment? What mix of business attributes properly reflects “capacity”? Does the meaning of such terms differ from industry to industry, locality to locality, or through time? Where and how might such data be reliably gathered? Even if capacity is well-defined and adequate data are gathered, when measuring the existence of discrimination, the statistical method used should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, revenues, bonding limits, or number of employees.

Consider an extreme example where discrimination has prevented the emergence of any minority owned firms. Suppose that racial discrimination was ingrained in a state’s construction market. As a result, few minority construction employees are given the opportunity to gain managerial experience in the business; minorities who do end up starting construction firms are denied the opportunity to work as subcontractors for nonminority prime contractors; and nonminority prime contractors place pressure on unions not to work with minority firms and on bonding companies and banks to prevent minority owned construction firms from securing bonding and capital. In this example, discrimination has prevented the emergence of a minority highway construction industry with “capacity.” Those DBEs that exist at all will be smaller and less experienced and have lower revenues, bonding limits, and employees—that is, “capacity”—because of discrimination than firms that have benefited from the exclusionary system.

Using revenue as the measure of qualifications illustrates the point. If DBEs are subject to marketplace discrimination, their revenues will be smaller than nonminority, male-owned businesses because they will be less successful at obtaining work. Revenue measures the extent to which a firm has succeeded in the marketplace, perhaps in spite of discrimination—it does not measure the ability to succeed in the absence of discrimination and should not be used to evaluate the effects of discrimination.

Therefore, focusing on the “capacity” of businesses in terms of employment, revenue, bonding limits, number of trucks, and so forth is simply wrong as a matter of economics because it can obscure the existence of discrimination. A truly “effective” discriminatory system would lead to a finding of no “capacity,” and under the “capacity” approach, a finding of no discrimination. Excluding firms from an availability measure based on their “capacity” in a discriminatory market merely affirms the results of discrimination rather than ameliorating them. A capacity requirement could preclude MDOT from doing anything to rectify its passive participation through public dollars in a clearly discriminatory system. The capacity argument fails to acknowledge that discrimination has obstructed the emergence of “qualified, willing, and able” minority firms. Without such firms, there can be no statistical disparity.

Further, in dynamic business environments, and especially in the construction sector, such “qualifications” or “capacity” can be obtained relatively easily. It is well known that small construction companies can expand rapidly as needs arise by hiring workers and renting

equipment, and many general contractors subcontract the majority of a project. Firms grow quickly when demand increases and shrink quickly when demand decreases. Subcontracting is one important source of this elasticity, as has been noted by several academic studies.<sup>58</sup> Other industry sectors, especially in this era of Internet commerce and independent contractors, can also quickly grow or shrink in response to demand.

Finally, even where “capacity”-type factors have been controlled for in statistical analyses, results consistent with business discrimination are still typically observed. For example, large and statistically significant differences in commercial loan denial rates between minority and nonminority firms are evident throughout the country, even when detailed balance sheet and creditworthiness measures are held constant.<sup>59</sup> Similarly, economists using decennial census data have demonstrated that statistically significant disparities in business formation and business owner earnings between minorities and non-minorities remain even after controlling for a host of additional relevant factors, including educational achievement, labor market experience, marital status, disability status, veteran status, interest and dividend income, labor market attachment, industry, geographic location, and local labor market variables such as the unemployment rate, population growth rate, government employment rate, or per capita income.<sup>60</sup>

To summarize, the statistical analysis of the availability of minority firms compared to nonminority firms to examine the existence and effects of discrimination in disparity studies should not adjust for inappropriate “capacity” factors because:

- “Capacity” has been ill-defined; and reliable data for measurement are generally unavailable;
- Small firms, particularly in the construction industry, are highly elastic with regard to ability to perform;
- Many disparity studies have shown that even when “capacity” and “qualifications”-type factors are held constant in statistical analyses, evidence of disparate impact against DBE firms persists; and
- Most important, identifiable indicators of “capacity” are themselves impacted by discrimination.

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<sup>58</sup> Bourdon and Levitt (1980); *see also* Eccles (1981); and Gould (1980).

<sup>59</sup> *See* Wainwright (2008).

<sup>60</sup> Wainwright (2000).

## C. Estimates of DBE Availability by Detailed Race, Gender, and Industry

Tables 2.17-2.22 present detailed estimates of DBE availability in MDOT's market area by race, gender, and detailed NAICS industry for each major procurement category: Construction, AE-CRS, Maintenance, IT, Services, and CSE. These estimates have been statistically corrected to adjust for misclassification and non-classification bias in the Baseline Business Universe as described above.

Tables 2.23 and 2.24 provide summary level estimates of availability for each major procurement category and overall. Tables 2.25 and 2.26 provide summary level estimates of availability for each major procurement category and overall restricted to federally-assisted contracts. Summary level estimates are weighted averages with weights in Tables 2.23 and 2.25 based on dollars awarded in each industry category, as described in the previous chapter. Weights in Tables 2.24 and 2.26 are based on dollars paid in each industry category.<sup>61</sup>

Overall:

DBE availability in Construction is estimated to be 33.49 percent when weighted by award dollars and 33.84 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 34.07 and 34.56, respectively.

DBE availability in AE-CRS is estimated to be 41.27 percent when weighted by award dollars and 41.82 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 41.01 and 41.63, respectively.

DBE availability in Maintenance is estimated to be 37.92 percent when weighted by award dollars and 39.22 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 26.61 and 27.15, respectively.

DBE availability in IT is estimated to be 48.76 percent when weighted by award dollars and 47.39 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 45.04 and 43.69, respectively.

DBE availability in Services is estimated to be 47.25 percent when weighted by award dollars and 47.89 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 47.08 and 47.77, respectively.

DBE availability in CSE is estimated to be 36.05 percent when weighted by award dollars and 36.05 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 34.92 and 34.92, respectively.

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<sup>61</sup> Tables 2.17.A-2.26.A, 2.17.B-2.26.B, and 2.17.C-2.26.C in Appendix III show comparable results for SHA, MTA, and MAA, respectively.

DBE availability across all six major procurement categories is estimated to be 38.00 percent when weighted by award dollars and 37.64 percent when weighted by paid dollars. On federally-assisted contracts, the figures are 37.58 and 37.47, respectively.

**Table 2.17. Detailed DBE Availability—Construction**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Other Crop Farming (NAICS 1119)	2.63	2.58	0.02	0.00	14.08	19.32	80.68
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.73	0.56	0.00	0.00	16.66	17.95	82.05
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Water, Sewage and Other Systems (NAICS 2213)	2.60	2.60	0.00	0.00	14.19	19.38	80.62
Residential Building Construction (NAICS 2361)	4.30	3.41	0.37	0.19	13.43	21.70	78.30
Nonresidential Building Construction (NAICS 2362)	10.38	4.93	3.11	0.84	13.17	32.43	67.57
Utility System Construction (NAICS 2371)	6.79	2.23	0.40	0.49	10.32	20.22	79.78
Land Subdivision (NAICS 2372)	7.17	1.35	0.00	0.02	7.41	15.94	84.06
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Other Heavy and Civil Engineering Construction (NAICS 2379)	14.21	3.30	0.85	0.08	11.70	30.13	69.87
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	8.32	3.48	2.68	0.33	12.74	27.54	72.46
Building Equipment Contractors (NAICS 2382)	7.60	2.82	2.77	0.19	10.90	24.27	75.73
Building Finishing Contractors (NAICS 2383)	5.75	3.48	2.59	0.06	11.17	23.03	76.97
Other Specialty Trade Contractors (NAICS 2389)	6.37	3.05	2.53	0.16	11.10	23.20	76.80
Other Textile Product Mills (NAICS 3149)	10.72	0.00	9.46	2.44	21.25	43.86	56.14
Other Wood Product Manufacturing (NAICS 3219)	3.42	0.00	7.20	0.68	23.17	34.47	65.53
Printing and Related Support Activities (NAICS 3231)	5.72	0.33	9.56	1.05	21.29	37.96	62.04
Petroleum and Coal Products Manufacturing (NAICS 3241)	5.89	0.56	7.60	1.11	16.66	31.82	68.18

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	6.03	0.19	7.51	0.74	14.96	29.43	70.57
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	6.19	1.32	11.02	2.47	15.81	36.81	63.19
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Foundries (NAICS 3315)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.87	0.90	7.96	0.83	17.05	32.62	67.38
Hardware Manufacturing (NAICS 3325)	6.75	0.00	8.94	2.37	13.10	31.16	68.84
Spring and Wire Product Manufacturing (NAICS 3326)	6.50	0.00	10.75	2.30	13.29	32.83	67.17
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.77	0.00	9.35	2.40	11.55	30.06	69.94
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Industrial Machinery Manufacturing (NAICS 3332)	6.57	0.00	10.87	2.30	12.64	32.39	67.61
Metalworking Machinery Manufacturing (NAICS 3335)	12.53	0.00	12.54	1.95	9.99	37.01	62.99
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.18	0.00	9.81	1.63	14.88	32.49	67.51
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	5.56	0.00	11.39	2.38	19.43	38.75	61.25

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Electric Lighting Equipment Manufacturing (NAICS 3351)	5.89	0.00	11.07	3.03	21.52	41.51	58.49
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	9.56	0.00	7.52	2.20	22.67	41.96	58.04
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	6.37	0.00	8.34	2.43	19.53	36.67	63.33
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	17.92	2.97	10.70	1.86	14.99	48.45	51.55
Other Miscellaneous Manufacturing (NAICS 3399)	5.57	0.65	7.94	0.81	24.56	39.53	60.47
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.88	0.08	8.79	0.80	22.69	38.24	61.76
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.36	0.34	8.10	0.71	17.74	32.25	67.75
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	5.68	0.17	8.73	0.99	19.43	35.00	65.00
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.95	0.00	8.61	0.74	17.19	31.50	68.50
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.52	0.51	8.03	0.75	17.53	32.34	67.66
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.55	0.69	9.24	0.80	24.43	47.71	52.29
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.08	0.32	9.39	2.55	18.61	38.95	61.05
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Home Furnishings Stores (NAICS 4422)	7.49	2.72	13.86	0.87	29.83	54.78	45.22
Building Material and Supplies Dealers (NAICS 4441)	8.24	2.65	9.61	0.65	21.72	42.87	57.13
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	8.90	2.55	4.22	1.01	26.06	42.74	57.26
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Direct Selling Establishments (NAICS 4543)	6.50	2.55	16.53	0.15	20.41	46.12	53.88
General Freight Trucking (NAICS 4841)	23.16	9.51	5.91	0.22	10.54	49.34	50.66
Specialized Freight Trucking (NAICS 4842)	29.94	8.64	5.07	0.40	11.07	55.12	44.88
Support Activities for Road Transportation (NAICS 4884)	12.04	3.58	8.10	0.00	12.75	36.46	63.54
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Cable and Other Subscription Programming (NAICS 5152)	13.50	6.55	4.33	0.00	10.64	35.02	64.98
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Depository Credit Intermediation (NAICS 5221)	10.81	0.00	5.41	0.00	24.32	40.54	59.46
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Lessors of Real Estate (NAICS 5311)	14.29	5.16	4.24	0.05	13.23	36.95	63.05
Offices of Real Estate Agents and Brokers (NAICS 5312)	12.07	0.58	5.17	0.02	28.08	45.92	54.08
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.41	6.24	4.26	0.10	11.54	36.56	63.44
Architectural, Engineering, and Related Services (NAICS 5413)	8.58	4.28	12.00	0.40	12.90	38.16	61.84
Specialized Design Services (NAICS 5414)	11.07	2.61	3.20	0.00	46.97	63.85	36.15
Computer Systems Design and Related Services (NAICS 5415)	13.08	3.95	16.54	0.52	13.91	48.00	52.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.81	1.58	7.41	0.31	29.36	53.46	46.54
Advertising, Public Relations, and Related Services (NAICS 5418)	8.84	4.04	8.29	0.26	21.41	42.84	57.16
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.52	0.68	5.28	0.01	27.92	46.40	53.60
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Employment Services (NAICS 5613)	18.84	6.02	6.00	0.38	18.69	49.92	50.08
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.89	3.74	5.85	0.77	21.36	49.61	50.39
Services to Buildings and Dwellings (NAICS 5617)	15.04	6.47	4.45	0.18	11.87	38.02	61.98
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
Waste Treatment and Disposal (NAICS 5622)	17.50	6.38	4.75	0.30	11.94	40.88	59.12
Remediation and Other Waste Management Services (NAICS 5629)	15.66	9.81	8.29	1.12	18.07	52.95	47.05
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Automotive Repair and Maintenance (NAICS 8111)	23.38	5.91	6.92	0.18	13.67	50.06	49.94
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	13.83	3.03	7.20	0.81	13.82	38.68	61.32
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.31	3.53	7.60	0.67	17.10	44.22	55.78
Other Personal Services (NAICS 8129)	25.88	5.89	7.19	0.12	17.93	57.00	43.00
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.09	6.26	6.35	0.00	12.62	50.33	49.67

Source: See Table 2.1. Note: Figures are expressed as percentages of all business establishments in the respective category and market area.

**Table 2.18. Detailed DBE Availability—AE-CRS**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.26	0.26	0.00	0.00	17.43	17.96	82.04
Support Activities for Mining (NAICS 2131)	2.66	2.66	0.00	0.00	17.14	22.47	77.53
Nonresidential Building Construction (NAICS 2362)	7.36	3.68	1.88	0.52	14.94	28.38	71.62
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.63	5.56	2.59	0.05	10.24	25.06	74.94
Building Equipment Contractors (NAICS 2382)	7.82	2.82	2.77	0.20	10.98	24.59	75.41
Building Finishing Contractors (NAICS 2383)	5.82	3.51	2.57	0.03	11.31	23.24	76.76
Other Specialty Trade Contractors (NAICS 2389)	6.27	3.03	2.67	0.15	10.79	22.90	77.10
Other Wood Product Manufacturing (NAICS 3219)	3.42	0.00	7.20	0.68	23.17	34.47	65.53
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	5.35	0.85	7.64	0.71	17.57	32.12	67.88
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	6.60	0.00	8.70	2.39	15.63	33.33	66.67
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	1.22	12.04	2.38	14.74	40.34	59.66
Communications Equipment Manufacturing (NAICS 3342)	7.62	0.00	10.70	2.26	12.85	33.44	66.56
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.37	1.40	9.39	1.98	16.67	39.83	60.17
Other Miscellaneous Manufacturing (NAICS 3399)	15.66	0.00	5.84	1.97	22.00	45.47	54.53
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.30	0.15	8.17	0.79	17.64	31.05	68.95

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	9.99	0.38	11.41	1.89	10.80	34.47	65.53
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.61	0.42	7.83	0.85	18.49	33.19	66.81
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.56	0.00	8.88	0.73	16.18	30.36	69.64
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.38	8.10	0.69	18.18	33.09	66.91
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.97	0.16	9.41	2.38	15.29	36.21	63.79
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.80	52.20
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Activities Related to Real Estate (NAICS 5313)	11.03	0.74	4.84	0.00	30.26	46.87	53.13

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.15	6.53	3.99	0.03	11.69	36.39	63.61
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.21	3.91	8.66	0.11	14.23	34.11	65.89
Architectural, Engineering, and Related Services (NAICS 5413)	8.68	4.27	12.16	0.41	12.95	38.48	61.52
Computer Systems Design and Related Services (NAICS 5415)	15.64	4.05	15.46	0.62	14.21	49.97	50.03
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.30	1.73	7.09	0.31	28.37	52.81	47.19
Scientific Research and Development Services (NAICS 5417)	9.49	2.45	9.47	0.26	23.38	45.04	54.96
Advertising, Public Relations, and Related Services (NAICS 5418)	11.74	2.28	5.83	0.10	29.49	49.44	50.56
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.67	1.16	5.34	0.05	30.47	49.69	50.31
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Employment Services (NAICS 5613)	17.19	5.86	5.03	0.25	18.39	46.72	53.28
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.56	3.27	5.97	0.84	22.76	50.39	49.61
Services to Buildings and Dwellings (NAICS 5617)	14.64	6.39	4.37	0.19	11.55	37.13	62.87
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Treatment and Disposal (NAICS 5622)	17.82	6.46	4.91	0.19	13.13	42.50	57.50
Remediation and Other Waste Management Services (NAICS 5629)	16.02	10.80	9.24	1.33	18.99	56.38	43.62
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Automotive Repair and Maintenance (NAICS 8111)	25.45	6.55	6.86	0.03	14.00	52.89	47.11
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89
Civic and Social Organizations (NAICS 8134)	22.13	5.15	6.37	0.23	12.08	45.96	54.04

Source and Notes: See Table 2.17.

**Table 2.19. Detailed DBE Availability—Maintenance**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.10	0.79	0.00	0.00	14.99	17.89	82.11
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Residential Building Construction (NAICS 2361)	4.32	3.41	0.38	0.19	13.42	21.72	78.28
Nonresidential Building Construction (NAICS 2362)	11.16	5.25	3.42	0.93	12.71	33.47	66.53
Utility System Construction (NAICS 2371)	6.75	2.22	0.37	0.49	10.29	20.11	79.89
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Other Heavy and Civil Engineering Construction (NAICS 2379)	14.21	3.30	0.85	0.08	11.70	30.13	69.87
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.06	5.05	2.61	0.12	10.87	25.71	74.29
Building Equipment Contractors (NAICS 2382)	7.89	2.85	2.77	0.19	11.21	24.91	75.09
Building Finishing Contractors (NAICS 2383)	5.83	3.51	2.57	0.03	11.31	23.25	76.75
Other Specialty Trade Contractors (NAICS 2389)	6.46	3.06	2.39	0.16	11.39	23.47	76.53
Pulp, Paper, and Paperboard Mills (NAICS 3221)	12.79	0.00	8.72	2.18	8.72	32.41	67.59
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	6.66	0.00	8.80	2.38	14.62	32.46	67.54
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	5.15	1.04	7.68	0.70	18.31	32.87	67.13
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.92	0.40	7.73	0.71	15.98	30.74	69.26
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Other General Purpose Machinery Manufacturing (NAICS 3339)	20.67	0.00	7.15	1.89	11.99	41.71	58.29
Communications Equipment Manufacturing (NAICS 3342)	7.52	1.41	9.09	0.91	17.44	36.37	63.63
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.43	1.43	9.34	2.01	16.66	39.86	60.14
Electric Lighting Equipment Manufacturing (NAICS 3351)	8.65	0.00	8.48	2.41	18.32	37.86	62.14
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.87	0.26	7.80	0.70	18.72	33.35	66.65
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.38	0.65	7.98	0.73	18.40	33.14	66.86
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	5.42	0.06	7.99	0.73	15.99	30.20	69.80
Electronics and Appliance Stores (NAICS 4431)	8.83	3.10	10.75	0.68	19.28	42.63	57.37
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
Grocery Stores (NAICS 4451)	5.73	2.89	17.01	0.23	21.60	47.46	52.54
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Direct Selling Establishments (NAICS 4543)	7.13	2.54	14.61	0.24	21.62	46.14	53.86
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
General Freight Trucking (NAICS 4841)	23.59	9.42	5.84	0.24	10.99	50.09	49.91
Specialized Freight Trucking (NAICS 4842)	29.98	8.64	5.06	0.40	11.07	55.15	44.85
Urban Transit Systems (NAICS 4851)	42.45	5.97	4.44	0.08	8.79	61.72	38.28
Taxi and Limousine Service (NAICS 4853)	22.29	8.15	6.45	0.21	11.02	48.12	51.88
Support Activities for Air Transportation (NAICS 4881)	8.17	2.81	8.30	0.00	14.57	33.85	66.15
Support Activities for Road Transportation (NAICS 4884)	14.38	3.94	7.77	0.00	11.83	37.93	62.07
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Other Telecommunications (NAICS 5179)	15.67	6.30	5.86	0.13	10.67	38.62	61.38
Insurance Carriers (NAICS 5241)	11.69	2.05	4.71	0.00	23.00	41.45	58.55
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
General Rental Centers (NAICS 5323)	12.78	5.40	3.95	0.00	18.03	40.16	59.84
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.33	6.33	4.17	0.08	11.59	36.50	63.50
Architectural, Engineering, and Related Services (NAICS 5413)	8.09	4.30	10.93	0.39	13.45	37.16	62.84
Computer Systems Design and Related Services (NAICS 5415)	11.22	3.79	17.50	0.45	13.85	46.82	53.18
Management, Scientific, and Technical Consulting Services (NAICS 5416)	17.79	2.15	6.33	0.28	30.01	56.56	43.44
Scientific Research and Development Services (NAICS 5417)	8.64	3.35	10.10	0.26	18.95	41.29	58.71
Advertising, Public Relations, and Related Services (NAICS 5418)	12.87	1.27	6.46	0.00	28.96	49.56	50.44

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
5418)							
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Employment Services (NAICS 5613)	18.73	5.97	5.88	0.43	18.84	49.85	50.15
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	20.41	5.36	5.62	0.55	15.31	47.25	52.75
Services to Buildings and Dwellings (NAICS 5617)	19.58	7.00	5.48	0.19	17.17	49.42	50.58
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Treatment and Disposal (NAICS 5622)	18.37	7.65	3.65	0.00	8.24	37.91	62.09
Remediation and Other Waste Management Services (NAICS 5629)	14.70	6.29	4.56	0.00	12.26	37.82	62.18
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Individual and Family Services (NAICS 6241)	7.97	0.05	3.88	0.04	30.27	42.21	57.79
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Automotive Repair and Maintenance (NAICS 8111)	8.35	1.15	7.38	1.30	11.14	29.32	70.68
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	12.87	2.27	6.70	0.84	13.64	36.33	63.67
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89
Drycleaning and Laundry Services (NAICS 8123)	28.05	5.24	8.45	0.00	15.20	56.95	43.05
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04

Source and Notes: See Table 2.17.

**Table 2.20. Detailed DBE Availability—IT**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.58	1.15	8.28	1.08	18.14	34.23	65.77
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	7.90	0.00	8.30	2.30	15.58	34.08	65.92
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.53	8.90	2.28	11.24	32.93	67.07
Communications Equipment Manufacturing (NAICS 3342)	7.42	1.69	9.29	0.98	17.60	36.98	63.02
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.33	38.44	61.56
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.59	1.64	12.02	1.06	18.16	41.47	58.53
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.98	0.90	8.68	0.84	19.86	35.27	64.73
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Direct Selling Establishments (NAICS 4543)	10.51	2.52	4.50	0.72	27.99	46.24	53.76
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09
Architectural, Engineering, and Related Services (NAICS 5413)	8.72	4.29	12.32	0.42	12.75	38.50	61.50
Computer Systems Design and Related Services (NAICS 5415)	16.44	3.64	14.39	0.59	16.35	51.41	48.59
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.71	1.92	7.23	0.17	26.50	52.52	47.48
Employment Services (NAICS 5613)	17.19	5.86	5.03	0.25	18.39	46.72	53.28
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24

Source and Notes: See Table 2.17.

**Table 2.21. Detailed DBE Availability—Services**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	10.96	10.96	89.04
Nonresidential Building Construction (NAICS 2362)	7.91	3.91	2.10	0.58	14.62	29.12	70.88
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.44	5.02	2.77	0.07	10.46	24.75	75.25
Building Equipment Contractors (NAICS 2382)	6.74	2.79	2.77	0.15	10.45	22.91	77.09
Building Finishing Contractors (NAICS 2383)	7.45	3.57	2.66	0.18	11.03	24.90	75.10
Other Specialty Trade Contractors (NAICS 2389)	6.36	3.04	2.53	0.15	11.09	23.18	76.82
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)	7.91	0.43	7.89	2.52	32.46	51.20	48.80
Other Wood Product Manufacturing (NAICS 3219)	7.49	0.31	8.83	2.41	15.62	34.66	65.34
Printing and Related Support Activities (NAICS 3231)	5.69	0.26	9.45	0.99	22.12	38.50	61.50
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	15.63	0.00	8.10	2.18	19.78	45.69	54.31
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Clay Product and Refractory Manufacturing (NAICS 3271)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Foundries (NAICS 3315)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Architectural and Structural Metals Manufacturing (NAICS 3323)	3.67	0.00	7.51	0.73	18.48	30.40	69.60
Spring and Wire Product Manufacturing (NAICS 3326)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.13	0.00	10.04	1.54	14.71	32.41	67.59
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.53	8.90	2.28	11.24	32.93	67.07

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	6.23	0.91	7.99	1.47	15.02	31.61	68.39
Electric Lighting Equipment Manufacturing (NAICS 3351)	9.31	0.00	7.85	2.27	17.55	36.98	63.02
Electrical Equipment Manufacturing (NAICS 3353)	5.24	0.92	8.10	0.69	17.89	32.83	67.17
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	6.48	0.00	13.74	3.18	8.64	32.04	67.96
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	9.34	0.00	8.10	2.34	18.30	38.08	61.92
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	9.38	0.00	9.34	2.30	18.81	39.83	60.17
Other Miscellaneous Manufacturing (NAICS 3399)	5.53	0.67	7.92	0.78	24.69	39.60	60.40
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	7.55	0.00	10.03	2.66	15.80	36.04	63.96
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.30	0.15	8.17	0.79	17.64	31.05	68.95
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.22	0.72	8.35	0.84	19.34	34.47	65.53
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.60	0.83	8.02	0.68	17.97	33.10	66.90
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	5.77	0.38	7.04	0.68	19.41	33.29	66.71
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	5.97	1.23	10.19	2.51	17.95	37.85	62.15

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Electronics and Appliance Stores (NAICS 4431)	8.08	2.98	12.31	0.56	20.22	44.16	55.84
Building Material and Supplies Dealers (NAICS 4441)	8.23	2.70	9.95	0.63	21.99	43.50	56.50
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	9.32	2.30	3.81	0.80	32.40	48.63	51.37
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.80	52.20
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Specialized Freight Trucking (NAICS 4842)	24.60	8.06	6.39	0.12	12.38	51.55	48.45
Urban Transit Systems (NAICS 4851)	42.76	5.94	4.39	0.08	8.79	61.96	38.04
Taxi and Limousine Service (NAICS 4853)	19.86	8.92	6.31	0.06	10.85	46.00	54.00
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Charter Bus Industry (NAICS 4855)	27.19	7.25	7.69	0.05	11.71	53.89	46.11
Other Transit and Ground Passenger Transportation (NAICS 4859)	31.83	7.15	5.69	0.12	11.21	56.00	44.00
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	11.10	0.85	6.86	0.03	28.62	47.46	52.54
Motion Picture and Video Industries (NAICS 5121)	13.87	1.78	5.53	0.24	30.78	52.19	47.81
Sound Recording Industries (NAICS 5122)	13.88	2.11	7.45	0.00	30.74	54.18	45.82
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Other Information Services (NAICS 5191)	11.30	0.92	6.42	0.00	28.46	47.11	52.89
Depository Credit Intermediation (NAICS 5221)	11.20	0.02	5.35	0.00	24.39	40.96	59.04
Activities Related to Credit Intermediation (NAICS 5223)	12.15	0.30	5.62	0.00	25.85	43.94	56.06
Other Financial Investment Activities (NAICS 5239)	13.18	0.28	5.44	0.00	24.49	43.39	56.61
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Lessors of Real Estate (NAICS 5311)	14.10	5.36	4.21	0.00	11.44	35.10	64.90
Consumer Goods Rental (NAICS 5322)	11.62	2.07	5.43	0.00	23.25	42.36	57.64
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.00	6.66	3.85	0.00	11.79	36.31	63.69
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09
Architectural, Engineering, and Related Services (NAICS 5413)	8.57	4.10	11.35	0.37	14.00	38.40	61.60
Specialized Design Services (NAICS 5414)	13.14	2.22	5.32	0.13	38.74	59.55	40.45
Computer Systems Design and Related Services (NAICS 5415)	12.90	3.80	17.21	0.54	13.90	48.35	51.65
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.51	1.97	7.18	0.24	27.36	53.26	46.74
Scientific Research and Development Services (NAICS 5417)	10.05	1.86	9.06	0.25	26.26	47.48	52.52
Advertising, Public Relations, and Related Services (NAICS 5418)	9.55	3.48	7.88	0.21	22.94	44.06	55.94
Other Professional, Scientific, and Technical Services (NAICS 5419)	11.54	1.10	5.06	0.03	31.12	48.85	51.15
Management of Companies and Enterprises (NAICS 5511)	11.14	0.10	5.94	0.00	24.98	42.15	57.85
Employment Services (NAICS 5613)	19.83	6.12	6.58	0.45	18.86	51.84	48.16

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Business Support Services (NAICS 5614)	13.38	0.73	5.83	0.06	26.77	46.78	53.22
Travel Arrangement and Reservation Services (NAICS 5615)	13.92	5.63	5.24	0.00	20.99	45.78	54.22
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Services to Buildings and Dwellings (NAICS 5617)	15.73	6.63	4.60	0.18	12.43	39.58	60.42
Waste Treatment and Disposal (NAICS 5622)	18.36	7.35	4.09	0.00	10.20	40.00	60.00
Colleges, Universities, and Professional Schools (NAICS 6113)	14.80	2.44	7.30	0.00	14.70	39.23	60.77
Offices of Other Health Practitioners (NAICS 6213)	9.34	0.49	3.93	0.50	38.10	52.37	47.63
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	7.13	0.28	3.42	0.28	34.03	45.14	54.86
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86
Performing Arts Companies (NAICS 7111)	18.19	3.06	7.48	0.20	19.78	48.71	51.29
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Special Food Services (NAICS 7223)	17.92	2.94	7.33	0.28	22.51	50.98	49.02
Automotive Repair and Maintenance (NAICS 8111)	24.61	5.48	6.61	0.18	12.95	49.83	50.17
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	13.83	3.03	7.20	0.81	13.82	38.68	61.32
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	14.90	3.32	7.01	0.82	12.80	38.85	61.15
Drycleaning and Laundry Services (NAICS 8123)	28.05	5.24	8.45	0.00	15.20	56.95	43.05
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.13	6.23	6.32	0.00	12.66	50.34	49.66

Source and Notes: See Table 2.17.

**Table 2.22. Detailed DBE Availability—CSE**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	15.63	0.00	8.10	2.18	19.78	45.69	54.31
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Other Fabricated Metal Product Manufacturing (NAICS 3329)	5.40	0.00	6.79	2.61	35.88	50.68	49.32
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	9.57	0.93	10.42	2.31	12.14	35.37	64.63
Communications Equipment Manufacturing (NAICS 3342)	7.45	1.60	9.22	0.96	17.55	36.78	63.22
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	15.72	0.00	8.32	2.08	8.32	34.44	65.56
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.75	0.59	8.97	2.32	11.55	30.18	69.82
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	6.55	0.16	8.19	1.48	14.46	30.83	69.17
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.59	1.64	12.02	1.06	18.16	41.47	58.53
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.83	0.63	8.17	0.98	18.07	33.68	66.32
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.55	0.69	9.24	0.80	24.43	47.71	52.29
Automobile Dealers (NAICS 4411)	9.16	2.90	4.55	0.91	19.59	37.11	62.89

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	6.38	2.63	15.74	0.27	20.56	45.58	54.42
Clothing Stores (NAICS 4481)	10.56	2.65	6.53	0.90	27.06	47.70	52.30
Scheduled Air Transportation (NAICS 4811)	9.65	2.82	8.47	0.00	11.29	32.24	67.76
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Automotive Equipment Rental and Leasing (NAICS 5321)	11.07	0.33	5.49	0.00	24.95	41.84	58.16
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.01	6.68	3.85	0.00	11.77	36.30	63.70
Architectural, Engineering, and Related Services (NAICS 5413)	8.73	4.29	12.33	0.42	12.75	38.52	61.48
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.49	1.31	7.06	0.00	26.53	51.39	48.61
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28

Source and Notes: See Table 2.17.

**Table 2.23. Estimated Availability (Award Dollar Weights)—Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.88	3.20	4.88	0.36	18.32	15.17	33.49	66.51
AE-CRS	10.19	3.87	11.40	0.40	25.85	15.42	41.27	58.73
MAINTENANCE	13.47	4.84	4.42	0.27	23.01	14.92	37.92	62.08
IT	14.60	3.82	13.51	0.52	32.45	16.31	48.76	51.24
SERVICES	15.49	3.72	8.56	0.30	28.07	19.18	47.25	52.75
CSE	8.51	2.39	8.43	0.91	20.25	15.80	36.05	63.95
TOTAL	10.66	3.63	7.89	0.37	22.55	15.46	38.00	62.00

Source and Notes: See Table 2.17.

**Table 2.24. Estimated Availability (Paid Dollar Weights)—Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.94	3.29	5.15	0.37	18.76	15.08	33.84	66.16
AE-CRS	10.52	3.83	11.33	0.40	26.08	15.74	41.82	58.18
MAINTENANCE	14.05	5.09	4.57	0.27	23.97	15.25	39.22	60.78
IT	13.36	3.70	13.19	0.47	30.71	16.67	47.39	52.61
SERVICES	15.81	3.43	8.53	0.28	28.05	19.84	47.89	52.11
CSE	8.51	2.39	8.43	0.91	20.25	15.80	36.05	63.95
TOTAL	10.76	3.60	7.37	0.38	22.10	15.54	37.64	62.36

Source and Notes: See Table 2.17.

**Table 2.25. Estimated Availability (Award Dollar Weights)—Federally-Assisted Contracts Only, Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.97	3.10	5.07	0.36	18.49	15.57	34.07	65.93
AE-CRS	10.05	3.90	11.41	0.40	25.76	15.26	41.01	58.99
MAINTENANCE	8.15	3.19	2.82	0.27	14.42	12.19	26.61	73.39
IT	12.23	4.03	14.33	0.51	31.11	13.92	45.04	54.96
SERVICES	15.49	3.73	8.43	0.30	27.96	19.12	47.08	52.92
CSE	8.57	2.15	7.43	1.03	19.18	15.75	34.92	65.08
TOTAL	10.19	3.49	8.07	0.37	22.12	15.45	37.58	62.42

Source and Notes: See Table 2.17.

**Table 2.26. Estimated Availability (Paid Dollar Weights)— Federally-Assisted Contracts Only, Overall and By Major Procurement Category**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.03	3.16	5.43	0.36	18.97	15.59	34.56	65.44
AE-CRS	10.42	3.85	11.32	0.40	25.99	15.64	41.63	58.37
MAINTENANCE	8.08	3.22	2.90	0.30	14.49	12.65	27.15	72.85
IT	11.51	4.03	13.75	0.50	29.80	13.89	43.69	56.31
SERVICES	15.69	3.45	8.50	0.28	27.92	19.85	47.77	52.23
CSE	8.57	2.15	7.43	1.03	19.18	15.75	34.92	65.08
TOTAL	10.36	3.41	7.64	0.38	21.79	15.69	37.47	62.53

Source and Notes: See Table 2.17.

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### III. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

#### A. Review of Relevant Literature

In this chapter we examine disparities in business formation and earnings principally in the private sector, where contracting activities are generally *not* subject to DBE or other affirmative action requirements. Statistical examination of disparities in the private sector of the relevant geographic market area is important for several reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of DBEs to compete, those practices will impact the larger private sector as well as the public sector. Second, examining the utilization of DBEs in the private sector provides an indicator of the extent to which DBEs are used in the absence of race- and gender-conscious efforts, since few firms in the private sector make such efforts. Third, the Supreme Court in *Croson* and other courts acknowledged that state and local governments have the constitutional authority not to contribute to the perpetuation of discrimination in the private sector of their relevant geographic and product markets.<sup>62</sup>

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—has expanded in recent years.<sup>63</sup> There is a good deal of agreement in the literature on the micro-economic correlates of self-employment.<sup>64</sup> In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among non-minorities than African Americans. The least educated have the highest probability of being self-employed. However, evidence is also found in the U.S. that the most highly educated also have relatively high probabilities. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

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<sup>62</sup> *Croson*, 488 U.S. at 492.

<sup>63</sup> Microeconomic work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie and Meyer (1996, 1998), Reardon (1998), Fairlie (1999), Wainwright (2000), Blanchflower and Wainwright (2005), and Blanchflower (2009) for the United States, Rees and Shah (1986), Pickles and O'Farrell (1987), Blanchflower and Oswald (1990, 1998), Meager (1992), Taylor (1996), Robson (1998a, 1998b), and Blanchflower and Shadforth (2007) for the UK, DeWit and van Winden (1990) for the Netherlands, Alba-Ramirez (1994) for Spain, Bernhardt (1994), Schuetze (1998), Arai (1997), Lentz and Laband (1990), and Kuhn and Schuetze (1998) for Canada, LaFerrere and McEntee (1995) for France, Blanchflower and Meyer (1994) and Kidd (1993) for Australia, and Foti and Vivarelli (1994) for Italy. There are also several theoretical papers including Kihlstrom and Laffont (1979), Kanbur (1990), Holmes and Schmitz (1990), Coate and Tennyson (1992), and Cagetti and DeNardi (2006), plus a few papers that draw comparisons across countries, *i.e.*, Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994), Blanchflower (2000), Blanchflower, Oswald, and Stutzer (2001), and Blanchflower and Oswald (2008) for many countries.

<sup>64</sup> Parker (2004) and Aronson (1991) provide good overviews.

There has been relatively less work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, 1987), immigration (Fairlie and Meyer, 1998; 2003; Olson, Zuiker and Montalto, 2000; Mora and Dávila 2006; Robles and Cordero-Guzmán, 2007),<sup>65</sup> immigration policy (Borjas and Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), and Blau (1987), and more recently by Schuetze (1998), have considered the role of taxes.<sup>66</sup> A number of other studies have also considered the cyclical aspects of self-employment and in particular how movements of self-employment are correlated with movements in unemployment. Meager (1992), provides a useful summary of much of this work.<sup>67</sup>

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.<sup>68</sup> In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question. Why do so few individuals in the U.S. and OECD countries manage to translate their preferences

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<sup>65</sup> Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on African American self-employment. In a subsequent paper Fairlie and Meyer (2003), found that self-employed immigrants did displace self-employed native non-African Americans. They found that immigration has a large negative effect on the probability of self-employment among native non-African Americans, although, surprisingly, they found that immigrants increase native self-employment earnings.

<sup>66</sup> In an interesting study pooling individual level data for the U.S. and Canada from the Current Population Survey and the Survey of Consumer Finances, respectively, Schuetze (1998) finds that increases in income taxes have large and positive effects on the male self-employment rate. He found that a 30 percent increase in taxes generated a rise of 0.9 to 2.0 percentage points in the male self-employment rate in Canada compared with a rise of 0.8 to 1.4 percentage points in the U.S. over 1994 levels.

<sup>67</sup> Evans and Leighton (1989) found that nonminority men who are unemployed are nearly twice as likely as wage workers to enter self-employment. Bogenhold and Staber (1991) also find evidence that unemployment and self-employment are positively correlated. Blanchflower and Oswald (1990) found a strong negative relationship between regional unemployment and self-employment for the period 1983-1989 in the U.K. using a pooled cross-section time-series data set. Blanchflower and Oswald (1998) confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment model for young people age 23 in 1981 and for the same people aged 33 in 1991. Taylor (1996) confirmed this result using data from the British Household Panel Study of 1991, showing that the probability of being self-employed rises when expected self-employment earnings increase relative to employee earnings, *i.e.*, when unemployment is low. Acs and Evans (1994) found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation. However, Schuetze (1998) found that for the U.S. and Canada the elasticity of the male self-employment rate with respect to the unemployment rate was considerably smaller than found for the effect from taxes discussed above. The elasticity of self-employment associated with the unemployment rate is about 0.1 in both countries using 1994 figures. A decrease of 5 percentage points in the unemployment rate in the U.S. (about the same decline occurred from 1983-1989) leads to about a 1 percentage point decrease in self-employment. Blanchflower (2000) found that there is generally a negative relationship between the self-employment rate and the unemployment rate. It does seem then that there is some disagreement in the literature on whether high unemployment acts to discourage self-employment because of the lack of available opportunities or encourage it because of the lack of viable alternatives.

<sup>68</sup> The OECD is an international organization of those developed countries that accept the principles of representative democracy and a free market economy. There are currently 30 full members.

into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also econometric evidence that confirms this barrier. Holding other influences constant, people who inherit cash, who win the lottery, or who have large family assets, are all more likely both to set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to have almost no predictive power about which persons will be running their own businesses as adults (Blanchflower and Oswald, 1998).

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.<sup>69</sup> Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b), drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit. In contrast, Hurst and Lusardi (2004), citing evidence from the U.S. *Panel Study of Income Dynamics*, claim to show that wealth is not a significant determinant of entry into self-employment. In response, however, Fairlie and Krashinsky (2006) have demonstrated that when the sample is split into two segments—those who enter self-employment after job loss and those who do not—the strong correlation between assets and rate of entry business formation is evident in both segments.

The work of Black, *et al.* (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997), find a similar result. Again this is suggestive of capital constraints. Finally, Lindh and Ohlsson (1996) adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden. Bernhardt (1994), in a study for Canada, using data from the 1981 Social Change in Canada Project also found evidence that capital constraints

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<sup>69</sup> This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives.

appear to bind. Using the 1991 French Household Survey of Financial Assets, LaFerrere and McEntee (1995), examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital and a range of demographic variables.

They also find evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital and the structure of the family were found to be determining factors in the decision to move from wage work into entrepreneurship. Broussard, *et al.* (2003) found that the self-employed have between 0.2 and 0.4 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction and in agriculture, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of African Americans in particular who do not have as strong a history of business ownership as indigenous non-minorities. Analogously, Hout and Rosen (2000) and Fairlie and Robb (2007a) found that the offspring of self-employed parents are more likely than others to become self-employed and argued that the historically low rates of self-employment among African Americans and Latinos may contribute to their low contemporary rates. Fairlie and Robb (2007b), using data from the U.S. *Characteristics of Business Owners* survey, and Dunn and Holtz-Eakin (2000), using data from the U.S. *National Longitudinal Surveys*, show that the transmission of positive effects of family on self-employment operates through two channels, intergenerational transmission of entrepreneurial preferences and wealth, and the acquisition of general and specific human capital.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of African American males is one third of that of nonminority males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels “did not have large effects on the trend in the racial gap in self-employment” (p. 662). They also found that an initial lack of business experience “cannot explain the current low levels of black self-employment.” Further they found that “the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment” (p. 664).

Fairlie (1999) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African American and nonminority self-employment rate can be attributed to discrimination. Using PUMS data from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999, 2006) demonstrates, for example, that the African American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same

rate as it does into bath B—that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the nonminority firms). When we return after 10 minutes, even though the inflow rates are the same there is much less water in bath A than there is in bath B. A lower exit rate for nonminority-owned firms than is found for minority-owned firms is perfectly consistent with the observed fact that minority-owned firms are younger and smaller than nonminority-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

## **B. Race and Gender Disparities in Earnings**

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their nonminority male counterparts. Other things equal, if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly-situated nonminorities because of discrimination, then failure rates for DBEs will be higher and DBE formation rates will be lower than would be observed in a race- and gender-neutral market area. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, that is, non-business owners. It is helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower, 2000; 2004). Employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential DBEs. In almost every instance examined, a statistically significant adverse impact on wage and salary earnings is observed—in both the economy at large and also in the construction and construction-related professional services sector.<sup>70</sup>

We then turn to an examination of differences in earnings among the self-employed, that is, among business owners. Here too, among the pool of minorities and women who have formed businesses despite discrimination in both employment opportunities and business opportunities, statistically significant adverse impacts are observed in the vast majority of cases in construction and construction-related professional services (hereafter, “construction”), and other sectors of the economy.

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<sup>70</sup> There is a growing body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to obtain them there is evidence that these loans are not obtained on equal terms: minority-owned firms have to pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. See Chapter IV, *infra*.

In the remainder of this Chapter we discuss the methods and data we employed and present the specific findings.

## 1. **Methods**

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or gender differences remain. In a discrimination free market area, one would not expect to observe significant differences in earnings by race or gender among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to MDOT's relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator variable for the Maryland Market Area (MDMA), which encompasses the Maryland, Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA, and is coextensive with the relevant geographic market area for MDOT. This model appears as Specification (1) in Tables 3.1 through 3.12. Next, we estimated Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race and gender with the MDMA indicator. Specification (3) represents our ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification (2) that were statistically significant.<sup>71</sup>

Any negative and statistically significant differences by race or gender that remain in Specification (3) after holding all of these other factors constant—time, age, education, geography, and industry—are consistent with what would be observed in a market suffering from business-related discrimination.<sup>72</sup>

## 2. **Data**

The analyses undertaken in this Study require individual-level data (*i.e.*, “microdata”) with relevant information on business ownership status and other key socioeconomic characteristics.

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<sup>71</sup> If none of these terms is significant then Specification (3) reduces to Specification (1).

<sup>72</sup> Typically, a given test statistic is considered to be statistically significant if there is a reasonably low probability that the value of the statistic is due to random chance alone. Unless otherwise indicated, in this and subsequent chapters, we employ three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance.

The data source used is the American Community Survey (ACS) Public Use Microdata Sample (PUMS) for 2006–2008. The Census Bureau’s ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia. The PUMS files from the ACS contain records for a subsample of the full ACS. The data used here are the multi-year estimates combining the 2006, 2007, and 2008 ACS PUMS records. The combined file contains over 3.6 million person-level records. The ACS PUMS provides the full range of population and housing information collected in the annual ACS and in the decennial census. Business ownership status is identified in the ACS PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

### **3. *Findings: Race and Gender Disparities in Wage and Salary Earnings***

Tables 3.1, 3.2, and 3.3 report results from our regression analyses of annual earnings among wage and salary workers. Table 3.1 focuses on the economy as a whole, Table 3.2 on Construction and AE-CRS, and Table 3.3 on Goods and Services. The numbers shown in each table indicate the percentage difference in that sector between the average annual wages of a given race/gender group and comparable nonminority males.

#### ***a. Specification (1) - the Basic Model***

For example, in Table 3.1 Specification (1) the estimated percentage difference in average annual wages between African Americans (both genders) and nonminority males in 2006–2008 was -32.6 percent. That is, average annual wages among African Americans were 32.6 percent lower than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 3.1 through 3.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.<sup>73</sup> In the example just used, the t-statistic of 172.13 indicates that the result is statistically significant.

Specification (1) in Table 3.1 shows adverse and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -22.6 percent for Hispanics to a high of -32.6 percent for African Americans.

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<sup>73</sup> From a two-tailed test.

Specification (1) in Table 3.2 shows similar results when the basic analysis is restricted to the Construction and AE-CRS sector. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women. Similarly, Specification (1) in Table 3.3 for the Goods and Services sector also shows large, adverse, and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women.

A comparison of Tables 3.1 and 3.2 shows that for Hispanics, Asians, and persons reporting in multiple race categories, the disparities in the Construction and AE-CRS sector are somewhat smaller than those observed in the economy as a whole. For African Americans and nonminority women, they are somewhat larger. Disparities for Native Americans are about the same in both sectors. A comparison of Tables 3.1 and 3.3 shows that for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women, the disparities in the Goods and Services sector are all larger than those observed in the economy as a whole.

### ***b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms***

Next, we turn to Specifications (2) and (3) in Tables 3.1–3.3. In each of these Tables, Specification (2) is the basic regression model with a set of interaction terms added to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification (2) in Table 3.1, for example, shows a -22.7 percent wage difference that estimates the direct effect of being Hispanic in 2006–2008, as well as a statistically significant 4.5 percent wage increment that captures the indirect effect of residing in the MDMA and being Hispanic. That is, wages for Hispanics in the MDMA, on average, were 4.5 percent higher than for Hispanics in the nation as a whole and 18.2 percent lower (-22.7 percent plus 4.5 percent) than for nonminority males in the MDMA.

Specification (3) simply repeats Specification (2), dropping any MDMA interactions that are not statistically significant. In Table 3.1, for example, the only interaction terms included in the final specification are for Hispanics and Asians/Pacific Islanders. The net result of Specification (3) in Table 3.1 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women. With only one exception, in Table 3.2 for Construction and AE-CRS and Table 3.3 for Goods and Services, there is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women as well.<sup>74</sup>

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<sup>74</sup> No wage disparity is observed for Asians/Pacific Islanders in Table 3.2.

**Table 3.1. Annual Wage Earnings Regressions, All Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.326 (172.13)	-0.326 (170.63)	-0.326 (172.16)
Hispanic	-0.226 (122.60)	-0.227 (121.65)	-0.227 (121.80)
Asian	-0.266 (110.29)	-0.267 (109.79)	-0.267 (109.86)
Native American	-0.308 (47.67)	-0.309 (47.25)	-0.308 (47.68)
Two or more races	-0.262 (62.74)	-0.263 (61.87)	-0.262 (62.76)
Nonminority Female	-0.325 (293.66)	-0.325 (288.67)	-0.325 (293.66)
Age	0.182 (572.68)	0.182 (572.68)	0.182 (572.68)
Age <sup>2</sup>	-0.002 (498.90)	-0.002 (498.90)	-0.002 (498.90)
MDMA	-0.046 (5.02)	-0.050 (5.18)	-0.048 (5.16)
MDMA*African American		0.017 (1.03)	
MDMA*Hispanic		0.045 (3.78)	0.043 (3.69)
MDMA * Asian/Pacific Islander		0.057 (2.49)	0.055 (2.40)
MDMA * Native American		0.059 (1.17)	
MDMA *Two or more races		0.015 (0.52)	
MDMA *Nonminority female		0.003 (0.53)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	2548959	2548959	2548959
Adj. R <sup>2</sup>	.4592	.4593	.4593

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient is the percentage difference in annual wages between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) “Other Race” includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) “MDMA” is shorthand for Maryland Market Area,” which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA; (7) Each specification also included 16 indicator variables for educational attainment, 51 for state of residence, and 88 for industry affiliation, signified by a “Yes” for the corresponding table row and column.

**Table 3.2. Annual Wage Earnings Regressions, Construction and Related Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.350 (44.21)	-0.351 (43.97)	-0.350 (44.22)
Hispanic	-0.196 (36.90)	-0.196 (36.40)	-0.196 (36.91)
Asian	-0.219 (19.37)	-0.221 (19.45)	-0.222 (19.47)
Native American	-0.309 (17.13)	-0.312 (17.01)	-0.309 (17.13)
Two or more races	-0.227 (15.89)	-0.222 (15.24)	-0.227 (15.90)
Nonminority Female	-0.360 (81.48)	-0.360 (79.69)	-0.360 (81.48)
Age	0.149 (139.48)	0.149 (139.48)	0.149 (139.48)
Age <sup>2</sup>	-0.001 (119.52)	-0.001 (119.51)	-0.001 (119.52)
MDMA	-0.103 (3.48)	-0.105 (3.52)	-0.104 (3.49)
MDMA *African American		0.035 (0.40)	
MDMA *Hispanic		0.004 (0.14)	
MDMA * Asian/Pacific Islander		0.224 (1.96)	0.225 (1.97)
MDMA * Native American		0.123 (1.02)	
MDMA *Two or more races		-0.151 (1.90)	
MDMA*Nonminority female		0.000 (0.01)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	221546	221546	221546
Adj. R <sup>2</sup>	.2762	.2762	.2762

Source and Notes: See Table 3.1.

**Table 3.3. Annual Wage Earnings Regressions, Goods and Services Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.378 (193.81)	-0.378 (191.83)	-0.378 (193.81)
Hispanic	-0.286 (144.30)	-0.286 (142.63)	-0.286 (144.30)
Asian	-0.292 (114.46)	-0.292 (113.60)	-0.292 (114.46)
Native American	-0.374 (53.87)	-0.374 (53.25)	-0.374 (53.87)
Two or more races	-0.318 (71.64)	-0.318 (70.54)	-0.318 (71.64)
Nonminority Female	-0.394 (367.93)	-0.394 (360.01)	-0.394 (367.93)
Age	0.218 (624.89)	0.218 (624.88)	0.218 (624.89)
Age <sup>2</sup>	-0.002 (542.61)	-0.002 (542.61)	-0.002 (542.61)
MDMA	-0.011 (1.07)	-0.007 (0.63)	-0.011 (1.07)
MDMA *African American		0.010 (0.58)	
MDMA *Hispanic		0.018 (1.34)	
MDMA * Asian/Pacific Islander		0.019 (0.78)	
MDMA * Native American		0.017 (0.30)	
MDMA *Two or more races		0.001 (0.04)	
MDMA*Nonminority female		-0.011 (1.69)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	2327413	2327413	2327413
Adj. R <sup>2</sup>	.4100	.4100	.4100

Source and Notes: See Table 3.1.

### ***c. Conclusions***

Clearly, minorities and women earn substantially and significantly less from their labor than do their nonminority male counterparts—in the Maryland market area just as in the nation as a whole. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of DBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to acquiring the skills, experience and

contacts necessary to take advantage of entrepreneurial opportunities. They also demonstrate that discrimination results in less opportunity for minorities and women to accumulate and save business start-up capital through their work as employees. These disparities reflect more than mere “societal discrimination” because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower DBE availability levels than would be observed in a race- and gender-neutral market area.

#### **4. *Findings: Race and Gender Disparities in Business Owner Earnings***

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and gender disparities in business owner earnings. Table 3.4 focuses on the economy as a whole, Table 3.5 on Construction and AE-CRS, and Table 3.6 on Goods and Services. The numbers shown in each table indicate the percentage difference in that sector between the average annual self-employment earnings of a given race/gender group and comparable nonminority males.

##### ***a. Specification (1) - the Basic Model***

Specification (1) in Table 3.4 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 40 percent lower than for comparable nonminority males; for Hispanics, 23.1 percent lower; for Asians, 9.3 percent lower; for Native Americans, 35.8 percent lower; and for nonminority women, 40.7 percent lower.

Turning to the Construction and AE-CRS sector, Specification (1) in Table 3.5 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 43.2 percent lower than for comparable nonminority males; for Hispanics, 15.9 percent lower; for Asians, 17.3 percent lower; for Native Americans, 31.2 percent lower; and for nonminority women, 45.9 percent lower.

For the Goods and Services sector, Specification (1) in Table 3.6 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 43.5 percent lower than for comparable nonminority males; for Hispanics, 29.6 percent lower; for Asians, 12.0 percent lower; for Native Americans, 40.1 percent lower; and for nonminority women, 43.1 percent lower.

***b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms***

Next, we turn to Specifications (2) and (3) in Tables 3.4–3.6. Specification (2) is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification (3) drops any MDMA interaction terms that are not statistically significant.

For the economy as a whole in 2006–2008, Table 3.4 shows that only the MDMA interaction term for persons reporting multiple races is statistically significant, indicating that disparities for persons reporting multiple races are worse in the MDMA than in the nation as a whole, while disparities for all other minorities and nonminority women in the MDMA are no better or worse than in the nation as a whole.

For the Construction and AE-CRS sector in 2006–2008, Table 3.5 shows that the estimates for the MDMA are in agreement with results for the nation as a whole.

For the Goods and Services sector in 2006–2008, Table 3.6 shows that the estimates for the MDMA are in agreement with results for the nation as a whole.

**Table 3.4. Annual Business Owner Earnings Regressions, All Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.400 (32.05)	-0.400 (31.77)	-0.400 (32.05)
Hispanic	-0.231 (20.70)	-0.233 (20.66)	-0.230 (20.69)
Asian	-0.093 (5.77)	-0.092 (5.65)	-0.093 (5.75)
Native American	-0.358 (10.16)	-0.352 (9.81)	-0.358 (10.16)
Two or more races	-0.363 (16.19)	-0.356 (15.57)	-0.356 (15.55)
Nonminority Female	-0.407 (67.41)	-0.407 (66.43)	-0.407 (67.41)
Age	0.163 (79.12)	0.163 (79.13)	0.163 (79.12)
Age <sup>2</sup>	-0.002 (69.62)	-0.002 (69.63)	-0.002 (69.62)
MDMA	-0.003 (0.05)	-0.010 (0.21)	0.000 (0.01)
MDMA*African American		-0.026 (0.22)	
MDMA*Hispanic		0.106 (1.38)	
MDMA* Asian/Pacific Islander		-0.107 (0.85)	
MDMA * Native American		-0.250 (1.14)	
MDMA *Two or more races		-0.287 (2.12)	-0.297 (2.22)
MDMA *Nonminority female		0.036 (1.07)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	284365	284365	284365
Adj. R <sup>2</sup>	.1673	.1673	.1673

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all persons in the private sector with positive business earnings between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient is the percentage difference in annual business earnings between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) “Other Race” includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) “MDMA” is shorthand for Maryland Market Area,” which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA; (7) Each specification also included 16 indicator variables for educational attainment, 51 for state of residence, and 88 for industry affiliation, signified by a “Yes” for the corresponding table row and column.

**Table 3.5. Business Owner Earnings Regressions, Construction and Related Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.432 (14.07)	-0.435 (14.04)	-0.432 (14.07)
Hispanic	-0.159 (6.96)	-0.164 (7.10)	-0.159 (6.96)
Asian/Pacific Islanders	-0.173 (3.53)	-0.175 (3.55)	-0.173 (3.53)
Native American	-0.312 (4.48)	-0.310 (4.38)	-0.312 (4.48)
Two or more races	-0.280 (5.41)	-0.265 (4.99)	-0.280 (5.41)
Nonminority female	-0.459 (22.95)	-0.461 (22.52)	-0.459 (22.95)
Age	0.126 (27.40)	0.126 (27.41)	0.126 (27.40)
Age <sup>2</sup>	-0.001 (24.68)	-0.001 (24.69)	-0.001 (24.68)
MDMA	-0.027 (0.30)	-0.031 (0.34)	-0.027 (0.30)
MDMA*African American		0.225 (0.70)	
MDMA *Hispanic		0.197 (1.38)	
MDMA * Asian/Pacific Islanders		0.137 (0.26)	
MDMA * Native American		-0.071 (0.16)	
MDMA *Two or more races		-0.429 (1.71)	
MDMA *Nonminority Female		0.103 (0.84)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	47414	47414	47414
Adj. R <sup>2</sup>	.0524	.0524	.0524

Source and Notes: See Table 3.4.

**Table 3.6. Business Owner Earnings Regressions, Goods and Services Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.435 (32.15)	-0.434 (31.77)	-0.435 (32.15)
Hispanic	-0.296 (23.87)	-0.297 (23.64)	-0.296 (23.87)
Asian/Pacific Islanders	-0.120 (6.91)	-0.118 (6.77)	-0.120 (6.91)
Native American	-0.401 (9.87)	-0.394 (9.50)	-0.401 (9.87)
Two or more races	-0.412 (16.50)	-0.407 (15.99)	-0.412 (16.50)
Nonminority female	-0.431 (72.86)	-0.433 (71.55)	-0.431 (72.86)
Age	0.181 (76.15)	0.181 (76.16)	0.181 (76.15)
Age <sup>2</sup>	-0.002 (66.13)	-0.002 (66.14)	-0.002 (66.13)
MDMA	0.007 (0.11)	-0.007 (0.12)	0.007 (0.11)
MDMA*African American		-0.116 (0.91)	
MDMA *Hispanic		0.033 (0.36)	
MDMA * Asian/Pacific Islanders		-0.114 (0.82)	
MDMA * Native American		-0.318 (1.27)	
MDMA *Two or more races		-0.248 (1.52)	
MDMA *Nonminority Female		0.053 (1.37)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	236951	236951	236951
Adj. R <sup>2</sup>	.1134	.1134	.1134

Source and Notes: See Table 3.4.

### ***c. Conclusions***

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. The situation is, in general, little different in the Maryland market area than in the nation as a whole. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect DBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to

that of similarly situated nonminority males, then capital reinvestment and growth rates may slow, business failure rates may increase, and as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower DBE availability levels than would be observed in a race- and gender-neutral market area. As this chapter demonstrates, discrimination depresses business owner earnings for women and minority entrepreneurs. Business owner earnings, however, are often directly related to whether an owner has the capital to reinvest (firm size), how long a firm survives (firm age) and how much money a firm takes in (firm revenues). These observations illustrate why firm size, age and revenues are especially inappropriate factors to consider in any sort of “capacity” type analysis.

### **C. Race and Gender Disparities in Business Formation**

As discussed in the two previous sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In the final section of this chapter, we turn to the analysis of race and gender disparities in business formation.<sup>75</sup> We compare self-employment rates by race and gender to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as similarly-situated nonminority males. We find that they are not as likely to do so and that minority and female business formation rates would likely be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

Discrimination in the labor market, symptoms of which are evidenced in Section B.3 above, might cause wage and salary workers to turn to self-employment in hopes of encountering less discrimination from customers and suppliers than from employers and co-workers. Other things equal, and assuming minority and female workers did not believe that discrimination pervaded commercial markets as well, this would lead minority and female business formation rates to be higher than would otherwise be expected.

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by individuals who were once employed as foremen for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents minorities and women from acquiring the financial credit and capital that are so often prerequisite to starting or expanding a business. Other things being equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against DBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and

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<sup>75</sup> We use the phrases “business formation rates” and “self-employment rates” interchangeably in this Study.

lower output prices for DBEs. This discrimination leads to higher rates of failure for some minority- and women-owned firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.<sup>76</sup> All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

## **1. Methods and Data**

To see if minorities or nonminority women are as likely to be business owners as are comparable nonminority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a “yes” or a “no” response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of “yes” (for example, she is in the labor force) or “no” (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.<sup>77</sup> In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2006–2008 ACS PUMS.

## **2. Findings: Race and Gender Disparities in Business Formation**

As a point of reference for what follows, Tables 3.7 and 3.8 provide a summary of business ownership rates in 2006–2008 by race and gender. A striking feature of both tables is how much higher business ownership rates are for nonminority males than for all other groups.

Table 3.7, for example, shows a 10.08 percentage point difference between the overall self-employment rate of African Americans and nonminority males in the MDMA ( $15.05 - 4.97 = 10.08$ ). As shown in the rightmost column, this 10.08 percentage point gap translates into an African American business formation rate in the MDMA that is 67.0 percent lower than the nonminority male business formation rate (*i.e.*,  $(4.97 - 15.05) \div 15.05 \approx -67.0\%$ ). Large deficits are observed for all minority groups as well as nonminority women, in the Construction and AE-CRS sector, the Goods and Services sector, and the economy as a whole.

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<sup>76</sup> See also the materials cited at fn. 63 *supra*.

<sup>77</sup> For a detailed discussion, see Maddala (1983). Probit analysis is performed here using the “dprobit” command in the statistical program STATA.

There is little doubt that part of the group differences documented in Tables 3.7 and 3.8 are associated with differences in the distribution of individual characteristics and preferences between minorities, women, and nonminority males. It is well known, for example, that earnings tend to increase with age (*i.e.*, labor market experience). It is also true that the propensity toward self-employment increases with experience.<sup>78</sup> Since most minority populations in the United States have a lower median age than the nonminority population, we must examine whether the disparities in business ownership evidenced in here are largely—or even entirely—due to differences in the age distribution or other factors such as education, geographic location, or industry preferences of minorities and nonminority women compared to nonminority males.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse, and statistically significant race and gender disparities for minorities and women remain when these other factors are held constant. Table 3.9 focuses on the economy as a whole and Tables 3.10 and 3.11 focus on the Construction and AE-CRS sector and the Goods and Services sector, respectively. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/gender group compared to similarly-situated nonminority males.

**Table 3.7. Self-Employment Rates in 2006–2008 for Selected Race and Gender Groups: United States and the Maryland Market Area, All Industries**

<b>Race/Gender</b>	<b>U.S. (%)</b>	<b>Maryland Market Area (%)</b>	<b>Percent Difference from Nonminority male (Maryland Market Area)</b>
African American	5.38	4.97	-67.0%
Hispanic	8.65	7.95	-47.2%
Asian and Pacific Islander	10.58	10.28	-31.7%
Native American	8.65	10.82	-28.1%
Two or more races	8.96	7.85	-47.8%
Minority	7.95	7.50	-50.2%
Nonminority female	8.76	9.73	-35.3%
DBE	8.38	9.04	-39.9%
Nonminority male	14.22	15.05	

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

<sup>78</sup> Wainwright (2000), p. 86.

**Table 3.8. Self-Employment Rates in 2006–2008 for Selected Race and Gender Groups: United States and the Maryland Market Area, Construction and AE-CRS Sectors and Goods and Services Sectors**

Race/Gender	U.S. (%)	Maryland Market Area (%)	Percent Difference from Nonminority male (Maryland Market Area)
<i>Construction and AE-CRS Sectors</i>			
African American	16.61	22.23	-22.4%
Hispanic	14.60	12.27	-57.2%
Asian and Pacific Islander	17.68	13.43	-53.1%
Native American	18.06	14.23	-50.3%
Two or more races	18.93	15.38	-46.3%
Minority	15.40	13.31	-53.6%
Nonminority female	15.34	17.86	-37.7%
DBE	15.39	14.93	-47.9%
Nonminority male	26.17	28.66	
<i>Goods and Services Sectors</i>			
African American	4.81	4.23	-65.5%
Hispanic	7.65	6.94	-43.4%
Asian and Pacific Islander	10.26	10.14	-17.3%
Native American	7.37	10.18	-17.0%
Two or more races	8.01	7.00	-42.9%
Minority	7.17	6.63	-45.9%
Nonminority female	8.56	9.46	-22.8%
DBE	7.93	8.65	-29.4%
Nonminority male	11.99	12.26	

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

### ***a. Specification (1) - the Basic Model***

Specification (1) in Table 3.9 shows large, adverse, and statistically significant business formation disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. Specification (1) in Tables 3.10 and 3.11 shows large, negative, and statistically significant business formation disparities for every group in the Construction and AE-CRS sectors as well as in the Goods and Services sectors.

### ***b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms***

Very few of the MDMA interaction terms included in Specification (2) were significant. The final results are in Specification (3) for Tables 3.9-3.11.

To summarize for the economy-wide results (Table 3.9):

- For African Americans, business formation rates are 4.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 4.3 percentage points lower than what would be expected in a race- and gender-neutral market area.<sup>79</sup>
- For Asians, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the Construction and AE-CRS sector results (Table 3.10):

- For African Americans, business formation rates are 9.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 11.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 6.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 7.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 9.6 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the Goods and Services sector results (Table 3.11):

- For African Americans, business formation rates are 5.3 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 4.2 percentage points lower than what would be expected in a race- and gender-neutral market area.

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<sup>79</sup> Recall that the net business formation rate is equal to the value of the direct coefficient (on the Hispanic indicator variable in this case) plus the value of the statistically significant coefficient on the MDMA\*Hispanic interaction term.

- For Asians, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

**Table 3.9. Business Formation Regressions, All Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.042 (74.39)	-0.042 (73.54)	-0.042 (74.36)
Hispanic	-0.032 (64.73)	-0.032 (63.42)	-0.032 (63.49)
Asian and Pacific Islander	-0.018 (27.05)	-0.018 (26.73)	-0.018 (26.99)
Native American	-0.027 (15.06)	-0.027 (14.96)	-0.027 (15.06)
Two or more races	-0.020 (16.41)	-0.020 (16.05)	-0.020 (16.40)
Nonminority Female	-0.028 (80.34)	-0.028 (79.04)	-0.028 (80.34)
Age	0.010 (115.64)	0.010 (115.63)	0.010 (115.64)
Age <sup>2</sup>	-0.000 (80.52)	-0.000 (80.51)	-0.000 (80.51)
MDMA	0.012 (4.27)	0.011 (4.11)	0.012 (4.34)
MDMA*African American		-0.008 (1.52)	
MDMA*Hispanic		-0.011 (3.35)	-0.011 (3.48)
MDMA* Asian/Pacific Islander		-0.004 (0.59)	
MDMA* Native American		0.010 (0.73)	
MDMA*Two or more races		-0.004 (0.51)	
MDMA*Nonminority Female		0.001 (0.69)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2695435	2695435	2695435
Pseudo R <sup>2</sup>	.2194	.2195	.2195

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient represents the percentage point probability difference in business ownership rates between a given group and nonminority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) “Other Race” includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) “MDMA” is shorthand for Maryland Market Area,” which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

**Table 3.10. Business Formation Regressions, Construction and Related Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.092 (21.59)	-0.092 (21.54)	-0.092 (21.57)
Hispanic	-0.078 (27.90)	-0.076 (27.02)	-0.076 (27.03)
Asian/Pacific Islanders	-0.062 (10.16)	-0.061 (9.97)	-0.062 (10.12)
Native American	-0.079 (8.27)	-0.078 (7.94)	-0.079 (8.27)
Two or more races	-0.041 (5.46)	-0.041 (5.29)	-0.041 (5.45)
Nonminority Female	-0.096 (37.27)	-0.096 (36.50)	-0.096 (37.27)
Age	0.025 (46.81)	0.025 (46.80)	0.025 (46.80)
Age <sup>2</sup>	-0.000 (32.55)	-0.000 (32.54)	-0.000 (32.54)
MDMA	0.022 (1.59)	0.023 (1.60)	0.023 (1.65)
MDMA*African American		0.048 (1.12)	
MDMA*Hispanic		-0.040 (2.80)	-0.041 (2.87)
MDMA* Asian/Pacific Islanders		-0.043 (0.77)	
MDMA* Native American		-0.059 (1.05)	
MDMA*Two or more races		-0.013 (0.32)	
MDMA*Nonminority female		0.008 (0.59)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	259606	259590	259590
Pseudo R <sup>2</sup>	.0815	.0815	.0815

Source and Notes: See Table 3.9.

**Table 3.11. Business Formation Regressions, Goods and Services Industries, 2006–2008**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.053 (78.16)	-0.053 (77.29)	-0.053 (78.17)
Hispanic	-0.030 (46.85)	-0.030 (45.88)	-0.030 (45.90)
Asian and Pacific Islander	-0.027 (33.62)	-0.027 (33.41)	-0.027 (33.61)
Native American	-0.028 (12.03)	-0.029 (12.03)	-0.028 (12.04)
Two or more races	-0.022 (14.61)	-0.022 (14.37)	-0.022 (14.61)
Nonminority Female	-0.027 (68.11)	-0.027 (67.12)	-0.027 (67.20)
Age	0.010 (92.13)	0.010 (92.12)	0.010 (92.13)
Age <sup>2</sup>	-0.000 (61.64)	-0.000 (61.63)	-0.000 (61.63)
MDMA	0.007 (2.23)	0.005 (1.65)	0.005 (1.63)
MDMA*African American		-0.009 (1.45)	
MDMA*Hispanic		-0.012 (2.83)	-0.012 (2.83)
MDMA* Asian/Pacific Islander		0.005 (0.64)	
MDMA* Native American		0.018 (1.01)	
MDMA*Two or more races		-0.001 (0.12)	
MDMA*Nonminority female		0.004 (2.21)	0.005 (2.34)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2504250	2504250	2504250
Pseudo R <sup>2</sup>	.0663	.0665	.0665

Source and Notes: See Table 3.9.

### ***c. Conclusions***

This section has demonstrated that observed DBE availability levels in the Maryland market area are substantially and statistically significantly lower in every case examined than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. Minorities and women are substantially and significantly less likely to own their own businesses than would be expected based upon their observable characteristics including age,

education, geographic location, industry, and trends over time. As demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males whether they work as employees or as entrepreneurs. These findings are consistent with results expected to be observed in a discriminatory market area.

#### **D. Expected Business Formation Rates—Implications for Current DBE Availability<sup>80</sup>**

In Table 3.12, the Probit regression results from Tables 3.9, 3.10, and 3.11 for the overall Maryland market area economy, Construction and AE-CRS sector, and Goods and Services sector, respectively, are combined with weighted average self-employment rates by race and gender from the 2006–2008 ACS PUMS (Tables 3.7 and 3.8) to determine the disparity between baseline availability and expected availability in a race- and gender-neutral market area. These figures appear in column (3) of each panel in Table 3.12.

The business formation rate in the MDMA for minorities and women in the Construction and AE-CRS sector is 14.93 percent (*see* middle panel of Table 3.12, last row). According to the regression specification underlying Table 3.10, however, that rate would be 23.90 percent, or 60.1 percent higher, in a race- and gender-neutral market area. Put differently, the disparity index of the actual business formation rate to the expected business formation rate is 62.47. Disparity indices are adverse and statistically significant for all groups examined.

In Construction and AE-CRS, the largest disparities observed are for Hispanics (51.19) and for minorities as a group (55.18), followed in descending order by Native Americans (64.30), nonminority females (65.04), Asians (68.42), African Americans (70.73), and persons reporting two or more races (78.95). As previously indicated, for DBEs as a group in the MDMA Construction and AE-CRS sectors, the disparity index is 62.47.

In the Goods and Services sector, the largest disparity observed is for African Americans (44.39), followed by Hispanics (62.30), minorities as a group (65.51), persons reporting two or more races (76.09), Native Americans (78.43), Asians (78.97), and nonminority women (81.13). For DBEs as a group in the MDMA Goods and Services sectors, the disparity index is 74.57.

Given the large disparities observed throughout Table 3.12, goal-setters might consider adjusting baseline estimates of DBE availability upward to account for the continuing effects of discrimination. The business formation rate disparities documented in Table 3.12 can be combined with the estimates of current DBE availability documented in Tables 2.23 and 2.24, to provide estimates of expected availability. These estimates appear below in Table 5.21. In every single instance in the Maryland market area, expected DBE availability exceeds current DBE availability.

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<sup>80</sup> This exercise also addresses the requirements of 49 CFR 26.45 (“Step 2”) for the USDOT DBE Program.

**Table 3.12. Actual and Potential Business Formation Rates in the Maryland Market Area**

<b>Race/Gender</b>	<b>Business Formation Rate (%)</b>	<b>Expected Business Formation Rate (%)</b>	<b>Disparity Index</b>
<i>All Industries</i>	(1)	(2)	(3)
African American	4.97	9.17	54.20
Hispanic	7.95	12.25	64.90
Asian and Pacific Islander	10.28	12.08	85.10
Native American	10.82	13.52	80.03
Two or more races	7.85	9.85	79.70
Minority	7.50	11.64	64.43
Nonminority female	9.73	12.53	77.65
DBE	9.04	12.45	72.61
<i>Construction and AE-CRS Sectors</i>	(1)	(2)	(3)
African American	22.23	31.43	70.73
Hispanic	12.27	23.97	51.19
Asian and Pacific Islander	13.43	19.63	68.42
Native American	14.23	22.13	64.30
Two or more races	15.38	19.48	78.95
Minority	13.31	24.12	55.18
Nonminority female	17.86	27.46	65.04
DBE	14.93	23.90	62.47
<i>Goods and Services Sectors</i>	(1)	(2)	(3)
African American	4.23	9.53	44.39
Hispanic	6.94	11.14	62.30
Asian and Pacific Islander	10.14	12.84	78.97
Native American	10.18	12.98	78.43
Two or more races	7.00	9.20	76.09
Minority	6.63	10.12	65.51
Nonminority female	9.46	11.66	81.13
DBE	8.65	11.60	74.57

Source: 2006–2008 ACS Public Use Microdata Sample. *See* Tables 3.9–3.11. Minority and DBE results from similar regression analyses, not reported here.

Notes: Figures in column (1) are average self-employment rates weighted using ACS population-based person weights. Figures in column (2), top, middle, and bottom panels, are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 3.9, 3.10, or 3.11, respectively. Minority and DBE figures were derived from similar regression analyses, not reported separately. Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100.

## **E. Evidence from the Survey of Business Owners**

As a final check on the statistical findings in this Chapter, we present evidence from a Census Bureau data collection effort dedicated to M/W/DBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO) collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic

minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Census* program. Data from the 2007 SBO, the most recent, were released in 2011.

The SBO estimates are created by matching data collected from income tax returns by the Internal Revenue Service with Social Security Administration data on race and ethnicity, and supplementing this information using statistical sampling methods. The unique field for conducting this matching is the Social Security Number (SSN) or the Employer Identification Number (EIN), as reported on the tax return.<sup>81</sup>

The SBO covers women and five groups of minorities: (1) African Americans, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Pacific Islanders, and (5) American Indians and Alaskan Natives. The 2007 SBO also includes comparative information for nonminority male-owned firms.<sup>82</sup>

The SBO provides aggregate estimates of the number of minority-owned and women-owned firms and their annual sales and receipts. The SBO distinguishes employer firms (*i.e.*, firms with one or more paid employees) from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Compared to the ACS PUMS, the SBO is more limited in the scope of industrial and geographic detail it provides. Nonetheless, it contains a wealth of information on the character of minority and female business enterprise in the U.S as a whole as well as in the State of Maryland.<sup>83</sup> In the remainder of this section, we present SBO statistics for the United States as a whole and in Maryland and calculate disparity indices from them. We find that results in the SBO regarding disparities are consistent with our findings above using the ACS PUMS.

Tables 3.13 and 3.14 contain data for all industries combined. Table 3.13 is for the U.S. as a whole, Table 3.14 is for the State of Maryland. Panel A in these two tables summarizes the SBO results for each race and/or gender grouping. For example, Panel A of Table 3.13 shows a total of 26.29 million firms in the U.S. in 2007 (column 1) with overall sales and receipts of \$10.949 trillion (column 2). Of these 26.29 million firms, 5.19 million had one or more employees (column 3) and these 5.19 million firms had overall sales and receipts of \$10.015 trillion (column 4). Column (5) shows a total of 56.63 million employees on the payroll of these 5.19 million firms and a total annual payroll expense of \$1.941 trillion (column 6).

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<sup>81</sup> Prior to 2002, “C” corporations were not included in the SMWOBE universe due to technical difficulties. This has been rectified in the 2002 SBO. For more information, consult the discussion of SBO survey methodology at <http://www.census.gov/econ/sbo/>.

<sup>82</sup> In the ACS PUMS data, discussed above, the unit of analysis is the business owner, or self-employed person. In the SBO data the unit of analysis is the business rather than the business owner. Furthermore, unlike most other business statistics, including the other components of the *Economic Census*, the unit of analysis in the SBO is the firm, rather than the establishment.

<sup>83</sup> It is, in general, not possible with the SBO dataset to examine geographic divisions below the state level.

The remaining rows in Panel A provide comparable statistics for nonminority male-owned, women-owned, and minority-owned firms. For example, Table 3.13 shows that there were 1.9 million African American-owned firms counted in the SBO, and that these 1.9 million firms registered \$135.7 billion in sales and receipts. It also shows that 106,566 of these African American-owned firms had one or more employees, and that they employed a total of 909,552 workers with an annual payroll total of \$23.33 billion.

Panel A of Table 3.14 provides comparable information for Maryland. The SBO counted 509,273 firms in Maryland, of which 207,553 were nonminority male-owned; 172,083 were female-owned; 102,173 were African American-owned; 25,774 were Hispanic-owned; 35,881 were Asian-owned; 3,301 were Native American-owned; and 294 were Native Hawaiian- or Pacific Islander-owned.

Panel B in each Table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 3.14 shows that nonminority male-owned firms were 40.75 percent of all firms in Maryland, female-owned firms were 33.79 percent, and African American-owned firms were 20.06 percent. Additionally, 5.06 percent of firms were Hispanic-owned, 7.05 percent were Asian-owned, 0.65 percent were Native American-owned, and 0.06 percent were Native Hawaiian- or Pacific Islander-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 3.14, for example, shows that although nonminority male-owned firms were 40.75 percent of all firms, they accounted for 73.18 percent of all sales and receipts. African American-owned firms, in contrast, were 20.06 percent of all firms in Maryland, but they accounted for only 3.44 percent of all sales and receipts. Hispanic-owned firms were 5.06 percent of all firms, but they accounted for only 2.19 percent of all sales and receipts. Asian-owned firms were 7.05 percent of all firms, but they accounted for only 5.75 percent of all sales and receipts. Native American-owned firms were 0.65 percent of all firms, but they accounted for only 0.17 percent of all sales and receipts. Native Hawaiian- or Pacific Islander-owned firms were 0.06 percent of all firms, but they accounted for only 0.04 percent of all sales and receipts. Similarly, women accounted for 33.79 percent of all firms in Maryland, but earned only 11.30 percent of sales and receipts.

Similar results are obtained when the survey results are restricted to firms with one or more paid employees. Column (3) in Table 3.14, for example, shows that although nonminority male-owned firms were 56.70 percent of all employer firms, they accounted for 75.15 percent of all employer firm sales and receipts. African American-owned firms, in contrast, were 5.43 percent of all employer firms, but they accounted for only 2.58 percent of all employer firm sales and receipts. Hispanic-owned firms were 3.32 percent of all employer firms, but they accounted for only 1.91 percent of all employer firm sales and receipts. Asian-owned firms were 9.85 percent of all employer firms, but they accounted for only 5.70 percent of all employer firm sales and receipts. Native American-owned firms were 0.33 percent of all employer firms but accounted for only 0.13 percent of all sales and receipts. Native Hawaiian- or Pacific Islander-owned employer firms were 0.04 percent of all employer firms and accounted for 0.05 percent of all sales and receipts. Finally, women accounted for 18.84 percent of all employer firms in Maryland, but earned only 10.23 percent of all employer firm sales and receipts.

Adverse disparities between the fraction of firms that are minority- or women-owned and their fraction of sales and receipts in Maryland are observed not only for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women, both for employer firms and nonemployer firms. The disparity indices are presented in Panel C of each table. Disparity indices of approximately 80 percent or less indicate disparate impact consistent with business discrimination (0 percent being complete disparity and 100 percent being full parity). In Maryland (Table 3.14), the sales and receipts disparity indices (in columns 2 and 4) fall at or beneath the 80 percent threshold in 10 out of 12 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

**Table 3.13. Disparity Ratios from the 2007 Survey of Business Owners, United States, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	26,294,860	10,949,461,874	5,189,968	10,015,142,962	56,626,554	1,940,572,944
Nonminority Male	10,943,636	7,725,275,376	2,753,871	7,255,760,511	37,138,139	1,386,782,737
Female	7,792,115	1,196,608,004	909,661	1,014,366,348	7,520,121	214,673,400
African American	1,921,864	135,739,834	106,566	97,144,898	909,552	23,334,792
Hispanic	2,260,269	350,661,243	248,852	279,920,707	1,908,161	54,295,508
Asian	1,549,559	506,047,751	397,426	453,574,194	2,807,771	79,230,459
Native Hawaiian/Pac. Islander	37,687	6,319,357	4,151	5,250,301	37,801	1,217,138
Am. Indian & Alaska Native	236,691	34,353,842	23,662	27,494,075	185,037	5,930,247
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	41.62%	70.55%	53.06%	72.45%	65.58%	71.46%
Female	29.63%	10.93%	17.53%	10.13%	13.28%	11.06%
African American	7.31%	1.24%	2.05%	0.97%	1.61%	1.20%
Hispanic	8.60%	3.20%	4.79%	2.79%	3.37%	2.80%
Asian	5.89%	4.62%	7.66%	4.53%	4.96%	4.08%
Native Hawaiian/Pac. Islander	0.14%	0.06%	0.08%	0.05%	0.07%	0.06%
Am. Indian & Alaska Native	0.90%	0.31%	0.46%	0.27%	0.33%	0.31%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		169.52		136.54	123.60	134.68
Female		36.88		57.79	75.77	63.12
African American		16.96		47.24	78.23	58.56
Hispanic		37.26		58.29	70.28	58.35
Asian		78.43		59.14	64.75	53.32
Native Hawaiian/Pac. Islander		40.27		65.54	83.46	78.42
Am. Indian & Alaska Native		34.86		60.21	71.67	67.03

Source: NERA calculations using 2007 SBO. Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Excludes publicly-owned, foreign-owned, and not-for-profit firms. (C) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

**Table 3.14. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	509,273	196,805,267	96,608	179,585,580	1,059,179	40,916,996
Nonminority Male	207,553	144,019,911	54,779	134,961,409	700,313	29,025,607
Female	172,083	22,231,876	18,202	18,379,402	164,894	5,447,955
African American	102,173	6,767,579	5,246	4,640,166	45,664	1,527,820
Hispanic	25,774	4,310,496	3,206	3,422,148	25,019	986,306
Asian	35,881	11,320,071	9,515	10,241,217	71,408	2,266,355
Native Hawaiian/Pac. Islander	294	88,073	39	86,124	679	35,465
Am. Indian & Alaska Native	3,301	324,997	318	239,231	1,971	79,595
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	40.75%	73.18%	56.70%	75.15%	66.12%	70.94%
Female	33.79%	11.30%	18.84%	10.23%	15.57%	13.31%
African American	20.06%	3.44%	5.43%	2.58%	4.31%	3.73%
Hispanic	5.06%	2.19%	3.32%	1.91%	2.36%	2.41%
Asian	7.05%	5.75%	9.85%	5.70%	6.74%	5.54%
Native Hawaiian/Pac. Islander	0.06%	0.04%	0.04%	0.05%	0.06%	0.09%
Am. Indian & Alaska Native	0.65%	0.17%	0.33%	0.13%	0.19%	0.19%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		179.56		132.54	116.61	125.11
Female		33.43		54.32	82.63	70.67
African American		17.14		47.58	79.39	68.76
Hispanic		43.28		57.42	71.18	72.64
Asian		81.64		57.90	68.45	56.24
Native Hawaiian/Pac. Islander		77.52		118.80	158.80	214.71
Am. Indian & Alaska Native		25.48		40.47	56.53	59.10

Source and Notes: See Table 3.13.

Table 3.15 shows comparable SBO data for the Construction and AE-CRS sector in the U.S. as a whole. Here, adverse disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women.<sup>84</sup> For example, although African Americans account for 4.10 percent of all firms in the Construction and AE-CRS sector, they earn only 1.15 percent of all sales and receipts in that sector. Hispanics account for 7.44 percent of firms but only 3.52 percent of sales and receipts. For Asians, the figures are 4.02 percent and 2.71 percent, respectively. For Native Americans, the figures are 0.87 percent and 0.49 percent, respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.12 percent and 0.10 percent, respectively. Finally, women account for 19.31 percent of all Construction and AE-CRS firms but earned only 9.08 percent of all sales and receipts.

<sup>84</sup> The sole exception being Native Hawaiian and Pacific Islander-owned employer firms.

Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, and women. Overall, disparities in this category are slightly less acute than among firms as a whole. However, they remain far larger than the comparable figure for nonminority male-owned firms. This is evident in that the fraction of employer firms compared to the fraction of all firms is far higher among nonminority males than among other race and gender groups. In Table 3.15, for example, nonminority males represent 54.37 percent of all firms but 62.74 percent of employer firms. For all other groups, the direction of this ratio is reversed. That is, each group's fraction among employer firms is substantially smaller than its fraction among firms as a whole, whereas for nonminority males it is larger.

**Table 3.15. Disparity Ratios from the 2007 Survey of Business Owners, United States, Construction and AE-CRS**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	7,069,005	2,247,219,546	1,473,633	1,968,365,597	10,803,954	515,161,851
Nonminority Male	3,843,180	1,649,355,770	924,548	1,483,625,570	7,664,496	381,436,430
Female	1,365,249	203,964,647	196,614	165,319,338	1,124,710	49,343,438
African American	289,579	25,787,994	22,521	18,937,276	135,685	5,647,555
Hispanic	526,190	79,164,324	63,055	58,649,224	390,113	15,224,090
Asian	284,427	61,003,128	48,732	51,923,279	303,058	17,195,039
Native Hawaiian/Pac. Islander	8,610	2,161,094	1,311	1,853,781	9,923	509,611
Am. Indian & Alaska Native	61,579	11,032,792	8,047	8,831,344	51,974	2,228,594
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	54.37%	73.40%	62.74%	75.37%	70.94%	74.04%
Female	19.31%	9.08%	13.34%	8.40%	10.41%	9.58%
African American	4.10%	1.15%	1.53%	0.96%	1.26%	1.10%
Hispanic	7.44%	3.52%	4.28%	2.98%	3.61%	2.96%
Asian	4.02%	2.71%	3.31%	2.64%	2.81%	3.34%
Native Hawaiian/Pac. Islander	0.12%	0.10%	0.09%	0.09%	0.09%	0.10%
Am. Indian & Alaska Native	0.87%	0.49%	0.55%	0.45%	0.48%	0.43%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		135.00		120.14	113.07	118.02
Female		47.00		62.95	78.02	71.79
African American		28.01		62.95	82.18	71.73
Hispanic		47.33		69.63	84.39	69.06
Asian		67.47		79.77	84.82	100.93
Native Hawaiian/Pac. Islander		78.96		105.86	103.24	111.19
Am. Indian & Alaska Native		56.36		82.16	88.10	79.22

Source and Notes: See Table 3.13.

Table 3.16 shows comparable results for the Construction and AE-CRS sector in Maryland. Among all firms in Construction and AE-CRS, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, and women. Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Native Americans, and women. As in Table 3.15, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women. In the Maryland Construction and AE-CRS sector, the sales and receipts disparity indices fall at or beneath the 80 percent threshold in 7 out of 12 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

**Table 3.16. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Construction and AE-CRS**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	145,681	54,764,219	32,091	49,317,726	274,097	14,685,323
Nonminority Male	71,374	38,909,428	19,920	35,823,055	185,623	10,256,798
Female	34,535	6,136,059	5,248	5,185,395	33,742	1,693,086
African American	18,191	2,486,853	1,612	2,033,814	13,791	722,193
Hispanic	9,573	1,969,781	1,335	1,551,985	9,745	495,993
Asian	7,801	2,631,364	1,440	2,380,769	13,360	862,506
Native Hawaiian/Pac. Islander	120	85,920	31	85,170	664	34,899
Am. Indian & Alaska Native	797	178,815	133	144,293	899	50,628
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	48.99%	71.05%	62.07%	72.64%	67.72%	69.84%
Female	23.71%	11.20%	16.35%	10.51%	12.31%	11.53%
African American	12.49%	4.54%	5.02%	4.12%	5.03%	4.92%
Hispanic	6.57%	3.60%	4.16%	3.15%	3.56%	3.38%
Asian	5.35%	4.80%	4.49%	4.83%	4.87%	5.87%
Native Hawaiian/Pac. Islander	0.08%	0.16%	0.10%	0.17%	0.24%	0.24%
Am. Indian & Alaska Native	0.55%	0.33%	0.41%	0.29%	0.33%	0.34%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		145.02		117.02	109.10	112.52
Female		47.26		64.29	75.28	70.50
African American		36.37		82.10	100.16	97.90
Hispanic		54.74		75.65	85.46	81.19
Asian		89.73		107.58	108.62	130.89
Native Hawaiian/Pac. Islander		190.47		178.77	250.78	246.01
Am. Indian & Alaska Native		59.68		70.59	79.14	83.18

Source and Notes: See Table 3.13.

Table 3.17 shows comparable SBO data for the Goods and Services sector in the U.S. as a whole. Here, adverse disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women. African Americans, for example, account for 8.49 percent of all firms in the Goods and Services sector, they earned only 1.26 percent of all sales and receipts in that sector. Hispanics account for 9.02 percent of firms but only 3.12 percent of sales and receipts. For Asians, the figures are 6.58 percent and 5.11 percent, respectively. For Native Americans, the figures are 0.91 percent and 0.27 percent, respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.15 percent and 0.05 percent, respectively. Finally, women account for 33.43 percent of all Goods and Services firms but earned only 11.41 percent of all sales and receipts. Comparable, though slightly smaller, disparities are observed as well among firms with paid employees in the Goods and Services sector.

**Table 3.17. Disparity Ratios from the 2007 Survey of Business Owners, United States, Goods and Services**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	19,225,855	8,702,242,328	3,716,335	8,046,777,365	45,822,600	1,425,411,093
Nonminority Male	7,100,456	6,075,919,606	1,829,323	5,772,134,941	29,473,643	1,005,346,307
Female	6,426,866	992,643,357	713,047	849,047,010	6,395,411	165,329,962
African American	1,632,285	109,951,840	84,045	78,207,622	773,867	17,687,237
Hispanic	1,734,079	271,496,919	185,797	221,271,483	1,518,048	39,071,418
Asian	1,265,132	445,044,623	348,694	401,650,915	2,504,713	62,035,420
Native Hawaiian/Pac. Islander	29,077	4,158,263	2,840	3,396,520	27,878	707,527
Am. Indian & Alaska Native	175,112	23,321,050	15,615	18,662,731	133,063	3,701,653
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	36.93%	69.82%	49.22%	71.73%	64.32%	70.53%
Female	33.43%	11.41%	19.19%	10.55%	13.96%	11.60%
African American	8.49%	1.26%	2.26%	0.97%	1.69%	1.24%
Hispanic	9.02%	3.12%	5.00%	2.75%	3.31%	2.74%
Asian	6.58%	5.11%	9.38%	4.99%	5.47%	4.35%
Native Hawaiian/Pac. Islander	0.15%	0.05%	0.08%	0.04%	0.06%	0.05%
Am. Indian & Alaska Native	0.91%	0.27%	0.42%	0.23%	0.29%	0.26%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		189.05		145.73	130.67	143.28
Female		34.12		54.99	72.74	60.45
African American		14.88		42.98	74.68	54.87
Hispanic		34.59		55.00	66.26	54.83
Asian		77.72		53.20	58.26	46.38
Native Hawaiian/Pac. Islander		31.59		55.23	79.61	64.95
Am. Indian & Alaska Native		29.42		55.20	69.11	61.81

Source and Notes: See Table 3.13.

Finally, Table 3.18 shows comparable results for the Goods and Services sector in Maryland. Among all firms in Goods and Services, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women. As in Table 3.17, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women. In the Maryland Goods and Services sector, the sales and receipts disparity indices fall at or beneath the 80 percent threshold in 12 out of 12 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

**Table 3.18. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Goods and Services**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	363,592	142,041,048	64,517	130,267,854	785,082	26,231,673
Nonminority Male	136,179	105,110,483	34,859	99,138,354	514,690	18,768,809
Female	137,548	16,095,817	12,954	13,194,007	131,152	3,754,869
African American	83,982	4,280,726	3,634	2,606,352	31,873	805,627
Hispanic	16,201	2,340,715	1,871	1,870,163	15,274	490,313
Asian	28,080	8,688,707	8,075	7,860,448	58,048	1,403,849
Native Hawaiian/Pac. Islander	174	2,153	8	954	15	566
Am. Indian & Alaska Native	2,504	146,182	185	94,938	1,072	28,967
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	37.45%	74.00%	54.03%	76.10%	65.56%	71.55%
Female	37.83%	11.33%	20.08%	10.13%	16.71%	14.31%
African American	23.10%	3.01%	5.63%	2.00%	4.06%	3.07%
Hispanic	4.46%	1.65%	2.90%	1.44%	1.95%	1.87%
Asian	7.72%	6.12%	12.52%	6.03%	7.39%	5.35%
Native Hawaiian/Pac. Islander	0.05%	0.00%	0.01%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.69%	0.10%	0.29%	0.07%	0.14%	0.11%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		197.58		140.85	121.34	132.42
Female		29.95		50.44	83.20	71.29
African American		13.05		35.52	72.08	54.53
Hispanic		36.98		49.50	67.09	64.45
Asian		79.21		48.21	59.08	42.76
Native Hawaiian/Pac. Islander		3.17		5.91	15.41	17.40
Am. Indian & Alaska Native		14.94		25.42	47.62	38.51

Source and Notes: See Table 3.13.



## IV. Statistical Disparities in Capital Markets

### A. Introduction

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. Among such characteristics, the most commonly considered are race, ethnicity and gender. In labor markets, this might translate into equally productive workers in similar jobs being paid different salaries because of their race, ethnicity or gender. In credit markets, it might translate into loan approvals differing across racial or gender groups with otherwise similar financial backgrounds.

In this Chapter, we examine whether there is evidence consistent with the presence of discrimination in the small business credit market against minority-owned or women-owned small businesses. Discrimination in the credit market against such businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place, might negatively impact the size a firm could obtain, and/or shorten its longevity in the market.<sup>85</sup>

In our analysis, we use data from the Federal Reserve Board to examine the existence or otherwise of discrimination in the small business credit market for 1993, 1998 and 2003. These surveys are based on a large representative sample of firms with fewer than 500 employees and are administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms but the 2003 survey did not.<sup>86</sup> Because of the cancellation of these surveys by the Federal Reserve Board in 2008, these data remain the best and most current available data sources for this topic.<sup>87</sup>

These data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms are substantially and statistically significantly more likely to be

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<sup>85</sup> Again, as noted in Chapter V, these factors also illustrate why, in a disparity study intended to answer the question of whether discrimination is present in business, adjusting availability for “capacity” factors such as firm age, firm size or firm revenues, is not a legitimate practice when there is evidence that suggests that these factors themselves are tainted by discrimination. To do so would be to inappropriately introduce one or more endogenous variables into the analysis.

<sup>86</sup> The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, *see* NORC (2005), p. 11.

<sup>87</sup> *See* fn. 128 for additional information. As described later in this chapter, we also employ a smaller dataset built from comparable surveys performed by NERA between 1999-2007 as well summarize findings from a more limited dataset covering the 2007-2010 period.

denied credit than are nonminority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms applied for a loan their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history.
- When minority-owned firms *did* receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms.
- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern.
- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year.
- There is no evidence that discrimination in the market for credit is significantly different in the Middle Atlantic census division or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole.
- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003.

The structure of this Chapter is as follows. First, we outline the main theories of discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the data files used in the remainder of the Chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we provide a series of answers to criticisms. Finally, we present our conclusions.

## **B. Theoretical Framework and Review of the Literature**

Most recent economic studies of discrimination draw on the analyses contained in Gary Becker's (1957) *The Economics of Discrimination*. Becker's main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for

which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group or (b) requiring better characteristics (*i.e.*, a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or be given less favorable terms on the loan.

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ statistical discrimination—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would rather reflect an attempt to minimize costs. Empirically, the racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

There has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of “redlining”—that is, not granting loans for properties located in certain areas. To analyze that issue, the Home Mortgage Disclosure Act was passed to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell, *et al.*, 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, non-minorities had 10 percent of their loans rejected whereas rejection rates were 28 percent for both African Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, etc.) were controlled for, African Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell, *et al.* (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution’s files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired “identical” applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to

borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (*c.f.* Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and Simon, 1997).

We now turn to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.<sup>88</sup> Liquidity constraints can be a problem in starting a business as well as in running it. Discrimination in the credit market against minority-owned small businesses can have a devastating effect on the success of such businesses, and even prevent them from opening in the first place. Evidence of the latter effect is provided in the economics literature on self-employment.<sup>89</sup>

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,<sup>90</sup> Bates argued that “from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and nonminority stereotypes about suitable roles for minorities in society” (Bates, 1989; Bates, 1993; Bates, 1973). Indeed, as Bates points out, Gunner Myrdal observed,

*“The Negro businessman ... encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down” (Myrdal, 1944, p. 308).*

Bates goes on to argue that commercial banks lend most easily to nonminority males who possess significant amounts of equity capital to invest in their businesses (Bates, 1991a). Apart from banks, an important source of debt capital for small business is likely to be family and

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<sup>88</sup> Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Holtz-Eakin, *et al.* (1994a, 1994b) examine flows in and out of self-employment and find that inheritances both raise entry and slow exit. Black, de Meza and Jeffreys (1996) find that housing equity plays an important role in shaping the supply of entrepreneurs. Lindh and Ohlsson (1996) suggest that the probability of being self-employed increases when people receive windfall gains in the form of lottery winnings and inheritances.

<sup>89</sup> See Chapter III, above.

<sup>90</sup> 298 F.Supp.2d 725 (N.D. Ill. 2003).

friends, but the low wealth of African American households reduces the availability of debt capital that family and friends could invest in small business operations (Bates, 1993; Bates, 1991b).

Additional evidence indicates that capital constraints for African American-owned businesses are particularly large. For instance, Bates (1989) finds that racial differences in levels of financial capital do have a significant effect upon racial patterns in business failure rates. Fairlie and Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper Fairlie (1999) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why African American men are one-third as likely to be self-employed as nonminority men. The author finds that the large discrepancy is due to an African American transition rate into self-employment that is approximately one half the nonminority rate and an African American transition rate out of self-employment that is twice the nonminority rate. He finds that capital constraints—measured by interest income and lump-sum cash payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for African American self-employed than for nonminority self-employed persons. Fairlie then attempts to decompose the racial gap in the transition rate into self-employment into a part due to differences in the distributions of individual characteristics and a part due to differences in the processes generating the transitions. He finds that differences in the distributions of characteristics between African Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, that “the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks” (1998, p.14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported in this Study. This paper documents that a large discrepancy exists in credit access between non-minorities and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm’s credit history and that of its owner, reducing the ability to provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions. In an unpublished paper, Cole (1998) uses the 1993 NSSBF and estimates models of loan denials similar in nature to those discussed in this Study.

The present analysis takes advantage of the 1993 NSSBF data, the 1998 Survey of Small Business Finances (SSBF) data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier NSSBF data, and the 1993 and 1998 surveys have larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are

also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

## C. Empirical Framework and Description of the Data

### 1. Introduction

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African American-owned firms compared to nonminority-owned firms is consistent with discrimination, it is necessary to compare African American- and nonminority-owned firms that have similar risks of default, that is, the fraction of the African American firms' loans that would be approved if they had the same creditworthiness as the nonminority-owned firms. A standard approach to this problem is to statistically control for firms' characteristics relevant to the loan decision. If African American-owned firms with the same likelihood of default as nonminority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell, *et al.* (1996) we estimated the following loan denial equation:

$$(1) \quad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

where  $D_i$  represents an indicator variable for loan denial for firm  $i$  (that is, 1 if the loan is denied and 0 if accepted),  $CW$  represents measures of creditworthiness,  $X$  represents other firm characteristics,  $R$  represents the race, ethnicity or gender of the firm's ownership, and  $\Phi$  is the cumulative normal probability distribution.<sup>91</sup> This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors.<sup>92</sup> Within the framework of this model, a positive estimate of  $\beta_3$  is consistent with the presence of discrimination.<sup>93</sup>

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<sup>91</sup> Additional discussion of Probit regression appears in Chapter III, Section C.1.

<sup>92</sup> Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of African American-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for nonminority and African American-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

<sup>93</sup> The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

## 2. 1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.<sup>94</sup> In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (*i.e.*, Asians, Pacific Islanders, American Indians, and Alaska Natives).<sup>95</sup>

Table 4.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African American-owned firms are almost 2.5 times more likely to have a loan application rejected as are non-Hispanic White-owned firms (hereafter “nonminority”) (65.9 percent versus 26.9 percent).<sup>96</sup> Other minority groups are denied at rates higher than non-minorities as well, but the magnitude of the African American/nonminority differential is especially striking.

Minority-owned firms, however, do have characteristics that are different from those of nonminority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their nonminority counterparts. Minority firms were also less creditworthy, on average, than their nonminority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to nonminority-owned firms, African American-owned firms were also more likely, on average to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than nonminority-owned firms. This was particularly true for African American-owned firms, who requested loans that were, on

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<sup>94</sup> The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

<sup>95</sup> There were also two firms in the “Other race” category in 1993 that reported multiple or mixed race.

<sup>96</sup> Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. Nonminority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African Americans, 36 percent for Hispanics, and 24 percent for other races, which are broadly similar to the differences reported here. These estimates for minority groups are estimated with less precision, however, because of the smaller number of minority-owned firms in the 1987 sample.

average, about 60 percent smaller than those requested by nonminority-owned firms; and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by nonminority-owned firms.

The NSSBF database does not identify the specific city or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 4.2 presents evidence for the South Atlantic Census division (hereafter SATL), which includes Maryland, Delaware, the District of Columbia, Virginia, and West Virginia.<sup>97</sup> The 1993 SATL sample includes the owners of 773 firms, of which 342 firms said that they had applied for a loan over the preceding three-year period.

**Table 4.1. Selected Population-Weighted Sample Means of Loan Applicants – USA, 1993**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	39.9
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.8	4.1	16.9	5.2	15.2
% Firms Delinquent in Business Obligations	24.2	23.1	49.0	25.1	31.6
% Owners Delinquent on Personal Obligations	14.0	12.6	43.4	14.8	24.5
% Owners Declared Bankruptcy in Past 7yrs	2.4	2.4	5.3	2.0	0.8
<i>Other Firm Characteristics</i>					
% Female-Owned	17.9	18.1	18.2	9.7	23.1
Sales (in 1,000s of 1992 \$)	1795.0	1870.6	588.6	1361.3	1309.1
Profits (in 1,000s of 1992 \$)	86.7	84.5	59.9	189.5	54.0
Assets (in 1,000s of 1992 \$)	889.4	922.5	230.3	745.6	747.3
Liabilities (in 1,000s of 1992 \$)	547.4	572.8	146.2	308.6	486.0
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% ≤ 8 <sup>th</sup> Grade Education	0.8	0.7	0.0	3.4	1.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.8
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8

<sup>97</sup> The other states in the South Atlantic division include Florida, Georgia, North Carolina, and South Carolina.

% Existing Relationship with Lender	24.6	24.7	12.8	29.6	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
<i>Characteristics of Loan Application</i>					
Amount Requested (in 1,000s of 1992\$)	300.4	310.8	126.5	179.1	310.5
% Loans to be Used for Working Capital	8.4	8.8	4.9	4.6	5.5
% Loans to be Used for Equipment/Machinery	2.3	2.4	1.7	0.2	0.6
% Loans to be Used for Land/Buildings	0.4	0.4	0.9	0.0	0.0
% Loan to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Source: NERA calculations from 1993 NSSBF.

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Sample restricted to firms that applied for a loan over the preceding three years.

**Table 4.2. Selected Sample Means of Loan Applicants – SATL 1993**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	29.2	26.3	69.8	50.9	33.4
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.8	3.9	14.9	0.0	22.5
% Firms Delinquent in Business Obligations	23.3	21.4	49.2	33.4	33.6
% Owners Delinquent on Personal Obligations	11.4	8.5	41.1	16.5	51.3
% Owners Declared Bankruptcy in Past 7yrs	2.3	2.2	6.6	0.0	0.0
<i>Other Firm Characteristics</i>					
% Female-Owned	18.3	17.8	29.9	9.7	28.6
Sales (in 1,000s of 1992 \$)	1727.7	1778.4	776.3	2363.0	635.8
Profits (in 1,000s of 1992 \$)	74.5	62.5	17.5	460.1	6.8
Assets (in 1,000s of 1992 \$)	1022.3	1074.2	277.8	815.9	752.9
Liabilities (in 1,000s of 1992 \$)	645.4	675.5	197.4	650.0	340.3
Owner's Years of Experience	19.1	19.7	15.2	10.9	16.6
Owner's Share of Business	73.8	73.5	84.8	62.3	82.9
% ≤ 8 <sup>th</sup> Grade Education	0.3	0.4	0.0	0.0	0.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	1.9	1.6	6.7	3.9	0.0
% High School Graduate	16.4	16.2	21.3	27.0	0.0
% Some College	28.2	29.6	25.7	18.6	0.0
% College Graduate	32.5	31.6	31.4	29.5	67.3
% Postgraduate Education	20.7	20.6	14.8	21.0	32.7
% Line of credit	47.4	48.5	32.8	53.0	28.6
Total Full-time Employment in 1990	12.4	12.8	10.9	8.0	8.2
Total Full-time Employment in 1992	14.1	14.5	14.2	9.6	8.2
Firm age, in years	13.2	13.6	10.3	9.3	10.1
% New Firm Since 1990	4.4	3.9	11.2	12.0	0.0
% Firms Located in MSA	80.6	80.0	89.6	92.0	72.4
% Sole Proprietorship	23.1	23.0	45.0	4.5	20.8
% Partnership	6.3	6.7	0.7	3.5	5.1
% S Corporation	29.7	30.3	22.8	23.9	28.6
% C Corporation	40.9	40.0	31.4	68.0	45.5
% Existing Relationship with Lender	24.0	23.8	21.7	15.9	43.6
% Firms with Local Sales Market	49.8	50.3	42.7	30.2	72.5
<i>Characteristics of Loan Application</i>					

Amount Requested (in 1,000s of 1992\$)	342.9	352.9	183.1	440.0	126.3
% Loans to be Used for Working Capital	6.9	7.4	1.3	3.5	5.3
% Loans to be Used for Equipment/Machinery	3.0	3.4	0.0	0.0	0.0
% Loans to be Used for Land/Buildings	0.4	0.4	0.0	0.0	0.0
% Loan to be Backed by Real Estate	24.6	23.9	38.5	34.4	14.7
Total Sample Size (unweighted)	342	270	45	19	8

Source and Notes: See Table 4.1.

The overall denial rate in the SATL is slightly lower than the national rate reported in Table 4.1, but this difference is not statistically significant. The difference in the denial rates between African American-owned and nonminority-owned firms is also slightly larger in the SATL (39.0 percentage points nationally and 43.5 percentage points in the SATL), but again this difference is not statistically significant. Indeed, in the large majority of cases (over 80 percent), the weighted sample means are not statistically significantly different in the SATL than in the nation as a whole—either overall or by race, ethnicity or gender.

## D. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves said were their main problems. While this evidence, standing alone, is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding discrimination in obtaining credit. That African American-owned firms and other minorities report greater difficulty in obtaining credit than do nonminority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. Evidence of business owners' own perceptions therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 4.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African Americans and Hispanics were much more likely to say that it had been a "serious" problem (31.3 percent and 22.9 percent, respectively) than non-minorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas—(1) training costs; (2) worker's compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) the Americans with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) the Family and Medical Leave Act. Differences by race, ethnicity or gender are much less pronounced in these eight areas than they are in relation to credit market conditions.<sup>98</sup> The finding that African American-owned and Hispanic-owned firms are largely

<sup>98</sup> We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African American-owned firms were more likely to report that credit market conditions were especially serious.

indistinguishable from nonminority-owned firms in reporting a variety of problems, except for the case of credit, indicates that minority-owned firms perceive credit availability to be a particular problem for them.

Results are broadly similar in Table 4.4 for the SATL region—with African American, Hispanic, and other minority-owned firms being more likely than nonminority-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

Table 4.5 reports the views of NSSBF respondents for the U.S. as a whole and Table 4.6 reports views for the SATL on the most important issue businesses expected to face over the next 12 months. Nationally, credit availability and cash flow again appear to be more important issues for African American-owned firms than for nonminority-owned firms. Nonminority-owned firms were especially worried about health care costs. Hispanic and Other minority-owned firms were especially worried about general business conditions.

**Table 4.3. Problems Firms Experienced During Preceding 12 Months - USA, 1993**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	66.2	67.3	43.1	58.9	65.8
Percent reporting somewhat of a problem	20.1	19.9	25.6	18.2	21.3
Percent reporting serious problem	13.7	12.7	31.3	22.9	12.9
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.6	7.2	6.3	4.3
Worker's compensation costs	21.7	21.0	19.3	30.6	28.7
Health insurance costs	32.5	31.6	38.1	44.3	35.0
IRS regulation or penalties	12.3	11.8	17.1	17.9	13.2
Environmental regulations	8.5	8.5	5.6	7.4	11.0
Americans with Disabilities Act	2.7	2.6	3.6	2.7	3.9
Occupational Safety and Health Act	4.5	4.5	3.9	3.6	6.2
Family and Medical Leave Act	2.7	2.5	4.5	3.1	4.8
Number of observations (unweighted)	2,007	1,648	170	96	93

Source: See Table 4.1.

**Table 4.4. Problems Firms Experienced During Preceding 12 Months – SATL, 1993**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	65.3	66.8	38.4	58.9	69.2
Percent reporting somewhat of a problem	20.9	20.9	28.8	14.2	18.4
Percent reporting serious problem	13.7	12.3	32.8	26.9	12.4
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.5	5.4	4.8	8.4
Worker's compensation costs	21.5	20.5	25.1	44.0	20.1
Health insurance costs	29.8	27.7	39.4	44.6	50.6
IRS regulation or penalties	12.7	12.3	19.1	24.3	5.0
Environmental regulations	9.3	10.1	6.1	2.9	2.5

Americans with Disabilities Act	2.1	2.0	6.6	0.0	1.2
Occupational Safety and Health Act	3.4	3.2	5.7	5.3	2.7
Family and Medical Leave Act	2.5	2.3	7.8	1.6	1.2
Number of observations (unweighted)	773	573	112	47	41

Source: See Table 4.1.

In the SATL, credit availability and cash flow are far more important issues for African American-owned firms than for nonminority-owned firms. Almost four times as many African American-owned firms reported credit availability as the most important issue than nonminority-owned firms. In contrast, in the SATL, health care costs were a large concern for all types of firms.

**Table 4.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA, 1993**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	5.9	5.5	20.5	5.3	4.3
Health care, health insurance	21.1	22.1	12.3	13.7	14.8
Taxes, tax policy	5.7	5.7	2.6	8.7	3.3
General U.S. business conditions	11.8	11.5	8.9	14.4	17.4
High interest rates	5.4	5.7	1.8	3.5	3.4
Costs of conducting business	3.3	3.3	3.8	3.8	3.6
Labor force problems	3.5	3.3	3.9	5.5	3.6
Profits, cash flow, expansion, sales	10.3	9.9	20.3	9.8	11.9
Number of observations (unweighted)	4,388	3,383	424	262	319

Source: See Table 4.1.

**Table 4.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – SATL, 1993**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	7.1	6.5	25.1	7.2	0.0
Health care, health insurance	19.4	19.6	13.2	17.2	21.6
Taxes, tax policy	6.8	7.2	2.1	9.5	0.0
General U.S. business conditions	10.2	10.1	5.3	15.9	13.3
High interest rates	5.5	5.8	0.7	1.6	6.1
Costs of conducting business	4.0	4.0	5.8	5.3	1.6
Labor force problems	3.9	3.7	4.3	9.3	2.9
Profits, cash flow, expansion, sales	8.5	7.9	14.0	6.1	19.0
Number of observations (unweighted)	729	544	106	41	38

Source: See Table 4.1.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey, conducted by the Census Bureau, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African American-owned firms reporting an answer indicated that lack of financial capital had a strong adverse impact—compared to only 17.3 percent among nonminority male-owned firms. Hispanic-owned firms and other minority-owned firms also reported higher percentages than nonminority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than nonminority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by nonminority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African Americans, 8.8 percent for Hispanics, 6.1 percent for other minorities, and 9.3 percent for women. Another 2.7 percent of nonminority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African Americans, 5.8 percent for Hispanics, 6.4 percent of Other minorities, and 3.3 percent for women.<sup>99</sup>

**Table 4.7. Types of Problems Facing Your Business, by Race and Gender – USA, 2005 (%)**

	<b>Non-minority Male</b>	<b>Non-minority Female</b>	<b>Minority Male</b>	<b>Minority Female</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>
Availability of credit	19	23	54	38	46	52	34
Rising health care costs	60	49	50	41	31	42	66
Excessive tax burden	49	46	48	42	46	34	51
Lack of qualified workers	37	28	33	17	22	20	34
Rising energy costs	37	35	36	35	29	34	44
Rising costs of materials	44	47	36	47	53	42	32
Legal reform	21	15	15	12	11	10	17
Number firms	415	356	80	81	55	50	41

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, available at [http://www.uschamber.com/publications/reports/access\\_to\\_capital.htm](http://www.uschamber.com/publications/reports/access_to_capital.htm).

Note: Total percentages may be greater than 100% due to respondents having the option to select multiple choices. Minorities also include 14 firms owned by Native Americans.

<sup>99</sup> Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

A later study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.<sup>100</sup> The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. As detailed in Table 4.7, minority-owned businesses report that availability of credit is their top problem. The biggest difference in responses between minorities and nonminority men and women was availability of credit: 19 percent of nonminority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and nonminority women. In no other category is there more than a 10 percentage point difference for men or women.

In summary, African American-owned and Hispanic-owned firms in particular and to a lesser extent other minority-owned firms and women-owned firms report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions reflect actual discrimination can be distinguished in the econometric analyses to follow.

## **E. Differences in Loan Denial Rates by Race, Ethnicity or Gender**

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this question we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 4.8 and Table 4.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the SATL region.<sup>101</sup> As indicated earlier, the 1993-2003 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race, ethnicity and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.<sup>102</sup> In Column (1) of Table 4.8 (in which the regression

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<sup>100</sup> Although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). Unfortunately, questions relating to the importance of access to financial loans and credit to business success were not included in the 2002 survey.

<sup>101</sup> Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are nonminority firms owned 50-50 by women and men.

<sup>102</sup> For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 4.8, the estimated coefficient of -0.003 on

model contains only race and gender indicators), the estimated coefficient of 0.443 on the African American indicator can be interpreted as indicating that the denial rate for African American-owned businesses is 44.3 percentage points higher than that for nonminority male-owned firms.<sup>103</sup>

The remainder of Table 4.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.<sup>104</sup> In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability.

Even after controlling for these differences in creditworthiness, however, African American-owned firms remain 29 percentage points more likely than nonminority-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 4.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry group. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which the firm applied.<sup>105</sup> In total these three columns add 176 variables to the more parsimonious specification reported in Column (2). Nevertheless, the estimated disadvantage experienced by African American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African American-owned firms

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owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

<sup>103</sup> This estimate largely replicates the raw difference in denial rates between African American- and nonminority-owned businesses reported in Table 4.1. The raw differential observed there ( $0.659 - 0.269 = 0.39$ ) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a nonminority female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 4.8 and subsequent tables we report only unweighted estimates.

<sup>104</sup> In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between non-minorities and African Americans. The F-Test conducted to determine whether parameter estimates were the same for African Americans and non-minorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between African Americans and non-minorities and using the coefficient on the African American indicator variable to measure the gap between groups. In this Chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

<sup>105</sup> Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall seventeen different types of financial institution were tabulated, although only the following accounted for more than 1% of the (weighted) total— Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

are 24 percentage points more likely than nonminority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.<sup>106</sup>

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<sup>106</sup> One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 4.8 (see Tables 4.27 and 4.28).

**Table 4.8. Determinants of Loan Denial Rates – USA, 1993**

	(1)	(2)	(3)	(4)	(5)
African American	0.443 (11.21)	0.288 (6.84)	0.237 (5.57)	0.235 (5.22)	0.241 (5.13)
Asian	0.225 (4.21)	0.171 (3.18)	0.140 (2.56)	0.121 (2.15)	0.119 (2.07)
Native American	-0.016 (0.11)	-0.141 (1.06)	-0.097 (0.71)	-0.052 (0.35)	-0.083 (0.56)
Hispanic	0.129 (2.62)	0.070 (1.42)	0.067 (1.36)	0.035 (0.70)	0.031 (0.63)
Nonminority female	0.088 (2.65)	0.048 (1.45)	0.047 (1.45)	0.036 (1.06)	0.033 (0.94)
Judgments		0.143 (2.84)	0.129 (2.56)	0.124 (2.40)	0.121 (2.29)
Firm delinquent		0.176 (6.50)	0.178 (6.43)	0.195 (6.77)	0.208 (7.00)
Personally delinquent		0.161 (4.45)	0.128 (3.56)	0.124 (3.38)	0.119 (3.17)
Bankrupt past 7 yrs		0.208 (3.11)	0.179 (2.68)	0.162 (2.37)	0.167 (2.33)
\$1992 profits (*10 <sup>8</sup> )		-0.000 (0.89)	-0.000 (1.64)	-0.000 (1.78)	-0.000 (1.83)
\$1992 sales (*10 <sup>8</sup> )		-0.000 (3.08)	-0.000 (3.38)	-0.000 (3.28)	-0.000 (3.38)
\$1992 assets (*10 <sup>8</sup> )		0.000 (0.51)	0.000 (0.60)	0.000 (0.40)	0.000 (0.37)
\$1992 liabilities (*10 <sup>8</sup> )		0.000 (0.61)	0.000 (1.11)	0.000 (1.04)	0.000 (1.17)
Owner years experience		-0.003 (2.59)	-0.001 (1.30)	-0.002 (1.55)	-0.002 (1.72)
Owners' share of business		0.001 (1.91)	0.000 (0.71)	0.000 (0.26)	0.000 (0.30)
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,007	2,007	2,006	1,985	1,973
Pseudo R <sup>2</sup>	.0608	.1412	.2276	.2539	.2725
Chi <sup>2</sup>	143.6	333.4	537.3	595.4	635.8
Log likelihood	-1108.8	-1013.8	-911.6	-874.8	-848.7

Source: See Table 4.1.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm's inventory, the level of wages and salaries paid to workers, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

**Table 4.9. Determinants of Loan Denial Rates – SATL Region, 1993**

	(1)	(2)	(3)	(4)	(5)
African American	0.452 (9.85)	0.289 (5.94)	0.239 (4.88)	0.235 (4.61)	0.252 (4.72)
Asian	0.223 (3.98)	0.180 (3.19)	0.142 (2.51)	0.123 (2.11)	0.125 (2.11)
Native American	0.007 (0.05)	-0.132 (0.94)	-0.094 (0.67)	-0.047 (0.31)	-0.079 (0.52)
Hispanic	0.104 (1.91)	0.047 (0.88)	0.051 (0.95)	0.021 (0.40)	0.014 (0.25)
Nonminority female	0.089 (2.45)	0.055 (1.51)	0.060 (1.65)	0.044 (1.18)	0.042 (1.10)
African American*SATL	-0.027 (0.35)	-0.009 (0.11)	-0.013 (0.16)	0.002 (0.02)	-0.030 (0.39)
Asian/Pacific*SATL	0.011 (0.06)	-0.069 (0.44)	-0.011 (0.06)	-0.018 (0.10)	-0.052 (0.31)
Native American*SATL					
Hispanic*SATL	0.114 (0.94)	0.107 (0.85)	0.079 (0.61)	0.073 (0.56)	0.095 (0.71)
Nonminority female*SATL	-0.006 (0.07)	-0.035 (0.43)	-0.062 (0.80)	-0.042 (0.51)	-0.050 (0.61)
SATL region	-0.009 (0.270)	0.012 (0.34)	0.015 (0.43)	0.042 (0.98)	0.046 (1.07)
Creditworthiness controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2006	2,006	2,005	1,984	1,972
Pseudo R <sup>2</sup>	.0612	.1416	.2280	.2540	.2728
Chi <sup>2</sup>	144.54	334.27	537.91	595.43	636.45
Log likelihood	-1107.9	-1013.1	-910.9	-874.4	-848.1

Source: See Table 4.1.

Note: Creditworthiness controls are those used in Table 4.8 above.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than nonminority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly different from the denial rates of firms owned by non-minorities; or that denial rates for firms

owned by nonminority women were significantly different from those for firms owned by nonminority men.<sup>107</sup>

In Table 4.9, we see results for the SATL region similar to those reported in Table 4.8 for the nation as a whole. The table shows that the results of our loan denial model in the SATL are not substantially different from the nationwide results reported in Table 4.8. The indicator variable for the SATL region is insignificantly different from zero; as are the interaction terms between race/ethnicity/gender and the SATL region.<sup>108</sup>

Although the results provided so far strongly indicate that financial institutions treat African American-owned and nonminority male-owned small businesses differently in lending, other considerations may limit our ability to interpret this finding as discrimination. Of perhaps greatest concern is the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African American-owned firms are less creditworthy and we have failed to sufficiently capture those differences then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, however, if financial institutions discriminate against African American-owned firms, then the greater likelihood of denial for African Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.<sup>109</sup>

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the

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<sup>107</sup> It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the Tables in Chapter 6 as a lack of adverse disparity. While tests for statistical significance are very useful for assessing whether chance can explain disparities that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It merely means that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (*e.g.*, discrimination). In the particular statistical application presented in this chapter, the chance that a test for statistical significance will incorrectly attribute to chance disparities that are due to discrimination becomes greater when relatively small sample sizes are present for an affected group.

<sup>108</sup> The number of Native Americans in the SATL sample was too small to yield statistical results.

<sup>109</sup> An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match reasonably closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The main shortcoming that we have identified in these data is that less detail is available on the finances of the owner of the firm.<sup>110</sup> Although the creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income. These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition may introduce a bias into our analysis if African American business owners have fewer resources than nonminority business owners.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.<sup>111</sup> Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for any of these other purposes are at least partially collateralized because the financial institution

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<sup>110</sup> This deficiency is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

<sup>111</sup> As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. 14 percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the SATL, the figures are 6.0, 34.3, 12 percent, and 26 percent, respectively.

could sell them, albeit at a potentially somewhat reduced rate, should the small business default.<sup>112</sup>

In order to determine whether the findings for the SATL region were different from those for the nation, in the second column of Table 4.10 we also report the coefficient and t-statistics on an interaction term between the SATL region and African American ownership. In only one case was the estimated coefficient on this interaction significant, implying that the national results also apply in general to the SATL.

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 4.8 or 4.9. Estimates presented in row numbers 1 through 9 of Table 4.10 indicate that African American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African American-owned firms are 18, 25, and 16 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributed to differences in the geographic location of African American- and nonminority-owned firms. If, for example, African American-owned firms are more likely to be located in the central city, and a central city location is inversely correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in rejecting the loan applications of African American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled "statistical discrimination." In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.<sup>113</sup>

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<sup>112</sup> As indicated earlier, greater personal wealth may improve a small business's chances of obtaining credit because it provides collateral should the loan go bad and because wealthy owners can use their own resources to weather bad times, improving the likelihood of repayment. Our separate analysis of corporations and proprietorships and of large and small firms does not account for this second reason because corporations and large businesses may still need to draw on the owner's personal wealth to help it survive short-term shocks. Businesses that have been in existence for several years, however, are less likely to experience these shocks, making them less likely to require infusions from the owner's personal wealth. A loan used to purchase equipment that can be sold if the firm defaults may insulate the bank from the need to seek repayment directly from the owner.

<sup>113</sup> A strong test to distinguish between statistical discrimination and "Becker-Type" discrimination would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this Chapter applies a definition that incorporates both.

**Table 4.10. Alternative Models of Loan Denials, 1993**

Specification	African American	African American* SATL	Asian	Hispanic	Non-minority Female	Sample Size
All	0.222 (4.76)	0.080 (0.85)	0.080 (1.37)	0.055 (0.97)	0.044 (1.25)	2,006
<i>Organization Type</i>						
1) Proprietorships and Partnerships	0.278 (3.03)	0.039 (0.24)	0.177 (1.51)	-0.021 (0.21)	-0.020 (0.29)	536
2) Corporations	0.181 (3.36)	0.175 (1.17)	0.050 (0.73)	0.092 (1.25)	0.069 (1.66)	1,457
<i>Age of Firm</i>						
3) 12 Years or Under	0.243 (3.80)	0.117 (1.02)	0.150 (1.41)	-0.001 (0.01)	0.029 (0.56)	1,074
4) Over 12 Years	0.180 (2.56)	-0.006 (0.54)	0.068 (0.08)	0.114 (1.39)	0.087 (1.69)	926
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	0.193 (2.97)	0.078 (1.71)	0.251 (0.92)	-0.019 (0.24)	-0.018 (0.34)	868
6) 10 or More Employees	0.245 (3.39)	0.077 (0.65)	-0.082 (0.85)	0.145 (1.61)	0.111 (2.18)	1,132
<i>Intended Use of Loan</i>						
7) Working Capital	0.241 (4.21)	0.176 (1.22)	0.035 (0.47)	0.039 (0.51)	0.041 (0.85)	1,086
8) Other Use	0.158 (1.93)	0.037 (0.27)	0.167 (1.74)	0.081 (0.94)	0.045 (0.87)	917
<i>Scope of Sales Market</i>						
9) Local	0.108 (1.50)	0.348 (2.06)	0.097 (1.26)	0.007 (0.10)	0.041 (0.78)	875
10) Regional, National, or international	0.199 (4.94)	-0.013 (0.24)	0.031 (0.65)	0.071 (1.34)	0.031 (1.19)	1,129
<i>Creditworthiness</i>						
11) No Past Problems	0.244 (4.08)	-0.005 (0.05)	0.113 (1.92)	0.039 (0.71)	0.071 (2.06)	1,386
12) One Past Problem	0.282 (2.53)	-0.072 (0.36)	-0.092 (0.53)	0.181 (1.10)	0.038 (0.37)	376
13) More Than One Problem	0.273 (2.55)	0.080 (0.85)	0.180 (0.67)	0.257 (1.70)	-0.018 (0.09)	231

Source: See Table 4.1.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 4.8. The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. Control for SATL also included.

To identify whether lenders' behavior is consistent with this hypothesis we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan denial rates should be greater in the firms that sell in the local market area. The results of this test, reported in row numbers 9 and 10 of Table 4.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates for the nation as a whole indicate that African American-owned firms that sell to the local market are 11 percentage points more likely to have their loan applications denied compared to a 20 percent excess denial rate for firms selling primarily to regional, national, or international markets. In the SATL, however, the figures are reversed, indicating that statistical discrimination may in fact be occurring in this region.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 4.1 and 4.2, African American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 4.8 and 4.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 4.10, we separated firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African American- and nonminority-owned firms is statistically indistinguishable within each of these groups. Asian-owned firms and nonminority female-owned firms with clean credit histories, as well, are also at a significant disadvantage relative to nonminority-male owned firms.

Finally, we considered whether African American-owned firms are treated differently from nonminority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is less likely that the race of the applicant is known to the financial institution, at least in the case of African American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about minority status. On the other hand, for Asian and Hispanic applicants, it is possible that surname does provide such a signal, although an imperfect one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African American- and nonminority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African Americans in providing small business loans, we may even expect to see African Americans use credit cards more often than non-minorities since they

have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.<sup>114</sup>

In Tables 4.11 and 4.12, we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other differences across firms.<sup>115</sup> There is no evidence, either for the U.S. as a whole or for the SATL, that African American-owned firms are less likely to access either business or personal credit cards for business expenses. On the other hand, there is evidence in the SATL and in the nation as a whole that Asian-owned firms are less likely to access business credit cards. Credit card use for financing business expenses may be an area where further research is warranted. Unfortunately, available data on this subject is quite limited.

**Table 4.11. Models of Credit Card Use – USA, 1993**

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.035 (1.35)	-0.096 (3.23)	0.085 (1.00)	0.024 (0.79)	0.018 (0.83)	4,633
2) Personal Credit Card	0.019 (0.74)	-0.019 (0.63)	0.019 (0.23)	-0.042 (1.40)	0.028 (1.28)	4,633

Source: See Table 4.1.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 4.8 but excluding the loan characteristics. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Other races are excluded due to sample size limitations.

<sup>114</sup> It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzzo, Cavalluzzo, and Wolken (1999) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

<sup>115</sup> On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the SATL the figures are 29 percent and 36 percent, respectively.

**Table 4.12. Models of Credit Card Use – SATL, 1993**

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.028 (0.96)	-0.087 (2.78)	0.098 (1.07)	0.028 (0.83)	0.009 (0.37)	4,633
2) Personal Credit Card	-0.014 (0.48)	-0.034 (1.08)	0.024 (0.26)	-0.029 (0.87)	0.028 (1.17)	4,633

Source: See Table 4.1.

Notes: See Table 4.11. Control for SATL included.

## F. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and nonminority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and nonminority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

$$(2) \quad I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i,$$

where  $I$  represents the interest rate charged on the loan,  $LC$  represents characteristics of the loan (see the notes to Table 4.8 for a full list of the variables included in this set),  $\varepsilon_i$  is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those

approved. Since African American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in interest rate to be even greater if those firms were included in the sample. We disregard this implication in the results reported below, but its impact should be kept in mind.

**Table 4.13. Models of Interest Rate Charged – USA, 1993**

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 4.8)	1.034 (3.72)	0.413 (1.37)	-0.427 (0.63)	0.517 (1.97)	0.025 (0.14)	1,454
<i>Creditworthiness</i>						
2) No credit problems	1.187 (3.27)	0.485 (1.33)	0.910 (1.07)	0.435 (1.48)	0.129 (0.66)	1,137
<i>Organization Type</i>						
3) Proprietorships and Partnerships	1.735 (2.57)	0.826 (1.03)	2.589 (0.9)	1.008 (1.74)	-0.239 (0.53)	364
4) Corporations	0.660 (2.04)	0.359 (1.07)	-0.585 (0.86)	0.491 (1.53)	0.127 (0.66)	1,090
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	1.200 (2.58)	-0.247 (0.41)	-0.010 (0.01)	0.783 (1.75)	-0.311 (1.02)	574
6) 10 or More Employees	0.450 (1.15)	0.446 (1.21)	-0.197 (0.25)	0.515 (1.37)	0.164 (0.77)	880
<i>Scope of Sales Market</i>						
7) Local	0.751 (1.55)	-0.073 (0.13)	1.773 (1.12)	0.805 (2.05)	0.324 (1.08)	633
8) Regional, National, or International	1.544 (4.26)	1.185 (2.93)	-1.368 (1.85)	0.392 (0.96)	-0.163 (0.73)	821

Source: See Table 4.1.

Notes: Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Each line of this table represents a separate regression with all of the control variables as Column (5) of Table 4.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. The sample consists of firms who had applied for a loan and had their application approved. 'No credit problems' means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years and the owner had not been bankrupt in the preceding 7 years.

**Table 4.14. Models of Interest Rate Charged – SATL, 1993**

Specification	African American	African American * SATL	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 4.8)	0.974 (3.02)	0.206 (0.35)	0.528 (1.69)	-0.959 (1.32)	0.211 (0.73)	-0.017 (0.09)	1,454
<i>Creditworthiness</i>							
2) No credit problems	0.928 (2.20)	0.927 (1.18)	0.512 (1.39)	0.227 (0.24)	0.008 (0.03)	0.068 (0.32)	1,137
<i>Organization Type</i>							
3) Proprietorships and Partnerships	1.338 (1.93)	6.556 (2.23)	0.772 (0.94)	2.284 (0.80)	0.979 (1.69)	-0.391 (0.83)	364
4) Corporations	0.716 (1.76)	-0.119 (0.19)	0.399 (1.16)	-1.193 (1.63)	0.027 (0.07)	0.107 (0.50)	1,090
<i>1993 Firm Size</i>							
5) Fewer than 10 Employees	1.076 (2.10)	0.746 (0.64)	0.048 (0.08)	-1.371 (0.92)	0.458 (0.97)	-0.488 (1.45)	574
6) 10 or More Employees	0.369 (0.69)	0.152 (0.20)	0.454 (1.23)	-0.200 (0.25)	0.535 (1.23)	0.200 (0.87)	880
<i>Scope of Sales Market</i>							
7) Local	1.154 (2.10)	-1.663 (1.52)	0.189 (0.33)	-1.081 (0.48)	0.541 (1.29)	0.346 (1.06)	633
8) Regional, National, or International	1.227 (2.79)	0.943 (1.27)	1.153 (2.82)	-1.403 (1.90)	0.003 (0.01)	-0.132 (0.54)	821

Source: See Table 4.1.

Notes: See Table 4.13.

The results obtained from estimating equation (2) are reported in Row 1 of Table 4.13, which includes the complete set of control variables comparable to those in Column (5) of Table 4.8. Estimates indicated that African American-owned firms pay rates of interest that are roughly 1 full percentage point higher than similarly situated nonminority-owned firms. Row 2 shows that even African American-owned firms with good credit histories are charged higher interest rates relative to nonminority-owned firms.<sup>116</sup>

The remainder of the table presents similar specification checks to those reported in Table 4.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are

<sup>116</sup> Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African Americans, and to a lesser extent Hispanics and Asians, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

Table 4.14 shows results for the SATL. Findings are comparable to those for the nation as a whole.

## **G. Loan Approval Rates and Access to Credit**

The results presented so far may be biased toward finding too small a disparity between nonminority- and African American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by non-minorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African American- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 4.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other characteristics of firms, and the results indicate that African American- and Hispanic-owned firms are, respectively, 41 and 24 percentage points more likely than nonminority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 4.15 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among African American- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26 and 16 percentage points still exists for African American- and Hispanic-owned firms relative to nonminority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, minority-owned firms were far more likely to report prejudice as the reason (19 percent for African American-owned firms, 8 percent for Hispanic-owned firms,

and 3 percent for nonminority-owned firms).<sup>117</sup> Results obtained in section (b) of Table 4.15 for the SATL region are very similar to those found for the nation as a whole. Further, as section (c) of Table 4.15 shows, African American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.<sup>118</sup>

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 4.8 and 4.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

**Table 4.15. Racial Differences in Failing to Apply for Loans Fearing Denial, 1993**

Specification	African American	Asian	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=4,637)	0.405 (16.65)	0.099 (3.61)	0.134 (1.72)	0.235 (8.28)	0.031 (1.54)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=4,633)	0.257 (10.02)	0.054 (1.98)	0.019 (0.27)	0.164 (5.69)	-0.008 (0.38)
<b>b) SATL</b>					
No Other Control Variables, except for SATL dummy and race*SATL interactions (n=4,637)	0.405 (14.53)	0.096 (3.27)	0.154 (1.83)	0.241 (7.77)	0.037 (1.67)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=4,633)	0.248 (8.52)	0.054 (1.85)	0.069 (0.85)	0.168 (5.35)	-0.002 (0.07)
<b>c) Construction</b>					
No Other Control Variables (n=781)	0.350 (6.74)	0.109 (1.27)	-0.087 (0.54)	0.150 (2.22)	-0.007 (0.12)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=781)	0.181 (3.67)	0.064 (0.78)	-0.132 (1.00)	0.039 (0.65)	-0.063 (1.32)

Source: See Table 4.1.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics in parentheses. Sample consists of all firms. Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

<sup>117</sup> Other reasons given, including “too little collateral,” “poor credit history,” and “poor balance sheet,” are comparable across groups. Firms could report more than one reason.

<sup>118</sup> It was not possible to report separate construction results in earlier tables because of small sample sizes.

More formally, suppose that loan denial rates for equally creditworthy nonminority- and minority-owned firms that applied for credit are  $\theta^W$  and  $\theta^m$ , respectively; the measure of discrimination employed in the previous analysis is  $\theta^m - \theta^W$ . Now suppose that firms that are equally creditworthy, but chose not to apply for a loan because they feared rejection, would have been denied at the rates  $\theta^W$  and  $\psi^m$  for nonminority- and minority-owned firms, respectively. Among the nonminority-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the correct representation of the disadvantage faced by minority-owned firms is  $[\eta\theta^m + (1-\eta)\psi^m] - \theta^W$ , where  $\eta$  represents the share of minority-owned firms desiring credit that submitted an application. Our earlier findings are biased if  $\theta^m$  is not equal to  $\psi^m$ .

One approach that is frequently employed to address such a problem is to estimate a “Heckman-correction” that would formally model the application process in conjunction with the loan outcome for those who applied. The difficulty with this methodology in the present context is that it is only correctly implemented when some variable is present that is correlated with a firm’s decision to apply for a loan, but is independent of the financial institution’s decision to approve or deny the request. Unfortunately, the NSSBF data do not appear to contain any variables that would satisfy these conditions, so we are unable to implement this methodology.<sup>119</sup>

As an alternative that answers a different, but related, question we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 4.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 4.16, are consistent with the previous analysis; we find that selection is not much of an issue for African American-owned firms nationally or in the SATL. Regardless of

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<sup>119</sup> The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm’s information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Asian- and Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (*see* Tables 4.8 and 4.9, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 16 percentage points more likely to be denied access to credit, and this difference is statistically significant. Among the pool of loan applicants, Asian-owned firms are about 12 percentage points more likely to be denied than other firms with the same characteristics (*see* Tables 4.8 and 4.9, Column 5). Among the pool of firms seeking additional credit, however, Asian-owned firms are 18 percentage points more likely to be denied access to credit, and this difference is statistically significant.

**Table 4.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit, 1993**

Specification	African American	Asian	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=2,646)	0.455 (14.84)	0.298 (6.82)	0.188 (1.57)	0.297 (7.76)	0.126 (4.01)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=2,643)	0.276 (6.93)	0.180 (3.42)	-0.008 (0.06)	0.165 (3.51)	0.049 (1.38)
<b>b) SATL</b>					
No Other Control Variables (n=2,646)	0.461 (13.02)	0.288 (6.19)	0.191 (1.49)	0.299 (7.13)	0.142 (4.19)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=2,643)	0.268 (5.85)	0.175 (3.16)	-0.018 (0.12)	0.159 (3.10)	0.083 (2.15)
<b>c) Construction</b>					
No Other Control Variables (n=463)	0.413 (6.12)	0.196 (1.46)	0.128 (0.36)	0.255 (2.71)	0.043 (0.51)
Full Set of Control Variables (same as Table 4.8, Column 3 except for loan characteristics) (n=463)	0.051 (2.86)	0.015 (0.53)	-0.015 (0.41)	0.019 (1.00)	-0.010 (1.04)

Source: See Table 4.1.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics in parentheses. The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. Dependent variable is unity if the firm failed to obtain credit and zero if the firm applied for credit and had their loan application approved.

## H. Analysis of Credit Market Discrimination in the U.S. in 1998

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the

Federal Reserve System.<sup>120</sup> This section updates the several estimates obtained above using the 1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear—African American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

## **1. Qualitative Evidence**

Consistent with the 1993 survey, Table 4.17 shows that African American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is “financing and interest rates.” In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 4.3 and 4.4) and over the next 12 months (Tables 4.5 and 4.6). Interestingly, even though credit availability was by far the most important category for African Americans (21 percent in Table 4.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

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<sup>120</sup> The target population of the survey was for-profit businesses with fewer than 500 employees that were either a single establishment or the headquarters of a multiple establishment company, and were not agricultural firms, financial institutions, or government entities. These firms also had to be in business during December 1998. Data were collected for fiscal year-end 1998. Like its 1993 counterpart, the purpose of this survey was to gather information about small business financial behavior and the use of financial services and financial service providers by these firms. The objectives of the survey were to collect information that can inform researchers and policy makers on the availability of credit to small businesses; the location of the sources of financial services; the types of financial services used, including checking accounts, savings accounts, various types of credit, credit cards, trade credit, and equity injections; as well as the firm’s recent credit acquisition experiences. The survey also investigated the level of debt held by these firms and their accessibility to credit. Additionally, the survey collected information on firm and owner demographics, as well as the firm’s recent income statement and balance sheet.

**Table 4.17. Most Important Problem Facing Your Business Today – USA, 1998**

	<b>Non-minority male</b>	<b>African American</b>	<b>Other</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Total</b>
Financing and interest rates	5.8%	18.2%	10.6%	8.1%	6.2%	6.8%
Taxes	7.7%	1.9%	5.3%	3.1%	6.6%	6.9%
Inflation	0.4%	0.6%	0.0%	1.0%	0.4%	0.4%
Poor sales	7.0%	5.9%	11.6%	7.0%	8.3%	7.5%
Cost/availability of labor	3.9%	3.3%	2.4%	3.5%	4.5%	3.9%
Government regulations/red tape	7.1%	3.0%	4.8%	8.1%	6.5%	6.8%
Competition (from larger firms)	11.1%	10.7%	10.6%	18.4%	10.2%	11.3%
Quality of labor	14.4%	11.0%	9.4%	8.7%	9.1%	12.6%
Cost and availability of insurance	2.6%	1.0%	0.8%	0.0%	2.3%	2.2%
Other	11.4%	10.0%	8.3%	16.0%	12.7%	11.7%
Cash flow	4.6%	10.9%	6.3%	3.5%	3.3%	4.6%
Capital other than working capital	1.1%	1.7%	4.1%	0.8%	1.3%	1.3%
Acquiring and retaining new customers	3.1%	3.9%	5.0%	1.8%	3.3%	3.2%
Growth of firm/industry	0.9%	1.0%	1.2%	0.1%	0.4%	0.8%
Overcapacity of firm/industry	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Marketing/advertising	2.1%	3.9%	2.5%	2.8%	3.6%	2.5%
Technology	1.4%	1.2%	1.6%	2.6%	1.3%	1.5%
Costs, other than labor	2.7%	1.8%	2.5%	3.6%	3.8%	2.9%
Seasonal/cyclical issues	1.3%	1.2%	0.7%	0.4%	0.7%	1.1%
Bill collection	2.8%	2.2%	2.4%	2.6%	2.8%	2.8%
Too much work/not enough time	3.6%	2.2%	4.3%	1.4%	5.7%	3.9%
No problems	4.6%	4.3%	5.6%	5.8%	6.4%	5.1%
Not ascertainable	0.4%	0.0%	0.0%	0.0%	0.7%	0.4%

Source: NERA calculations from the 1998 SSBF (n=3561).

Notes: Results are weighted.

## **2. Differences in Loan Denial Rates by Race/Ethnicity**

In 1998 as in 1993, in comparison with firms owned by nonminority males, minority and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African American-owned firms in particular, were much less likely to be classified as having a “low risk” credit rating by Dun & Bradstreet.<sup>121</sup>

<sup>121</sup> Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

In the 1993 survey, respondents were asked “During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?” In 1998, a narrower question limited to new loans was asked—“Did the firm apply for new loans in the last three years?” In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and gender is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

Percentage of Loan Applications Denied		
	1993	1998
Nonminority males	26.2%	24.4%
African Americans	65.9%	62.3%
Asians, Native Americans, etc.	39.9%	47.0%
Hispanics	35.9%	49.9%
Nonminority females	30.1%	23.5%
Overall	28.8%	28.6%

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity and gender across the two years. More than half of African American owners did not apply for a loan for fear of being denied compared with only one out of five nonminority males.

Percentage Not Applying for Fear of Denial		
	1993	1998
Nonminority males	22.5%	20.2%
African Americans	60.7%	53.9%
Asians, Native Americans, etc.	27.5%	23.1%
Hispanics	41.5%	34.3%
Nonminority females	22.7%	24.2%
Overall	24.7%	23.3%

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

- a) Prejudice on a racial/ethnic basis.
- b) Prejudice against women.
- c) Prejudice against the business location.
- d) Prejudice against the business type.
- e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among non-minorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of non-minorities believed prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 4.8 and 4.9 the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that African American-owned firms were almost twice as likely to have their loans denied than nonminority male-owned firms, even after controlling for a host of variables included primarily to control for the possibility that minority-owned firms are smaller and less creditworthy than those owned by nonminority men.

A similar exercise is performed below in Tables 4.18 and 4.19 using data from the 1998 SSBF. Column (1) in Table 4.18 shows that African American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993 the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African Americans to 21.8 in Column (5) as the full set of controls is added. For 1993 the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 4.18 Column (5), Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than nonminority male-owned firms. In Table 4.8, by contrast, denial probabilities for Hispanic-owned firms were *not* significantly different from those of nonminority male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

Table 4.19 focusing on the SATL region yields similar results—showing significantly larger denial probabilities for African American- and Hispanic-owned firms (24.3 percent and 20.9 percentage points, respectively) than for nonminority male-owned firms. The SATL indicator was not significant in Table 4.19, nor were the interaction terms between SATL and race, ethnicity or gender, indicating that the 1998 loan denial results for the SATL are not significantly different than for the nation as a whole.

**Table 4.18. Determinants of Loan Denial Rates - USA, 1998**

	(1)	(2)	(3)	(4)	(5)
African American	0.422 (7.94)	0.254 (5.36)	0.217 (5.05)	0.192 (4.52)	0.218 (4.74)
Asian	0.148 (2.54)	0.129 (2.52)	0.049 (1.25)	0.023 (0.65)	0.028 (0.77)
Hispanic	0.353 (6.44)	0.269 (5.37)	0.211 (4.69)	0.183 (4.21)	0.171 (4.00)
Nonminority female	0.087 (2.22)	0.049 (1.55)	0.024 (0.96)	0.016 (0.66)	0.011 (0.44)
Judgments		0.272 (4.28)	0.249 (4.32)	0.272 (4.47)	0.262 (4.20)
Firm delinquent		0.081 (2.88)	0.115 (4.20)	0.103 (3.88)	0.111 (4.01)
Personally delinquent		0.092 (2.85)	0.039 (1.59)	0.042 (1.69)	0.045 (1.76)
Bankrupt past 7 yrs		0.504 (4.48)	0.406 (3.83)	0.392 (3.67)	0.395 (3.64)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (2.47)	-0.000 (0.26)	0.000 (0.02)	0.000 (0.03)
\$1998 firm equity (*10 <sup>8</sup> )		0.000 (1.40)	0.000 (0.46)	0.000 (0.20)	0.000 (0.06)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.52)	0.000 (1.47)	0.000 (0.96)	0.000 (0.90)
Owner net worth (*10 <sup>8</sup> )		-0.000 (1.25)	-0.000 (1.28)	-0.000 (1.19)	-0.000 (1.24)
Owner years experience		-0.002 (1.42)	-0.001 (0.49)	-0.000 (0.34)	-0.000 (0.21)
Owners' share of business		0.000 (0.75)	-0.000 (0.12)	0.000 (0.03)	-0.000 (0.33)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	924	924	924	924	905
Pseudo R <sup>2</sup>	.1061	.2842	.3714	.3910	.4015
Chi <sup>2</sup>	90.0	241.1	315.1	331.8	337.8
Log likelihood	-379.3	-303.7	-266.7	-258.3	-251.7

Source: See Table 4.17.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" includes the size of the loan applied for.

**Table 4.19. Determinants of Loan Denial Rates – SATL, 1998**

	(1)	(2)	(3)	(4)	(5)
African American	0.471 (7.46)	0.318 (5.38)	0.236 (4.59)	0.217 (4.16)	0.243 (4.35)
Asian	0.189 (3.00)	0.162 (2.89)	0.072 (1.65)	0.041 (1.05)	0.048 (1.17)
Hispanic	0.381 (6.27)	0.309 (5.46)	0.251 (4.79)	0.223 (4.32)	0.209 (4.13)
Nonminority female	0.074 (1.69)	0.049 (1.39)	0.021 (0.75)	0.012 (0.45)	0.004 (0.16)
African American*SATL	-0.092 (1.42)	-0.072 (1.65)	-0.029 (0.63)	-0.028 (0.64)	-0.027 (0.60)
Asian*SATL					
Hispanic*SATL	-0.080 (0.96)	-0.070 (1.32)	-0.051 (1.28)	-0.047 (1.20)	-0.046 (1.20)
Nonminority female*SATL	0.050 (0.53)	-0.011 (0.18)	0.001 (0.02)	0.006 (0.11)	0.017 (0.29)
SATL region	0.043 (0.94)	0.041 (1.05)	0.040 (1.19)	0.006 (0.13)	0.011 (0.22)
Creditworthiness Controls (8 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	918	918	918	918	899
Pseudo R <sup>2</sup>	0.1119	0.2893	0.3750	0.3941	0.4052
Chi <sup>2</sup>	94.67	244.85	317.33	333.51	339.91
Log likelihood	-375.8	-300.7	-264.5	-256.4	-249.5

Source: See Table 4.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the four other variables included in Column (2) of Table 4.18. Since there was no variation in the loan denial indicator for the Asian observations in the SATL sample, they dropped out of the regression analysis.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

- The value of the equity, if any, in the owner's home.
- The owner's net worth excluding home equity and equity in the firm.

- c) The firm's 1999 Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.<sup>122</sup>

Despite the fact that these new variables do help to predict loan denials,<sup>123</sup> the estimated race, ethnicity, and gender differences including these variables are little changed from those reported above.<sup>124</sup> This suggests that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

### 3. Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans including renewals. Responses in 1998 were as follows:

Applied for New Loans Last Three Years	Number	Percent
Did not apply	2,599	73.0%
Always approved	713	20.0%
Always denied	166	4.7%
Sometimes approved/sometimes denied	83	2.3%
Total	3,561	100.0%

The dependent variable used in Tables 4.18 and 4.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable—called *denylast*—is set to one if the application is always denied, set to zero if always approved. Those responding “sometimes approved/sometimes denied” are excluded from the analysis. Column (1) of Table 4.20 replicates Column (1) of Table 4.18 using *denylast* as the dependent variable with the smaller sub-sample. African Americans, Hispanics, Asians and nonminority females are all confirmed to face higher denial rates than nonminority males using this specification. For African Americans and

<sup>122</sup> The D&B Commercial Credit Score Report predicts the likelihood of a company paying in a delinquent manner (90+ days past terms) during the next 12 months based on the information in D&B's file. The score is intended to help firms decide quickly whether to accept or reject accounts, adjust terms or credit limits, or conduct a more extensive review based on the report D&B provides. Firms can also determine the company's relative ranking among other businesses in the D&B database.

<sup>123</sup> The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk .228 (2.45), average risk= .295 (3.25); significant risk=.319 (3.28); high risk= .391 (3.53), n=924 pseudo  $r^2$ =.0253. Excluded category 'low risk'. Results were essentially unchanged when a control for SATL was included.

<sup>124</sup> This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (1999) who performed a similar exercise with the 1993 data.

Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians, the difference is 19 percentage points, and for nonminority females, 8 percentage points.

**Table 4.20. More Loan Denial Probabilities, 1998**

	(1)	(2)	(3)	(4)
	<i>Denylast</i>	<i>Denylast</i>	<i>Denylast</i>	<i>Denylast</i>
African American	0.457 (8.00)	0.246 (4.76)	0.499 (7.42)	0.271 (4.32)
Asian	0.185 (2.81)	0.027 (0.65)	0.231 (3.25)	0.043 (0.93)
Hispanic	0.360 (6.28)	0.171 (3.67)	0.385 (6.07)	0.206 (3.79)
Nonminority female	0.083 (2.00)	0.005 (0.20)	0.068 (1.48)	0.001 (0.04)
African American*SATL			-0.091 (1.21)	-0.028 (0.53)
Asian*SATL				
Hispanic*SATL			-0.078 (0.82)	-0.051 (1.06)
Nonminority female*SATL			0.058 (0.57)	0.011 (0.16)
SATL			0.043 (0.87)	0.025 (0.43)
Creditworthiness Controls	No	Yes	No	Yes
Owner's Education	No	Yes	No	Yes
Other Firm Characteristics	No	Yes	No	Yes
Characteristics of the loan	No	Yes	No	Yes
Region	No	Yes	No	Yes
Industry	No	Yes	No	Yes
N	846	846	841	841
Pseudo R <sup>2</sup>	0.1112	0.4265	0.1168	0.4284
Chi <sup>2</sup>	90.94	348.71	95.23	349.41
Log likelihood	-363.3	-234.5	-360.1	-233.1

Source: See Table 4.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the four other variables included in Column (2) of Table 4.18. Since there was no variation in the loan denial indicator for the Asian observations in the SATL sample, they dropped out of the regression analysis.

Results consistent with discrimination are confirmed for African Americans and Hispanics in Column (2) of Table 4.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the SATL region are added to the model as in Columns (3) and (4), these results remain statistically significant.

Neither the SATL indicator nor any of the interactions between SATL and race, ethnicity or gender is significant.

#### **4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial**

Tables 4.21 through 4.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

First, Table 4.21, which is similar to Tables 4.13 and 4.14, finds that conditional on obtaining a loan, African Americans are charged a higher price for their credit—on average 1.06 percentage points nationally. These results are not significantly different in construction and construction-related industries either.<sup>125</sup> African Americans in the SATL appear to be no different in this regard than elsewhere in the country.

Table 4.22, which is similar to Table 4.15, shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Based on all of the foregoing evidence this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as nonminority male-owned firms to have their application rejected. This is evident in the SATL as well and also in the construction and construction-related industries.<sup>126</sup>

Finally, Table 4.23, which is comparable to Tables 4.11 and 4.12, suggests that when the financial institution does not know the race or ethnicity of the applicant—as is often the case in an application for a credit card—there are no differences nationally by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of any race effects in the use of business credit cards in the SATL region (row 3) or in construction (results not reported here).

Our confidence in the strength of our findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the original results. Unfortunately, African Americans continue to be discriminated against in the market for small business credit. By 1998, this discrimination appears to be on the increase for African Americans and to be expanding to impact other minority groups, such as Hispanics and Asians, as well. This is an important market failure, and one which governments such as the State of Maryland cannot ignore if they are to avoid passive participation in a discriminatory market area.

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<sup>125</sup> There is some indication that nonminority females nationally pay slightly less for their loans, but this difference is not quite statistically significant.

<sup>126</sup> There is some evidence of this phenomenon for Hispanics nationally as well. However, the coefficient of 0.052 in Row (2) of Table 4.22 is not quite statistically significant.

**Table 4.21. Models of Interest Rate Charged, 1998**

Specification	African American	African American * SATL	African American * Construction	Asian	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 4.18) n=765	1.064 (2.66)	—	—	0.559 (1.49)	-0.088 (0.23)	-0.501 (1.93)
1b) All Loans (as in Column 5 of Table 4.18) n=765	1.177 (2.22)	-0.407 (0.49)	0.251 (0.25)	0.639 (1.50)	-0.152 (0.30)	-0.272 (0.92)

Source: See Table 4.17.

Notes: Each line of this table represents a separate regression with all of the control variables. The sample consists of firms who had applied for a loan and had their application approved.

**Table 4.22. Racial Differences in Failing to Apply for Loans Fearing Denial, 1998**

Specification	African American	Asian	Hispanic	Nonminority female
<b>a) U.S.</b>				
No Other Control Variables (n=3,448)	0.353 (11.90)	0.046 (1.48)	0.173 (5.77)	0.051 (2.55)
Full Set of Control Variables (n=3,448)	0.208 (7.04)	-0.012 (0.43)	0.052 (1.87)	0.011 (0.59)
<b>b) SATL region</b>				
No Other Control Variables (n=618)	0.389 (7.00)	-0.001 (0.01)	0.122 (1.71)	0.080 (1.58)
Full Set of Control Variables (n=618)	0.218 (4.21)	-0.024 (0.35)	0.023 (0.40)	0.023 (0.57)
<b>c) Construction</b>				
No Other Control Variables (n=613)	0.371 (5.06)	0.117 (1.43)	0.020 (0.26)	0.122 (2.08)
Full Set of Control Variables (n=609)	0.273 (3.69)	0.099 (1.32)	-0.062 (1.13)	0.038 (0.74)

Source: See Table 4.17.

Note: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 4.18, except for loan amount, year of application, and type of lender.

**Table 4.23. Models of Credit Card Use, 1998**

Specification	African American	Asian	Hispanic	Nonminority female	Sample Size
1) Business Credit Card	-0.001 (0.02)	-0.038 (1.00)	-0.014 (0.38)	-0.018 (0.72)	3,561
2) Personal Credit Card	-0.018 (0.54)	0.016 (0.44)	-0.050 (1.42)	0.012 (0.52)	3,561
3) Business Credit Card SATL	0.034 (0.49)	-0.198 (1.73)	-0.063 (0.7)	-0.108 (1.71)	641
4) Personal Credit Card SATL	-0.031 (0.47)	0.018 (0.16)	-0.028 (0.32)	0.091 (1.54)	641
3) Business Credit Card Construction & related	0.056 (0.62)	-0.074 (0.70)	0.087 (0.86)	-0.025 (0.35)	624
4) Personal Credit Card Construction & related	0.003 (0.04)	0.047 (0.46)	-0.092 (1.01)	-0.073 (0.99)	624

Source: See Table 4.17.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 4.18, except for loan amount, year of application and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size includes all firms. Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses.

## I. Analysis of Credit Market Discrimination in the U.S. in 2003

The most recent wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System in 2007.<sup>127</sup> This is the fourth and final survey of U.S. small businesses conducted by the Board of Governors since 1987.<sup>128</sup> The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the U.S. at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the

<sup>127</sup> See [www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html](http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html).

<sup>128</sup> The Federal Reserve Board cancelled the SSBF subsequent to the completion of the 2003 wave, ostensibly for financial reasons. See Robb (2010).

Dun & Bradstreet Market Identifier file. The numbers of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves. According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.<sup>129</sup>

In 1998 almost 8 percent of survey respondents were African American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.<sup>130</sup> Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.<sup>131</sup>

Using these data, Mach and Wolken (2006) reported that 13.1 percent of firms were owned by nonminority or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African Americans and Asians each held roughly constant at 4 percent and the share of American Indians and Alaska natives held at roughly 1 percent. However, the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent, which is somewhat surprising given the evidence that Hispanics are a growing share of the U.S. population—up from 12.5 percent in 2000 to 14.5 percent in 2005. The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent.

Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The next section presents our findings from this analysis.<sup>132</sup>

## 1. Qualitative Evidence

Table 4.24 reports the results of asking business owners for the most important problem currently facing their firm. Unlike earlier surveys, “poor sales” was the top concern among all groups. Consistent with the 1993 and 1998 surveys, however, firms owned by minorities and women were more likely to say that their most important problem was “financing and interest

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<sup>129</sup> See footnote 86, above.

<sup>130</sup> The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For nonminority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

<sup>131</sup> Mach and Wolken (2006, Table 2) report that weighted figures for African Americans were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively. Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively. Native Americans were 0.8 and 1.3 percent, respectively, and women were 24.3 and 22.4 percent, respectively.

<sup>132</sup> The data file provided by the Board of Governors includes five separate observations per firm. That is to say there are 4240\*5=21,200 observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation; the results presented here are essentially identical whichever imputation is used. Overall only 1.8 percent of observations in the data file were missing.

rates.” Once again the African American/nonminority difference was most pronounced—only slightly more than 5 percent of nonminority male business owners reported this as their major problem compared to almost 21 percent of African American business owners.

**Table 4.24. Most Important Problem Facing Your Business Today – USA, 2003**

	<b>Non-minority Male</b>	<b>African American</b>	<b>Other</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Total</b>
Financing and interest rates	5.4%	20.7%	9.1%	5.7%	5.8%	6.3%
Taxes	6.3%	2.4%	4.9%	7.7%	4.3%	5.7%
Inflation	2.7%	1.0%	2.3%	0.5%	1.4%	2.3%
Poor sales	17.8%	38.5%	28.9%	30.0%	22.5%	20.6%
Cost/availability of labor	1.5%	0.0%	0.6%	1.5%	1.5%	1.4%
Government regulations/red tape	4.7%	1.0%	5.4%	9.6%	2.5%	4.5%
Competition (from larger firms)	4.0%	2.7%	2.7%	3.6%	3.6%	3.8%
Quality of labor	7.9%	6.9%	5.0%	3.8%	6.5%	7.2%
Cost and availability of insurance	10.3%	1.8%	3.1%	5.2%	6.4%	8.6%
Other	2.6%	1.9%	4.0%	2.8%	1.6%	2.5%
Cash flow	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Capital other than working capital	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Acquiring and retaining new customers	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Growth of firm/industry	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Overcapacity of firm/industry	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Marketing/advertising	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Technology	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Costs, other than labor	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Seasonal/cyclical issues	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Bill collection	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Too much work/not enough time	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
No problems	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Costs, other than labor	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Seasonal/cyclical issues	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Bill collection	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Too much work/not enough time	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
No problems	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
Not ascertainable	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4072).

Note: Results are weighted.

## **2. Differences in Loan Denial Rates by Race/Ethnicity**

Tables 4.25 and 4.26 present estimates of loan denial probabilities for the nation as a whole and for the SATL using a regression model comparable to that which was used with the 1993 and 1998 survey waves.<sup>133</sup>

Column (1) in Table 4.25 (comparable to Table 4.8 for 1993 and 4.18 for 1998) shows that African American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for nonminority females and other minority groups are not significant however.

Table 4.26 (comparable to Table 4.9 for 1993 and 4.19 for 1998), which focuses on the SATL region, yields similar results—showing significantly larger denial probabilities for African American-owned firms than for nonminority male-owned firms. The SATL indicator as well as the race and gender interaction terms with the SATL are also insignificant.

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<sup>133</sup> In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

**Table 4.25. Determinants of Loan Denial Rates - USA, 2003**

	(1)	(2)	(3)	(4)	(5)
African American	0.459 (8.38)	0.136 (5.47)	0.105 (4.80)	0.091 (5.04)	0.094 (4.95)
Asian	0.055 (1.51)	0.020 (1.59)	0.009 (1.01)	0.002 (0.49)	0.001 (0.18)
Hispanic	0.067 (1.74)	0.008 (0.83)	0.004 (0.58)	0.001 (0.30)	0.001 (0.25)
Native American and Other	0.184 (2.22)	0.061 (1.95)	0.032 (1.47)	0.021 (1.43)	0.021 (1.49)
Nonminority female	0.043 (2.17)	0.003 (0.70)	0.002 (0.49)	0.001 (0.57)	0.002 (0.76)
Judgments against owner		0.007 (0.66)	0.003 (0.35)	0.003 (0.54)	0.006 (0.90)
Judgments against firm		0.005 (1.16)	0.005 (1.42)	0.001 (0.54)	0.001 (0.64)
Firm delinquent		0.032 (3.78)	0.021 (3.23)	0.019 (3.89)	0.021 (4.08)
Personally delinquent		-0.007 (0.69)	-0.006 (1.02)	-0.003 (0.82)	-0.002 (0.58)
Owner Bankrupt past 7 yrs		0.046 (1.36)	0.041 (1.35)	0.052 (1.81)	0.044 (1.66)
Firm Bankrupt past 7 yrs		0.000 (0.03)	0.003 (0.37)	0.001 (0.17)	-0.001 (0.38)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (1.68)	0.000 (0.04)	0.000 (0.29)	0.000 (0.51)
\$1998 firm equity (*10 <sup>8</sup> )		-0.000 (2.23)	-0.000 (1.03)	-0.000 (1.62)	-0.000 (1.63)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.28)	0.000 (0.02)	-0.000 (0.45)	-0.000 (0.26)
Owner net worth (*10 <sup>8</sup> )		-0.000 (2.97)	-0.000 (2.92)	-0.000 (3.06)	-0.000 (3.26)
Owner years experience		0.000 (0.31)	0.000 (1.00)	0.000 (0.82)	0.000 (0.62)
Owners' share of business		0.000 (0.08)	0.000 (0.61)	0.000 (0.38)	0.000 (0.47)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,664	1,655	1,655	1,655	1,605
Pseudo R <sup>2</sup>	.0850	.2267	.2901	.3336	.3681
Chi <sup>2</sup>	74.1	192.9	246.8	283.8	310.3
Log likelihood	-399.1	-328.9	-301.9	-283.4	-266.4

Source: See Table 4.24. Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, the value of land held by the firm, and total salaries and wages paid. "Characteristics of the loan" includes the size of the loan applied for.

**Table 4.26. Determinants of Loan Denial Rates – SATL, 2003**

	(1)	(2)	(3)	(4)	(5)
African American	0.412 (6.44)	0.111 (4.18)	0.088 (3.74)	0.082 (4.05)	0.083 (4.05)
Asian	0.051 (1.31)	0.016 (1.24)	0.007 (0.80)	0.001 (0.26)	-0.000 (0.00)
Hispanic	0.030 (0.70)	-0.002 (0.22)	-0.002 (0.23)	-0.002 (0.59)	-0.002 (0.63)
Native and Other	0.206 (2.34)	0.062 (1.94)	0.035 (1.50)	0.022 (1.43)	0.022 (1.50)
Nonminority female	0.054 (2.39)	0.004 (0.70)	0.002 (0.55)	0.002 (0.63)	0.002 (0.96)
African American*SATL	0.053 (0.78)	0.018 (0.81)	0.011 (0.61)	0.003 (0.34)	0.003 (0.35)
Asian*SATL	0.025 (0.27)	0.018 (0.55)	0.010 (0.38)	0.009 (0.49)	0.009 (0.50)
Hispanic-Other*SATL	0.093 (1.04)	0.067 (1.55)	0.032 (1.16)	0.032 (1.39)	0.034 (1.40)
Native-Other*SATL					
Nonminority female*SATL	0.054 (2.39)	0.004 (0.70)	-0.002 (0.19)	-0.001 (0.25)	-0.002 (0.57)
SATL region	0.010 (0.51)	-0.002 (0.35)	-0.001 (0.32)	-0.001 (0.32)	-0.001 (0.38)
Creditworthiness (4 variables)	No	Yes	Yes	Yes	Yes
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Balance Sheet (4 indicator variables)	No	Yes	Yes	Yes	Yes
Owner Experience (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Share of Business (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,663	1,654	1,654	1,654	1,604
Pseudo R <sup>2</sup>	0.0897	0.2307	0.2926	0.3367	0.3719
Chi <sup>2</sup>	78.25	196.16	248.84	286.32	313.48
Log likelihood	-397.0	-327.2	-300.8	-282.1	-264.7

Source: See Table 4.24.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses. Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. For other variables, see notes for Table 4.25. Since there was no variation in the loan denial indicator for the Native-Other observations in the SATL sample, they dropped out of the regression analysis.

### **3. *Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial***

Table 4.27 models the interest rate charged for those minority-owned and nonminority female-owned firms that were able to successfully obtain a loan (comparable to Tables 4.13 and 4.14 for 1993 and Table 4.21 for 1998). As was found in earlier surveys, African American business owners are hurt here as well since they have to pay, nationally on average, 1.05 percentage points more for their loans than nonminority male business owners with identical characteristics. Hispanic business owners, as well, pay 0.99 percentage points more, nationally on average, than their nonminority male counterparts have to pay.

The loan price differential is present for African American and Hispanic business owners in the SATL as well. According to the results in Table 4.27, African American business owners in the SATL may pay 1.1 percentage points more for their loans, on average, than comparable nonminority males. For Hispanics, the differential is 1.04 percentage points.

Table 4.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 4.11 and 4.12 for 1993 and Table 4.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. There is some evidence nationally and in the SATL in 2003 that African Americans and Hispanics are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards.

Finally, consistent with earlier results, Table 4.29 (comparable to Tables 4.15 for 1993 and 4.22 for 1998), shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic, and industry factors, African American business owners are still almost 17 percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit.

In the SATL the phenomenon is evident as well—African American business owners are 15 percentage points more likely to fail to apply for fear of denial. In construction and related industries, the trend is even more pronounced at 30 percentage points. There is evidence of this phenomenon for nonminority female business owners as well in the SATL and in the nation as a whole.

**Table 4.27. Models of Interest Rate Charged, 2003**

Specification	African American	African American * SATL	African American * Construction	Asian	Hispanic	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 4.25) n=1,537 (U.S.)	1.046 (2.02)			0.430 (1.20)	0.991 (2.72)	0.260 (0.35)	-0.148 (0.75)
1b) All Loans (as in Column 5 of Table 4.26) n=1,537 (SATL)	1.101 (1.72)	-0.187 (0.16)	-0.162 (0.12)	0.486 (1.16)	1.044 (2.22)	0.480 (0.51)	-0.185 (0.77)

Source: See Table 4.24.

Notes: Each line of this table represents a separate regression with all of the control variables as indicated. Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. The sample consists of firms who had applied for a loan and had their application approved. Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses.

**Table 4.28. Models of Credit Card Use, 2003**

Specification	African American	Asian	Hispanic	Native American and Other	Non-minority Female	Sample Size
1) Business Credit Card	-0.060 (1.13)	0.040 (0.91)	0.004 (0.08)	-0.001 (0.01)	0.002 (0.07)	3,676
2) Personal Credit Card	-0.132 (2.68)	0.036 (0.84)	-0.080 (1.77)	-0.040 (0.48)	0.036 (1.56)	3,676
3) Business Credit Card SATL	-0.057 (0.57)	0.096 (0.94)	-0.013 (0.13)	—	-0.011 (0.20)	655
4) Personal Credit Card SATL	-0.185 (2.04)	-0.149 (1.52)	-0.271 (2.86)	—	0.056 (1.00)	646

Source: See Table 4.24.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 4.27, except for loan amount, year of application, and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses.

**Table 4.29. Racial Differences in Failing to Apply for Loans Fearing Denial, 2003**

Specification	African American	Asian	Hispanic	Native American and Other	Non-minority Female
<b>a) U.S.</b>					
No Other Control Variables (n=3,704)	0.385 (9.48)	0.059 (1.95)	0.138 (4.01)	0.138 (2.14)	0.072 (4.47)
Full Set of Control Variables (n=3,676)	0.166 (4.73)	0.038 (1.40)	0.050 (1.82)	0.052 (1.01)	0.035 (2.46)
<b>b) SATL region</b>					
No Other Control Variables (n=3,704)	0.357 (7.22)	0.060 (1.80)	0.115 (2.98)	0.126 (1.91)	0.088 (4.93)
Full Set of Control Variables (n=3,676)	0.152 (3.59)	0.036 (1.19)	0.033 (1.06)	0.046 (0.88)	0.046 (2.90)
<b>c) Construction</b>					
No Other Control Variables (n=705)	0.492 (4.34)	-0.022 (0.29)	0.090 (1.22)	0.258 (2.17)	0.026 (0.64)
Full Set of Control Variables (n=695)	0.303 (3.16)	0.002 (0.04)	-0.009 (0.34)	0.137 (1.65)	-0.002 (0.11)

Source: See Table 4.24.

Note: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 4.25, except for loan amount, year of application, and type of lender. In Panel (b), interaction terms between race, gender, and SATL were all insignificant, with the exception of the interaction between white female and SATL in the model with no other controls.

## **J. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007**

NERA has conducted local credit market surveys at nine other times and places across the country since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland<sup>134</sup> in 2000 (Maryland I), the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland in 2005 (Maryland II),<sup>135</sup> the State

<sup>134</sup> Including the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

<sup>135</sup> Including (again) the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys and the Memphis surveys included other goods and services as well.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 4.30, and are remarkably similar to results seen in Tables 4.8-4.9, 4.18-4.19, and 4.25-4.26. Denial probabilities for African American-owned firms compared to nonminority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and nonminority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for nonminority female-owned firms than for their nonminority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (9-19 percentage points higher).

Finally, as shown in Table 4.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 4.13-4.14, 4.21 and 4.27. African Americans pay almost 1.7 percentage points more, on average, for their business credit than do nonminority males, declining to 1.5 percentage points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF, and the 2003 SSBF.

**Table 4.30. Determinants of Loan Denial Rates – Nine Jurisdictions**

	(1)	(2)
	<i>Most Recent Application</i>	<i>Last Three Years</i>
African American	0.289 (8.2)	0.293 (7.60)
Hispanic	0.178 (3.86)	0.244 (4.59)
Native American	0.087 (1.69)	0.188 (3.29)
Asian	0.042 (0.72)	0.003 (0.05)
Other race	0.313 (3.07)	0.364 (3.15)
Nonminority female	0.046 (1.83)	0.086 (2.96)
Judgments	0.051 (1.23)	0.119 (2.24)
Firm delinquent	0.022 (2.7)	0.057 (5.90)
Personally delinquent	0.076 (7.38)	0.077 (6.03)
Bankrupt past 3yrs	0.228 (3.99)	0.328 (4.74)
N	1,855	1,855
Pseudo R <sup>2</sup>	.1905	.1721
Chi <sup>2</sup>	336.0	363.3

Source: NERA Credit Market Surveys, 1999-2007.

Notes: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), with t-statistics in parentheses. Indicator variables are also included for the various jurisdictions.

**Table 4.31. Determinants of Interest Rates – Nine Jurisdictions**

	(1)	(2)
African American	1.683 (3.44)	1.491 (2.98)
Asian	1.221 (2.16)	0.789 (1.34)
Hispanic	0.820 (1.48)	0.895 (1.56)
Native American	1.241 (1.52)	1.008 (1.24)
Other race	-1.115 (0.63)	-1.072 (0.61)
Nonminority female	0.046 (0.16)	0.018 (0.06)
Judgments		0.537 (0.85)
Firm delinquent		-0.041 (0.36)
Personally delinquent		0.644 (3.65)
Bankrupt past 3yrs		1.184 (1.13)
Creditworthiness, Firm, and Owner Characteristics	No	Yes
Loan Characteristics	Yes	Yes
N	1,490	1,463
Adjusted R <sup>2</sup>	.0831	.1046
F	11.4	11.05

Source: See Table 4.30.

Notes: Reported estimates are coefficients from OLS regression models, t-statistics are in parentheses. Source: NERA Credit Market Surveys, 1999-2007. Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application. Seven additional indicators for jurisdiction are also included.

## K. Conclusions

The results presented in this chapter indicate that African American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian-owned firms, Native American-owned firms, and nonminority female-owned firms.

As in any regression-based study, our analysis hinges upon the proposition that all the factors that are related to loan denial rates have been included in our statistical model. If, for example, African American business owners possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To check on this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Moreover, we have also estimated several alternative specifications that could potentially identify the impact of such a bias. Moreover, we have conducted our own surveys on numerous occasions and in numerous places across the U.S.. Throughout, we have consistently found that African Americans and often other minorities as well are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination.

Another potential criticism is that this Study has examined loan denial rates rather than loan default rates; some have claimed that the latter provides a more appropriate strategy for identifying discrimination. For example, if banks only approve loans for relatively good African American firms then African American firms should exhibit relatively low default rates. Such an approach has several significant shortcomings that are detailed in Browne and Tootell (1995) and Ladd (1998). For instance, one problem is that it relies on the distribution of default probabilities being similar for African American and nonminority applicants meeting the acceptance standard used for nonminority firms. A further problem is that it assumes that the loan originators know with a high degree of precision what determines defaults, however little hard information exists on what causes default. Additionally, it would be hard to disentangle the factors associated with differences in default rates between nonminority- and African American-owned firms given the fact that the African American-owned firms which obtain credit are typically charged higher interest rates, as we have demonstrated. Finally, such an analysis would require longitudinal data, tracking firms for several years following loan origination. Such data does not exist. While we have highlighted the potential limitations of such an analysis, we believe that it would be fruitful for this sort of longitudinal data collection to take place and for future research to investigate this question more fully.

In addition, many of the criticisms levied against the home mortgage loan discrimination study of Munnell, *et al.* (1996) could perhaps be used here as well. Yet these criticisms appear to have been effectively countered by, for example, Browne and Tootell (1995) and Tootell (1996). What is important to keep in mind in reference to this work compared with Munnell, *et al.* (1996) is the magnitude of the estimated racial disparity. The absolute size of the raw racial differences found in the mortgage study is considerably smaller than those observed in this Study regarding business credit.<sup>136</sup>

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<sup>136</sup> In the Boston Fed study 10 percent of nonminority mortgage applications were rejected compared with 28 percent for African Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for nonminority males and between 50.0 and 65.9 percent for African American-owned firms (depending on which NSSBF or SSBF survey is used).

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added “distance” in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p. 6) point out, “economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others.” A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

Clearly, a portion of the difference in denial rates between nonminority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.<sup>137</sup>

Our analysis finds significant evidence that African American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect it to be a problem in the future. In fact, these concerns prevented more African American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African American-owned firms than for nonminority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for nonminority women as well, although not with as much consistency as the findings for African Americans.

Overall, the evidence is strong that African American-owned firms and often other DBE firms as well face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are due to discrimination.

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<sup>137</sup> The gap in denial rates between African Americans and non-minorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

As noted above, the Federal Reserve discontinued the SSBF as of 2003 and the most recent NERA survey on the topic was conducted in 2007. Economist Alicia Robb, in her article “Beyond the Late, Lamented Survey of Small Business Finance,”<sup>138</sup> notes:

“A few years ago, the [SSBF], the main source of data on small business financing, was cancelled by the Federal Reserve Board. The SSBF had provided detailed information on the use of credit and other financial services by small businesses every five years beginning in 1987. There are no data available after 2003. The Federal Reserve stated the survey was cancelled for financial reasons and the survey had been conducted four times in varying economic conditions. Yet, less than a year after the cancellation, the worst financial crisis hit the United States since the Great Depression. Unfortunately, the nation now has no demand-side data to investigate the impact of this financial crisis on small business financing or firm performance. .... It is ironic that a survey that could shed light on the impact of a financial crisis on the state of small business financing was cancelled due to budgetary concerns when the government has spent hundreds of billions of dollars on other matters arising from the crisis. The survey cost about \$6 million dollars over a five-year survey period, more of a rounding error to the Fed than a significant investment. What a pity that we have no data for 2008—a year of great interest for policy purposes.”

Given this, what, if anything, can we say about evidence of M/W/DBE disparities in access to capital and credit since the 2003-2007 Period? Although adverse impact of the loss of the SSBF cannot be overstated, Dr. Robb herself has endeavored to partially fill the void using data from a unique data set known as the Kaufman Firm Survey (KFS), which follows a sample of small businesses from 2004 through 2010, as well as other sources.

Key findings from Dr. Robb’s 2012 article entitled “Access to Capital among Young Firms, Minority-owned Firms, Women-owned Firms, and High-tech Firms,”<sup>139</sup> include the following:

- Differences in asset levels are the largest single factor explaining racial disparities in business creation rates. Half of all Hispanic families in 2004 had less than \$13,375 in wealth and half of all African American families in 2004 had less than \$8,650 in wealth. These figures were 12 percent and 8 percent, respectively, of nonminority wealth levels.
- Research indicates that the level of startup capital is a strong predictor of business success.

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<sup>138</sup> Robb, A. (2010).

<sup>139</sup> Robb, A. (2012)

- There is evidence that during times of financial distress, bank lending is curtailed, especially to firms that are inherently more risky, such as minority-owned and women-owned firms
- During 2007-2010, young firms owned by African Americans, Hispanics, and other minorities (except Asians) were statistically significantly less likely than similarly situated nonminority firms to apply for credit when they needed it for fear of denial. Dr. Robb notes: “This is perhaps the clearest recent evidence of continued borrowing constraints for Black and Hispanic business owners in the United States. Women were also more likely than men to have this fear during the economic crisis.”
- During 2007-2010, when they did apply for credit, African American, Hispanic, and other young minority firms were statistically significantly more likely to have their loans denied than nonminority owned firms with comparable levels of creditworthiness.
- Moreover, the magnitude of minority denials “increased dramatically” during the 2007-2010 period and through the financial crisis.
- Women-owned firms were also more likely to be denied than nonminority male firms with comparable creditworthiness levels in three of the four years studied, though the difference was only statistically significant in 2008.

Dr. Robb concludes:<sup>140</sup>

“The multivariate findings indicate that ... minority owners who did not apply for new loans were significantly more likely than their White counterparts to avoid applying for loans when needed because they were afraid that their loan applications would be declined by lenders. This is even after controlling for credit quality and a host of owner and firm characteristics. Women were also more likely than similar men not to apply for credit when it was needed for fear of having their loan application denied during the years of the economic crisis. The analysis showed that women and minority business owners’ fears of being declined for a loan were not necessarily unwarranted. In particular, in terms of loan application outcomes, even after controlling for such factors as industry, credit score, legal form, and human capital, minority owners of young firms were significantly less likely to have their loan applications approved than were similar White business owners. Similarly, in 2008, women owners of new businesses were significantly less likely than men with similar credit profiles and legal forms of organization to be approved for loans. More generally, the results suggest that in the initial year of startup, Black- and Hispanic-owned businesses faced greater credit constraints than did their White and Asian counterparts. Similarly, women-

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<sup>140</sup> *Ibid.*

owned businesses faced greater credit constraints than did similar startups owned by men during the years of the financial crisis.”

Dr. Robb’s findings are consistent with those reported above from the SSBF and from NERA’s own surveys. There is no evidence to suggest that credit discrimination has lessened in the years since 2007. Indeed the available evidence suggests that credit discrimination has continued and, if anything, worsened during the recent financial crisis.

## V. DBE Utilization and Disparity in MDOT Contracting

### A. Introduction

The *Croson* decision and its progeny have held that statistical evidence of race-based or gender-based disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious or gender-conscious requirements for DBE participation in contracting and procurement. Chapters III and IV documented the extent of disparity facing minority- and women-owned firms in the private sector of MDOT's market area, where contracting and procurement activity is typically *not* subject to such requirements. In this Chapter, we combined the evidence from Chapter II, which estimates DBE availability in MDOT's market area, with the Master Contract/Subcontract Database described in Chapter I, in order to examine whether there is statistical evidence of disparities in public sector contracting and purchasing activities supported by MDOT.

To determine whether DBEs have been underutilized in the public sector, we should ideally examine public expenditures that were *not* subject to affirmative action requirements. As a result of the federal DBE and State MBE Programs, however, MDOT has a longstanding policy of pursuing affirmative action in its federally-assisted contracting activities, as well as in its state-funded contracting activities.<sup>141</sup>

Given the history of U.S. Department of Transportation DBE policies, MDOT's own data may not show evidence of underutilization, even if such underutilization exists in the private sector of its relevant market area. MDOT's data is most useful for examining the effectiveness of its DBE policy during the study period. This is why it will usually be counterproductive to suspend or significantly curtail DBE programs at the first sign of the elimination of public sector disparities. Given the presence of proactive efforts to remedy discrimination, we would expect public sector disparities to lessen or even disappear. This is especially true since the benchmark used to assess disparities is current availability, which has been demonstrated to be lower than would be observed in a race- and gender-neutral market area (*see* Chapter II above). But as long as private sector disparities remain, and private sector efforts to increase utilization of DBEs remain limited, public sector disparities are likely to reemerge if DBE programs are weakened or suspended. Of course, if actual DBE utilization for MDOT still turns out to be significantly less than DBE availability in certain procurement categories, even in the presence of a robust DBE program, then the MDOT data will still provide strong evidence of adverse disparities.

The statistical evidence reported in Chapter I has already established from which specific industries MDOT buys the goods and services it requires as well as from which geographic areas it draws the majority of its prime contractors and subcontractors. In addition, the statistical evidence reported in Chapter II has established what percentage of all firms in MDOT's geographic and product markets are DBEs.

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<sup>141</sup> See NERA Economic Consulting (2011), Chapter IX, for an historical summary of the State's MBE program.

This Chapter will document:

- To what extent have DBEs been utilized in the contracting and subcontracting activities of MDOT during the study period.
- Whether DBEs have been utilized to the extent that they are available in the relevant market area.

Below, we report the DBE utilization results using two measures—dollars awarded and dollars paid. We report this information for Construction, AE-CRS, Maintenance, IT, Services, and CSE, and for all six of these procurement categories combined. We also report results separately for federally-assisted contracts. All results are reported by race and gender as well as for all DBEs combined.

## B. Utilization

For this Study, we examined 769 prime contracts and 5,112 associated subcontracts awarded during the FFY 2005-2009 time period and with a total award value of \$5.50 billion and a total payment value of \$3.08 billion.<sup>142</sup> Of these, 489 prime contracts and 3,611 associated subcontracts were issued on federally-assisted projects, with a total award value of \$4.58 billion and a total paid value of \$2.38 billion.<sup>143</sup> NAICS codes, DBE status, and detailed race and gender status for the prime contractors and subcontractors included in the master contract/subcontract database were established through computer-assisted cross-referencing of firms in that database with firms in (a) the master directory of DBEs assembled for this Study, (b) Dun & Bradstreet/Hoover's, (c) company profiles drawn from American Business Information, Standard & Poor's, and other sources, and (d) the results of our race/gender misclassification/non-classification surveys.<sup>144</sup>

Table 5.1 shows that during the study period, DBEs as a group were awarded 27.01 percent of all MDOT contract and subcontract dollars in Construction, 24.25 percent in AE-CRS, 17.42 percent in Maintenance, 20.66 percent in IT, 15.33 percent in Services, and 0.70 percent in CSE. Combined, DBEs were awarded 22.76 percent of all MDOT contract and subcontract dollars during the five-year study period. Non-DBEs were awarded 77.24 percent of all MDOT contract and subcontract dollars. Among DBEs, firms owned by nonminority females were awarded the largest fraction of contracting and subcontracting dollars, followed in descending order by African Americans, Asians/Pacific Islanders, Hispanics, and Native Americans.

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<sup>142</sup> Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals.

<sup>143</sup> Details of the contract universe definitions, sampling and data collection procedures, and response rates are provided in Chapter I.

<sup>144</sup> See Chapter II.

**Table 5.1. DBE Utilization at MDOT (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.42	3.30	3.45	3.62	9.75	0.00	4.06
Hispanic	2.67	1.42	1.80	0.00	1.30	0.00	2.04
Asian	0.55	10.68	0.09	14.75	1.00	0.70	2.40
Native American	2.28	0.00	0.00	0.00	0.00	0.00	1.28
Minority	8.93	15.40	5.34	18.37	12.05	0.70	9.78
Nonminority Female	18.08	8.85	12.08	2.30	3.28	0.00	12.98
DBE	27.01	24.25	17.42	20.66	15.33	0.70	22.76
Non-DBE	72.99	75.75	82.58	79.34	84.67	99.30	77.24
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	3,075,432,112	879,183,452	444,026,504	78,236,702	725,617,784	293,136,663	5,495,633,217

Source: NERA Master Contract/Subcontract Database.

Table 5.2 shows that during the study period, DBEs as a group were paid 27.07 percent of all MDOT contract and subcontract dollars in Construction, 23.38 percent in AE-CRS, 10.95 percent in Maintenance, 33.23 percent in IT, 8.42 percent in Services, and 0.70 percent in CSE. Combined, DBEs were paid 21.12 percent of all MDOT contract and subcontract dollars during the five-year study period. Non-DBEs were paid 78.88 percent. Among DBEs, firms owned by nonminority females were paid the largest share, followed in descending order by African Americans, Native Americans, Asians/Pacific Islanders, and Hispanics.

**Table 5.2. DBE Utilization at MDOT (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.10	2.59	2.80	3.49	4.55	0.00	2.96
Hispanic	2.89	1.60	0.73	0.00	1.21	0.00	2.10
Asian	0.67	10.89	0.05	28.81	0.69	0.70	2.13
Native American	3.59	0.00	0.01	0.00	0.00	0.00	2.14
Minority	10.25	15.08	3.60	32.30	6.45	0.70	9.33
Nonminority Female	16.82	8.30	7.36	0.93	1.97	0.00	11.79
DBE	27.07	23.38	10.95	33.23	8.42	0.70	21.12
Non-DBE	72.93	76.62	89.05	66.77	91.58	99.30	78.88
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,261,152,910	418,487,243	316,620,043	51,483,005	459,433,787	293,136,663	3,800,313,651

Source: NERA Master Contract/Subcontract Database.

Restricting the data to federally-assisted contracts and associated subcontracts, Table 5.3 shows that DBEs as a group were awarded 28.06 percent of all MDOT contract and subcontract dollars in Construction, 24.71 percent in AE-CRS, 21.50 percent in Maintenance, 29.24 percent in IT, 12.91 percent in Services, and 0.77 percent in CSE. Combined, DBEs were awarded 23.73 percent of all MDOT contract and subcontract dollars during the five-year study period. Non-DBEs were paid 76.27 percent. Among DBEs, firms owned by nonminority females were awarded the largest share, followed in descending order by African Americans, Asians/Pacific Islanders, Hispanics, and Native Americans.

**Table 5.3. DBE Utilization at MDOT on Federally-Assisted Contracts (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.31	3.38	2.30	6.19	8.30	0.00	3.73
Hispanic	2.04	1.36	0.91	0.00	0.68	0.00	1.56
Asian	0.55	11.09	0.10	18.92	0.84	0.77	2.65
Native American	2.58	0.00	0.00	0.00	0.00	0.00	1.51
Minority	8.49	15.84	3.32	25.11	9.82	0.77	9.46
Nonminority Female	19.58	8.87	18.18	4.13	3.08	0.00	14.27
DBE	28.06	24.71	21.50	29.24	12.91	0.77	23.73
Non-DBE	71.94	75.29	78.50	70.76	87.09	99.23	76.27
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,681,516,219	824,480,482	196,690,221	43,208,653	565,349,612	266,458,652	4,577,703,839

Source: NERA Master Contract/Subcontract Database.

Table 5.4 shows that during the study period, DBEs as a group were paid 28.58 percent of all federally-assisted MDOT contract and subcontract dollars in Construction, 24.11 percent in AE-CRS, 9.70 percent in Maintenance, 27.53 percent in IT, 5.46 percent in Services, and 0.77 percent in CSE. Combined, DBEs were paid 21.94 percent of all MDOT contract and subcontract dollars during the five-year study period. Non-DBEs were paid 78.06 percent. Among DBEs, firms owned by nonminority females were paid the largest share, followed in descending order by Native Americans, African Americans, Asians/Pacific Islanders, and Hispanics.<sup>145</sup>

**Table 5.4. DBE Utilization at MDOT on Federally-Assisted Contracts (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	2.89	2.65	3.00	4.74	2.05	0.00	2.53
Hispanic	2.02	1.63	0.83	0.00	0.51	0.00	1.54
Asian	0.68	11.57	0.03	21.46	0.72	0.77	2.24
Native American	4.28	0.00	0.03	0.00	0.00	0.00	2.62
Minority	9.87	15.86	3.89	26.20	3.28	0.77	8.93
Nonminority Female	18.71	8.25	5.81	1.32	2.17	0.00	13.01
DBE	28.58	24.11	9.70	27.53	5.46	0.77	21.94
Non-DBE	71.42	75.89	90.30	72.47	94.54	99.23	78.06
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	1,882,836,340	377,959,231	147,766,024	35,167,198	367,542,921	266,458,652	3,077,730,366

Source: NERA Master Contract/Subcontract Database.

## C. Disparity Analysis

### 1. MDOT Results By Major Procurement Category

We turn next to a comparison between our estimates of DBE utilization in MDOT's own contracting and subcontracting activities and our estimates of DBE availability in MDOT's geographic and product market area.

<sup>145</sup> Tables 5.1.A-5.4.A, 5.1.B-5.4.B, and 5.1.C-5.4.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

Tables 5.5 and 5.6 present the results of this comparison using dollars awarded and dollars paid, respectively, as the metric of utilization. These two tables include all funding sources. Tables 5.7 and 5.8 are restricted to federally-assisted contracts.

In each table, the figures in the utilization column include both prime contract and subcontract dollars and were derived as described above in this chapter. The figures in the availability column were derived as described above in Chapter II. The disparity ratio, which appears in the final column of Tables 5.5 through 5.8, is derived by dividing utilization by availability and then multiplying the result by 100. A disparity ratio below 100 indicates that DBEs are not participating in MDOT's contracting and subcontracting at a level that is consistent with their estimated availability in the relevant market area. A disparity ratio of 80 or lower is considered to be large, or substantively significant. A disparity ratio is said to be statistically significant if it is unlikely to be caused by chance alone. In the tables below, statistical significance is indicated by one or more asterisks to the right of the disparity ratio.<sup>146</sup>

In Table 5.5, using award dollars, adverse disparity ratios are observed in 45 out of 49 cases (92%). Adverse disparity ratios of less than or equal to 80 are observed in 40 out of 49 (82%) cases, and are statistically significant in 39 out of 49 (80%) cases.

In Table 5.6, using paid dollars, adverse disparity ratios are observed in 44 out of 49 (90%) cases. Adverse disparity ratios of less than or equal to 80 are observed in 42 out of 49 (86%) cases, and are statistically significant in 40 out of 49 (82%) cases.

In Construction, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, minorities as a group, and DBEs as a group. Disparities are statistically significant for African Americans, Asians/Pacific Islanders, minorities as a group, and DBEs as a group (Table 5.6 only).

In AE-CRS, adverse disparities are observed for African Americans, Hispanics, Native Americans, Asians/Pacific Islanders, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

In Maintenance, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics,

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<sup>146</sup> Statistical significance was determined using Monte Carlo simulation methods. Starting from the project database of contracts and subcontracts, all with differing dollar sizes, these studies simulate the award process by programming a computer to randomly assign awards to the several types of DBEs as well as to non-DBEs, based on their estimated availability. For example, if African American-owned firms in a particular category had estimated availability of 10.0%, then the computer would randomly pick 10.0% of the awards and assign them to African American-owned firms. The value of the randomly-assigned awards would then be totaled and compared to availability to assess whether there was a disparity. The simulation exercise is then repeated a large number of times. If utilization fell below availability in 95% or more of the runs (or 99%, or 90%, or 85%, depending on the significance level chosen), then that disparity is deemed statistically significant. For additional discussion of simulation analysis, *see* Wainwright and Holt (2010, p. 50).

Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women (Table 5.6 only), and DBEs as a group.

In IT, adverse disparities are observed for African Americans, Hispanics, Native Americans, minorities as a group (Table 5.5 only), nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Native Americans, minorities as a group (Table 5.5 only), nonminority women, and DBEs as a group.

In Services, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

In CSE, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

When all procurement categories are combined, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Asians/Pacific Islanders, minorities as a group, and DBEs as a group.

**Table 5.5. Utilization, Availability, and Disparity Results for MDOT Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.42	9.88	34.63 ****
Hispanic	2.67	3.20	83.43
Asian/Pacific Islander	0.55	4.88	11.35 ****
Native American	2.28	0.36	
Minority-owned	8.93	18.32	48.72 ****
Nonminority female	18.08	15.17	
DBE total	27.01	33.49	80.64
AE-CRS			
African American	3.30	10.19	32.40 ****
Hispanic	1.42	3.87	36.85 ****
Asian/Pacific Islander	10.68	11.40	93.68
Native American	0.00	0.40	0.00 ****
Minority-owned	15.40	25.85	59.58 ****
Nonminority female	8.85	15.42	57.41 ****
DBE total	24.25	41.27	58.77 ****
Maintenance			

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
African American	3.45	13.47	25.61 ****
Hispanic	1.80	4.84	37.15 ****
Asian/Pacific Islander	0.09	4.42	2.14 ****
Native American	0.00	0.27	0.00 ****
Minority-owned	5.34	23.01	23.23 ****
Nonminority female	12.08	14.92	80.97
DBE total	17.42	37.92	45.94 ****
IT			
African American	3.62	14.60	24.77 ****
Hispanic	0.00	3.82	0.00 ****
Asian/Pacific Islander	14.75	13.51	
Native American	0.00	0.52	0.00 ****
Minority-owned	18.37	32.45	56.60 ****
Nonminority female	2.30	16.31	14.08 ****
DBE total	20.66	48.76	42.38 ****
Services			
African American	9.75	15.49	62.96 ***
Hispanic	1.30	3.72	34.86 ****
Asian/Pacific Islander	1.00	8.56	11.67 ****
Native American	0.00	0.30	1.19 ****
Minority-owned	12.05	28.07	42.94 ****
Nonminority female	3.28	19.18	17.10 ****
DBE total	15.33	47.25	32.45 ****
CSE			
African American	0.00	8.51	0.00 ****
Hispanic	0.00	2.39	0.00 ****
Asian/Pacific Islander	0.70	8.43	8.28 ****
Native American	0.00	0.91	0.00 ****
Minority-owned	0.70	20.25	3.45 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.70	36.05	1.94 ****
All Contracting			
African American	4.06	10.66	38.11 ****
Hispanic	2.04	3.63	56.23
Asian/Pacific Islander	2.40	7.89	30.48 ****
Native American	1.28	0.37	
Minority-owned	9.78	22.55	43.38 ****
Nonminority female	12.98	15.46	83.95
DBE total	22.76	38.00	59.88 ****

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe.

Note: (1) “\*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “\*\*” indicates the disparity is significant at a 10% level or better (90% confidence). “\*\*\*” indicates significance at a 5% level or better (95% confidence). “\*\*\*\*” indicates significance at

a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

**Table 5.6. Utilization, Availability, and Disparity Results for MDOT Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.10	9.94	31.14 ****
Hispanic	2.89	3.29	87.98
Asian/Pacific Islander	0.67	5.15	13.07 ****
Native American	3.59	0.37	
Minority-owned	10.25	18.76	54.66 ****
Nonminority female	16.82	15.08	
DBE total	27.07	33.84	80.01 *
AE-CRS			
African American	2.59	10.52	24.60 ****
Hispanic	1.60	3.83	41.85 ***
Asian/Pacific Islander	10.89	11.33	96.11
Native American	0.00	0.40	0.00 ****
Minority-owned	15.08	26.08	57.82 ****
Nonminority female	8.30	15.74	52.74 ****
DBE total	23.38	41.82	55.91 ****
Maintenance			
African American	2.80	14.05	19.94 ****
Hispanic	0.73	5.09	14.39 ****
Asian/Pacific Islander	0.05	4.57	1.06 ****
Native American	0.01	0.27	5.44 ****
Minority-owned	3.60	23.97	15.00 ****
Nonminority female	7.36	15.25	48.23 ****
DBE total	10.95	39.22	27.92 ****
IT			
African American	3.49	13.36	26.15 ****
Hispanic	0.00	3.70	0.00 ****
Asian/Pacific Islander	28.81	13.19	
Native American	0.00	0.47	0.00 ****
Minority-owned	32.30	30.71	
Nonminority female	0.93	16.67	5.57 ****
DBE total	33.23	47.39	70.12 ****
Services			
African American	4.55	15.81	28.78 ****
Hispanic	1.21	3.43	35.25 ****
Asian/Pacific Islander	0.69	8.53	8.06 ****
Native American	0.00	0.28	1.01 ****
Minority-owned	6.45	28.05	22.99 ****
Nonminority female	1.97	19.84	9.93 ****
DBE total	8.42	47.89	17.58 ****

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.51	0.00 ****
Hispanic	0.00	2.39	0.00 ****
Asian/Pacific Islander	0.70	8.43	8.28 ****
Native American	0.00	0.91	0.00 ****
Minority-owned	0.70	20.25	3.45 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.70	36.05	1.94 ****
All Contracting			
African American	2.96	10.76	27.50 ****
Hispanic	2.10	3.60	58.44
Asian/Pacific Islander	2.13	7.37	28.92 ****
Native American	2.14	0.38	
Minority-owned	9.33	22.10	42.22 ****
Nonminority female	11.79	15.54	75.85
DBE total	21.12	37.64	56.10 ****

Source and Notes: See Table 5.5.

In Table 5.7, using award dollars on federally-assisted contracts, adverse disparity ratios are observed in 44 out of 49 cases (90%). Adverse disparity ratios of less than or equal to 80 are observed in 39 out of 49 (80%) cases, and are statistically significant in 38 out of 49 cases (78%).

In Table 5.8, using paid dollars on federally-assisted contracts, adverse disparity ratios are observed in 44 out of 49 (90%) cases. Adverse disparity ratios of less than or equal to 80 are observed in 41 out of 49 (84%) cases, and are statistically significant in 39 out of 49 (80%) cases.

In Construction, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, minorities as a group, and DBEs as a group. Disparities are statistically significant for African Americans, Asians/Pacific Islanders, and minorities as a group.

In AE-CRS, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders (Table 5.7 only), Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

In Maintenance, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women (Table 5.8 only), and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women (Table 5.8 only), and DBEs as a group (Table 5.8 only).

In IT, adverse disparities are observed for African Americans, Hispanics, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically

significant for African Americans, Hispanics, Native Americans, nonminority women, and DBEs as a group.

In Services, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

In CSE, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority women, and DBEs as a group.

When all procurement categories are combined, adverse disparities are observed for African Americans, Hispanics, Asians/Pacific Islanders, minorities as a group, nonminority women, and DBEs as a group. Disparities are statistically significant for African Americans, Hispanics (Table 5.7 only), Asians/Pacific Islanders, minorities as a group, and DBEs as a group.

**Table 5.7. Utilization, Availability, and Disparity Results for Federally-Assisted MDOT Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.31	9.97	33.23 ****
Hispanic	2.04	3.10	65.76
Asian/Pacific Islander	0.55	5.07	10.82 ****
Native American	2.58	0.36	
Minority-owned	8.49	18.49	45.88 ****
Nonminority female	19.58	15.57	
DBE total	28.06	34.07	82.38
AE-CRS			
African American	3.38	10.05	33.68 ****
Hispanic	1.36	3.90	35.01 ***
Asian/Pacific Islander	11.09	11.41	97.15
Native American	0.00	0.40	0.00 ****
Minority-owned	15.84	25.76	61.48 ****
Nonminority female	8.87	15.26	58.15 ***
DBE total	24.71	41.01	60.24 ****

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Maintenance			
African American	2.30	8.15	28.25 ****
Hispanic	0.91	3.19	28.69 ****
Asian/Pacific Islander	0.10	2.82	3.58 ****
Native American	0.00	0.27	0.00 ****
Minority-owned	3.32	14.42	23.00 ****
Nonminority female	18.18	12.19	
DBE total	21.50	26.61	80.78
IT			
African American	6.19	12.23	50.62 ****
Hispanic	0.00	4.03	0.00 ****
Asian/Pacific Islander	18.92	14.33	
Native American	0.00	0.51	0.00 ****
Minority-owned	25.11	31.11	80.71
Nonminority female	4.13	13.92	29.65 ****
DBE total	29.24	45.04	64.92 ****
Services			
African American	8.30	15.49	53.56 ****
Hispanic	0.68	3.73	18.09 ****
Asian/Pacific Islander	0.84	8.43	10.00 ****
Native American	0.00	0.30	1.52 ****
Minority-owned	9.82	27.96	35.13 ****
Nonminority female	3.08	19.12	16.13 ****
DBE total	12.91	47.08	27.41 ****
CSE			
African American	0.00	8.57	0.00 ****
Hispanic	0.00	2.15	0.00 ****
Asian/Pacific Islander	0.77	7.43	10.34 ****
Native American	0.00	1.03	0.00 ****
Minority-owned	0.77	19.18	4.01 ****
Nonminority female	0.00	15.75	0.00 ****
DBE total	0.77	34.92	2.20 ****
All Contracting			
African American	3.73	10.19	36.61 ****
Hispanic	1.56	3.49	44.83 *
Asian/Pacific Islander	2.65	8.07	32.85 ****
Native American	1.51	0.37	
Minority-owned	9.46	22.12	42.76 ****
Nonminority female	14.27	15.45	92.33
DBE total	23.73	37.58	63.15 ****

Source and Notes: See Table 5.5.

**Table 5.8. Utilization, Availability, and Disparity Results for Federally-Assisted MDOT Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	2.89	10.03	28.80 ****
Hispanic	2.02	3.16	63.95
Asian/Pacific Islander	0.68	5.43	12.58 ****
Native American	4.28	0.36	
Minority-owned	9.87	18.97	52.02 ****
Nonminority female	18.71	15.59	
DBE total	28.58	34.56	82.68
AE-CRS			
African American	2.65	10.42	25.42 ****
Hispanic	1.63	3.85	42.45 **
Asian/Pacific Islander	11.57	11.32	
Native American	0.00	0.40	0.00 ****
Minority-owned	15.86	25.99	61.01 ****
Nonminority female	8.25	15.64	52.77 ****
DBE total	24.11	41.63	57.92 ****
Maintenance			
African American	3.00	8.08	37.19 ****
Hispanic	0.83	3.22	25.69 ****
Asian/Pacific Islander	0.03	2.90	0.92 ****
Native American	0.03	0.30	10.46 *
Minority-owned	3.89	14.49	26.83 ****
Nonminority female	5.81	12.65	45.94 ****
DBE total	9.70	27.15	35.74 ****
IT			
African American	4.74	11.51	41.16 ****
Hispanic	0.00	4.03	0.00 ****
Asian/Pacific Islander	21.46	13.75	
Native American	0.00	0.50	0.00 ****
Minority-owned	26.20	29.80	87.93
Nonminority female	1.32	13.89	9.53 ****
DBE total	27.53	43.69	63.00 ****
Services			
African American	2.05	15.69	13.04 ****
Hispanic	0.51	3.45	14.83 ****
Asian/Pacific Islander	0.72	8.50	8.51 ****
Native American	0.00	0.28	1.26 ****
Minority-owned	3.28	27.92	11.76 ****
Nonminority female	2.17	19.85	10.94 ****
DBE total	5.46	47.77	11.42 ****

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.57	0.00 ****
Hispanic	0.00	2.15	0.00 ****
Asian/Pacific Islander	0.77	7.43	10.34 ****
Native American	0.00	1.03	0.00 ****
Minority-owned	0.77	19.18	4.01 ****
Nonminority female	0.00	15.75	0.00 ****
DBE total	0.77	34.92	2.20 ****
All Contracting			
African American	2.53	10.36	24.47 ****
Hispanic	1.54	3.41	45.07 ****
Asian/Pacific Islander	2.24	7.64	29.30 ****
Native American	2.62	0.38	
Minority-owned	8.93	21.79	40.99 ****
Nonminority female	13.01	15.69	82.95 ****
DBE total	21.94	37.47	58.55 ****

Source and Notes: See Table 5.5.

## 2. SHA Results By Major Procurement Category

Tables 5.9 through 5.12 below document utilization, availability, and disparity results for SHA comparable to those presented above in Tables 5.5 through 5.8.

**Table 5.9. Utilization, Availability, and Disparity Results for SHA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.06	10.06	30.40 ***
Hispanic	2.67	3.16	84.56 ****
Asian/Pacific Islander	0.44	5.09	8.73 ***
Native American	2.50	0.36	
Minority-owned	8.68	18.68	46.45 ***
Nonminority female	19.45	15.63	
DBE total	28.13	34.30	82.00 ****
AE-CRS			
African American	3.21	9.49	33.80 ***
Hispanic	0.27	4.02	6.84 ***
Asian/Pacific Islander	13.32	11.76	
Native American	0.00	0.40	0.00 ***
Minority-owned	16.80	25.68	65.43 **

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Nonminority female	10.15	14.36	70.70
DBE total	26.95	40.04	67.32 ***
Maintenance			
African American	2.63	9.15	28.77 ***
Hispanic	3.47	3.40	
Asian/Pacific Islander	0.19	3.13	6.15 ***
Native American	0.00	0.27	0.00 ***
Minority-owned	6.29	15.95	39.45 ***
Nonminority female	22.80	13.28	
DBE total	29.10	29.24	99.52
IT			
African American	4.97	15.32	32.41 ***
Hispanic	0.00	3.79	0.00 ***
Asian/Pacific Islander	7.86	13.61	57.79 ***
Native American	0.00	0.53	0.00 ***
Minority-owned	12.83	33.25	38.58 ***
Nonminority female	3.15	16.69	18.89 ***
DBE total	15.98	49.94	32.00 ***
Services			
African American	58.81	16.24	
Hispanic	0.21	4.14	4.99 ***
Asian/Pacific Islander	3.47	8.51	40.80 ***
Native American	0.00	0.37	0.00 ***
Minority-owned	62.49	29.26	
Nonminority female	18.52	20.56	90.07
DBE total	81.01	49.82	
CSE			
African American	0.00	8.32	0.00 ***
Hispanic	0.00	0.95	0.00 ***
Asian/Pacific Islander	0.00	10.57	0.00 ***
Native American	0.00	0.92	0.00 ***
Minority-owned	0.00	20.76	0.00 ***
Nonminority female	0.00	20.91	0.00 ***
DBE total	0.00	41.67	0.00 ***
All Contracting			
African American	3.98	10.11	39.41 ***
Hispanic	2.26	3.52	64.18
Asian/Pacific Islander	2.61	7.75	33.70 ***
Native American	1.88	0.38	
Minority-owned	10.73	21.76	49.33 ***
Nonminority female	17.90	15.16	
DBE total	28.63	36.92	77.55 *

Source and Notes: See Table 5.5.

**Table 5.10. Utilization, Availability, and Disparity Results for SHA Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	2.59	10.08	25.66 ***
Hispanic	2.87	3.24	88.63
Asian/Pacific Islander	0.53	5.40	9.81 ***
Native American	4.02	0.37	
Minority-owned	10.00	19.09	52.40 ***
Nonminority female	18.22	15.51	
DBE total	28.22	34.60	81.58
AE-CRS			
African American	2.38	9.61	24.76 ***
Hispanic	0.36	4.01	9.09 ***
Asian/Pacific Islander	14.99	11.74	
Native American	0.00	0.40	0.00 ***
Minority-owned	17.73	25.76	68.84 **
Nonminority female	10.45	14.46	72.25
DBE total	28.18	40.22	70.07 ***
Maintenance			
African American	1.42	9.14	15.52 ***
Hispanic	1.24	3.57	34.68 ***
Asian/Pacific Islander	0.10	3.07	3.26 ***
Native American	0.03	0.30	10.08 **
Minority-owned	2.79	16.09	17.34 ***
Nonminority female	13.47	13.24	
DBE total	16.26	29.33	55.44 ***
IT			
African American	5.53	14.69	37.61 ***
Hispanic	0.00	3.57	0.00 ***
Asian/Pacific Islander	23.89	13.30	
Native American	0.00	0.48	0.00 ***
Minority-owned	29.42	32.04	91.81
Nonminority female	1.47	17.78	8.27 ***
DBE total	30.89	49.82	62.00 ***
Services			
African American	7.45	14.83	50.25 ***
Hispanic	1.01	2.56	39.58 **
Asian/Pacific Islander	13.33	9.13	
Native American	0.00	0.29	0.00 ***
Minority-owned	21.80	26.80	81.32
Nonminority female	18.62	23.36	79.72
DBE total	40.42	50.16	80.57 **

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.32	0.00 ***
Hispanic	0.00	0.95	0.00 ***
Asian/Pacific Islander	0.00	10.57	0.00 ***
Native American	0.00	0.92	0.00 ***
Minority-owned	0.00	20.76	0.00 ***
Nonminority female	0.00	20.91	0.00 ***
DBE total	0.00	41.67	0.00 ***
All Contracting			
African American	2.55	10.07	25.31 ***
Hispanic	2.44	3.46	70.55
Asian/Pacific Islander	2.45	7.23	33.94 ***
Native American	3.25	0.38	
Minority-owned	10.70	21.14	50.60 ***
Nonminority female	16.83	15.25	
DBE total	27.53	36.40	75.63 **

Source and Notes: See Table 5.5.

**Table 5.11. Utilization, Availability, and Disparity Results for Federally-Assisted SHA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	3.10	10.17	30.52 ***
Hispanic	1.96	3.08	63.84
Asian/Pacific Islander	0.42	5.29	7.93 ***
Native American	2.77	0.36	
Minority-owned	8.26	18.90	43.69 ***
Nonminority female	20.71	16.02	
DBE total	28.97	34.92	82.96
AE-CRS			
African American	3.24	9.40	34.49 ***
Hispanic	0.28	4.05	6.93 ***
Asian/Pacific Islander	13.43	11.80	
Native American	0.00	0.40	0.00 ***
Minority-owned	16.96	25.65	66.11 **
Nonminority female	9.94	14.22	69.88
DBE total	26.89	39.87	67.45 **
Maintenance			
African American	0.91	7.28	12.44 ***
Hispanic	1.09	3.10	35.27 **
Asian/Pacific Islander	0.16	2.39	6.55 ***
Native American	0.00	0.24	0.00 ***
Minority-owned	2.15	13.00	16.58 ***
Nonminority female	28.10	11.66	
DBE total	30.26	24.66	
IT			
African American	11.94	14.15	84.36
Hispanic	0.00	4.04	0.00 ***
Asian/Pacific Islander	4.97	15.40	32.30 ***
Native American	0.00	0.56	0.00 ***
Minority-owned	16.91	34.14	49.52 ***
Nonminority female	7.96	14.11	56.41 **
DBE total	24.87	48.25	51.54 ***
Services			
African American	69.57	16.26	
Hispanic	0.00	4.16	0.00 ***
Asian/Pacific Islander	4.11	8.68	47.31 **
Native American	0.00	0.38	0.00 ***
Minority-owned	73.68	29.49	
Nonminority female	9.91	20.41	48.54 ***
DBE total	83.59	49.90	

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
All Contracting			
African American	4.14	9.89	41.85 ***
Hispanic	1.59	3.48	45.68
Asian/Pacific Islander	2.78	7.88	35.26 ***
Native American	2.12	0.38	
Minority-owned	10.62	21.63	49.12 ***
Nonminority female	18.85	15.19	
DBE total	29.48	36.82	80.04

Source and Notes: See Table 5.5. There were no federally-assisted contracts in CSE.

**Table 5.12. Utilization, Availability, and Disparity Results for Federally-Assisted SHA Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	2.58	10.19	25.32 ***
Hispanic	1.89	3.13	60.27
Asian/Pacific Islander	0.50	5.67	8.80 ***
Native American	4.66	0.37	
Minority-owned	9.62	19.36	49.70 ***
Nonminority female	19.89	16.01	
DBE total	29.51	35.38	83.42
AE-CRS			
African American	2.41	9.50	25.33 ***
Hispanic	0.38	4.03	9.32 ***
Asian/Pacific Islander	15.32	11.76	
Native American	0.00	0.41	0.00 ***
Minority-owned	18.10	25.69	70.45 *
Nonminority female	10.10	14.32	70.52
DBE total	28.20	40.02	70.47 **
Maintenance			
African American	1.00	7.08	14.09 ***
Hispanic	0.97	3.26	29.67 **
Asian/Pacific Islander	0.05	2.31	2.06 ***
Native American	0.06	0.26	21.79
Minority-owned	2.07	12.91	16.02 ***
Nonminority female	10.22	11.87	86.10
DBE total	12.29	24.78	49.60 ***
IT			
African American	10.00	14.62	68.40
Hispanic	0.00	4.00	0.00 ***
Asian/Pacific Islander	2.94	15.13	19.43 ***
Native American	0.00	0.57	0.00 ***
Minority-owned	12.94	34.32	37.70 ***
Nonminority female	2.79	14.40	19.40 ***
DBE total	15.73	48.72	32.29 ***
Services			
African American	11.32	15.06	75.17
Hispanic	0.00	2.55	0.00 ***
Asian/Pacific Islander	20.25	9.38	
Native American	0.00	0.30	0.00 ***
Minority-owned	31.57	27.29	
Nonminority female	16.73	23.39	71.52
DBE total	48.30	50.68	95.30

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
All Contracting			
African American	2.59	9.96	25.97 ***
Hispanic	1.64	3.41	48.08
Asian/Pacific Islander	2.44	7.49	32.61 ***
Native American	3.83	0.38	
Minority-owned	10.50	21.24	49.45 ***
Nonminority female	18.12	15.44	
DBE total	28.63	36.68	78.05

Source and Notes: See Table 5.5. There were no federally-assisted contracts in CSE.

### 3. MTA Results By Major Procurement Category

Tables 5.13 through 5.16 below document utilization, availability, and disparity results for MTA comparable to those presented above in Tables 5.5 through 5.8.

**Table 5.13. Utilization, Availability, and Disparity Results for MTA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	5.55	8.14	68.17
Hispanic	2.42	3.23	74.80
Asian/Pacific Islander	3.23	3.30	97.87
Native American	0.09	0.28	30.44
Minority-owned	11.29	14.96	75.45
Nonminority female	3.73	11.62	32.11 **
DBE total	15.02	26.58	56.50 *
AE-CRS			
African American	3.27	11.64	28.06 **
Hispanic	3.91	3.62	
Asian/Pacific Islander	7.43	10.64	69.83
Native American	0.00	0.39	0.00 ***
Minority-owned	14.61	26.30	55.55 *
Nonminority female	6.88	17.45	39.41 **
DBE total	21.48	43.75	49.11 ***
Maintenance			
African American	4.83	15.19	31.81 **
Hispanic	0.59	3.92	15.08 **
Asian/Pacific Islander	0.00	6.29	0.00 ***
Native American	0.00	0.51	0.00 ***
Minority-owned	5.42	25.90	20.94 ***
Nonminority female	0.16	16.47	0.95 ***
DBE total	5.58	42.37	13.17 ***
IT			
African American	0.00	9.63	0.00 ***
Hispanic	0.00	4.04	0.00 ***
Asian/Pacific Islander	33.23	12.80	
Native American	0.00	0.45	0.00 ***
Minority-owned	33.23	26.92	
Nonminority female	0.00	13.66	0.00 ***
DBE total	33.23	40.58	81.88

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Services			
African American	2.24	15.22	14.71 ***
Hispanic	0.74	3.56	20.82 *
Asian/Pacific Islander	0.56	8.35	6.71 ***
Native American	0.01	0.27	1.85
Minority-owned	3.55	27.40	12.94 ***
Nonminority female	2.41	18.72	12.86 ***
DBE total	5.95	46.11	12.91 ***
CSE			
African American	0.00	8.60	0.00 ***
Hispanic	0.00	2.45	0.00 ***
Asian/Pacific Islander	0.77	8.20	9.37 ***
Native American	0.00	0.92	0.00 ***
Minority-owned	0.77	20.17	3.81 ***
Nonminority female	0.00	15.40	0.00 ***
DBE total	0.77	35.57	2.16 ***
All Contracting			
African American	2.37	11.42	20.73 ***
Hispanic	1.22	3.50	34.73
Asian/Pacific Islander	2.49	8.65	28.82 **
Native American	0.01	0.38	3.12
Minority-owned	6.09	23.96	25.42 ***
Nonminority female	2.51	16.28	15.41 ***
DBE total	8.60	40.24	21.37 ***

Source and Notes: See Table 5.5.

**Table 5.14. Utilization, Availability, and Disparity Results for MTA Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	6.81	8.56	79.61
Hispanic	2.57	3.34	76.95
Asian/Pacific Islander	4.08	3.50	
Native American	0.11	0.31	34.66
Minority-owned	13.57	15.71	86.40
Nonminority female	5.72	12.03	47.55
DBE total	19.29	27.74	69.55
AE-CRS			
African American	2.49	12.99	19.17 ***
Hispanic	4.97	3.43	
Asian/Pacific Islander	4.15	10.31	40.28
Native American	0.00	0.40	0.00 ***
Minority-owned	11.61	27.13	42.79 ***
Nonminority female	3.30	18.95	17.43 ***
DBE total	14.91	46.08	32.36 ***
Maintenance			
African American	5.57	13.79	40.42 *
Hispanic	0.65	3.00	21.58
Asian/Pacific Islander	0.00	6.29	0.00 ***
Native American	0.00	0.55	0.00 ***
Minority-owned	6.22	23.63	26.33 ***
Nonminority female	0.15	17.13	0.87 ***
DBE total	6.37	40.76	15.63 ***
IT			
African American	0.00	9.56	0.00 ***
Hispanic	0.00	4.07	0.00 ***
Asian/Pacific Islander	37.24	12.86	
Native American	0.00	0.45	0.00 ***
Minority-owned	37.24	26.94	
Nonminority female	0.00	13.53	0.00 ***
DBE total	37.24	40.47	92.01
Services			
African American	1.84	15.84	11.59 ***
Hispanic	0.52	3.64	14.34 *
Asian/Pacific Islander	0.32	8.31	3.79 ***
Native American	0.00	0.28	1.30
Minority-owned	2.68	28.07	9.54 ***
Nonminority female	1.84	19.08	9.66 ***
DBE total	4.52	47.15	9.59 ***

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.60	0.00 ***
Hispanic	0.00	2.45	0.00 ***
Asian/Pacific Islander	0.77	8.20	9.37 ***
Native American	0.00	0.92	0.00 ***
Minority-owned	0.77	20.17	3.81 ***
Nonminority female	0.00	15.40	0.00 ***
DBE total	0.77	35.57	2.16 ***
All Contracting			
African American	2.16	12.10	17.83 ***
Hispanic	1.00	3.40	29.48
Asian/Pacific Islander	1.99	8.22	24.24 **
Native American	0.01	0.40	3.54
Minority-owned	5.17	24.11	21.42 ***
Nonminority female	1.71	16.86	10.16 ***
DBE total	6.88	40.97	16.79 ***

Source and Notes: See Table 5.5.

**Table 5.15. Utilization, Availability, and Disparity Results for Federally-Assisted MTA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	5.55	8.14	68.17
Hispanic	2.42	3.23	74.80
Asian/Pacific Islander	3.23	3.30	97.87
Native American	0.09	0.28	30.44
Minority-owned	11.29	14.96	75.45
Nonminority female	3.73	11.62	32.11 **
DBE total	15.02	26.58	56.50
AE-CRS			
African American	3.35	11.63	28.82 **
Hispanic	4.04	3.63	
Asian/Pacific Islander	7.40	10.64	69.50
Native American	0.00	0.40	0.00 ***
Minority-owned	14.79	26.29	56.24
Nonminority female	7.08	17.42	40.65 **
DBE total	21.87	43.71	50.02 ***
Maintenance			
African American	4.83	15.19	31.82 **
Hispanic	0.59	3.92	15.09 **
Asian/Pacific Islander	0.00	6.28	0.00 ***
Native American	0.00	0.51	0.00 ***
Minority-owned	5.43	25.90	20.95 ***
Nonminority female	0.16	16.47	0.95 ***
DBE total	5.58	42.37	13.17 ***
IT			
African American	0.00	9.18	0.00 ***
Hispanic	0.00	4.03	0.00 ***
Asian/Pacific Islander	33.95	12.62	
Native American	0.00	0.44	0.00 ***
Minority-owned	33.95	26.28	
Nonminority female	0.00	13.64	0.00 ***
DBE total	33.95	39.91	85.07
Services			
African American	2.24	15.21	14.73 ***
Hispanic	0.74	3.57	20.76
Asian/Pacific Islander	0.52	8.34	6.24 ***
Native American	0.01	0.27	1.86
Minority-owned	3.51	27.39	12.81 ***
Nonminority female	2.41	18.65	12.92 ***
DBE total	5.92	46.04	12.85 ***

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
CSE			
African American	0.00	8.51	0.00 ***
Hispanic	0.00	2.07	0.00 ***
Asian/Pacific Islander	0.79	7.49	10.61 ***
Native American	0.00	1.03	0.00 ***
Minority-owned	0.79	19.09	4.16 ***
Nonminority female	0.00	15.80	0.00 ***
DBE total	0.79	34.89	2.28 ***
All Contracting			
African American	2.40	11.42	20.99 ***
Hispanic	1.23	3.50	35.21
Asian/Pacific Islander	2.47	8.59	28.75 *
Native American	0.01	0.38	3.16
Minority-owned	6.11	23.88	25.59 ***
Nonminority female	2.54	16.26	15.62 ***
DBE total	8.65	40.13	21.55 ***

Source and Notes: See Table 5.5. There were no federally-assisted contracts in CSE.

**Table 5.16. Utilization, Availability, and Disparity Results for Federally-Assisted MTA Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	6.81	8.56	79.61
Hispanic	2.57	3.34	76.95
Asian/Pacific Islander	4.08	3.50	
Native American	0.11	0.31	34.66
Minority-owned	13.57	15.71	86.40
Nonminority female	5.72	12.03	47.55
DBE total	19.29	27.74	69.55
AE-CRS			
African American	2.56	12.96	19.75 ***
Hispanic	5.19	3.44	
Asian/Pacific Islander	3.73	10.34	36.10
Native American	0.00	0.40	0.00 ***
Minority-owned	11.48	27.14	42.31 **
Nonminority female	3.42	18.85	18.13 ***
DBE total	14.90	46.00	32.40 ***
Maintenance			
African American	5.58	13.80	40.43
Hispanic	0.65	3.00	21.61
Asian/Pacific Islander	0.00	6.28	0.00 ***
Native American	0.00	0.55	0.00 ***
Minority-owned	6.23	23.63	26.35 ***
Nonminority female	0.15	17.13	0.87 ***
DBE total	6.37	40.76	15.64 ***
IT			
African American	0.00	9.10	0.00 ***
Hispanic	0.00	4.06	0.00 ***
Asian/Pacific Islander	38.15	12.68	
Native American	0.00	0.44	0.00 ***
Minority-owned	38.15	26.29	
Nonminority female	0.00	13.50	0.00 ***
DBE total	38.15	39.79	95.89
Services			
African American	1.84	15.84	11.61 ***
Hispanic	0.52	3.65	14.32 **
Asian/Pacific Islander	0.28	8.30	3.43 ***
Native American	0.00	0.28	1.31
Minority-owned	2.65	28.06	9.44 ***
Nonminority female	1.85	19.04	9.69 ***
DBE total	4.49	47.11	9.54 ***

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	8.51	0.00 ***
Hispanic	0.00	2.07	0.00 ***
Asian/Pacific Islander	0.79	7.49	10.61 ***
Native American	0.00	1.03	0.00 ***
Minority-owned	0.79	19.09	4.16 ***
Nonminority female	0.00	15.80	0.00 ***
DBE total	0.79	34.89	2.28 ***
All Contracting			
African American	2.18	12.09	18.07 ***
Hispanic	1.02	3.40	29.95
Asian/Pacific Islander	1.96	8.13	24.07 *
Native American	0.01	0.40	3.59
Minority-owned	5.17	24.01	21.54 ***
Nonminority female	1.74	16.81	10.32 ***
DBE total	6.91	40.82	16.92 ***

Source and Notes: See Table 5.5. There were no federally-assisted contracts in CSE.

#### 4. MAA Results By Major Procurement Category

Tables 5.17 through 5.20 below document utilization, availability, and disparity results for MAA comparable to those presented above in Tables 5.5 through 5.8.

**Table 5.17. Utilization, Availability, and Disparity Results for MAA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	8.47	9.28	91.32
Hispanic	2.89	3.84	75.22
Asian/Pacific Islander	0.24	3.46	7.06 ***
Native American	0.00	0.37	0.00 ***
Minority-owned	11.60	16.95	68.46
Nonminority female	4.73	12.47	37.96 **
DBE total	16.33	29.42	55.53 **
AE-CRS			
African American	3.83	11.33	33.75 **
Hispanic	3.40	3.49	97.34
Asian/Pacific Islander	2.36	10.78	21.86 ***
Native American	0.00	0.37	0.00 ***
Minority-owned	9.58	25.98	36.87 ***
Nonminority female	5.35	17.45	30.64 ***
DBE total	14.93	43.43	34.37 ***
Maintenance			
African American	3.97	18.36	21.65 ***
Hispanic	0.00	6.61	0.00 ***
Asian/Pacific Islander	0.00	5.77	0.00 ***
Native American	0.00	0.25	0.00 ***
Minority-owned	3.97	30.98	12.83 ***
Nonminority female	2.39	16.69	14.30 ***
DBE total	6.36	47.67	13.34 ***
IT			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
Services			
African American	15.86	15.34	
Hispanic	3.63	3.66	99.21
Asian/Pacific Islander	1.51	10.00	15.10 ***
Native American	0.00	0.30	0.00 ***
Minority-owned	21.00	29.30	71.68
Nonminority female	0.17	18.66	0.91 ***
DBE total	21.17	47.96	44.15 ***
CSE			
African American	0.00	7.89	0.00 ***
Hispanic	0.00	2.37	0.00 ***
Asian/Pacific Islander	0.00	9.64	0.00 ***
Native American	0.00	0.85	0.00 ***
Minority-owned	0.00	20.75	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
DBE total	0.00	38.18	0.00 ***
All Contracting			
African American	7.94	13.10	60.55
Hispanic	2.31	4.49	51.42
Asian/Pacific Islander	0.91	7.70	11.80 ***
Native American	0.00	0.34	0.00 ***
Minority-owned	11.15	25.63	43.51 ***
Nonminority female	2.90	16.21	17.87 ***
DBE total	14.05	41.83	33.58 ***

Source and Notes: See Table 5.5. There were no contracts in IT.

**Table 5.18. Utilization, Availability, and Disparity Results for MAA Contracting, Overall and by Contracting Category (Dollars Paid)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	7.78	9.58	81.23
Hispanic	3.46	3.88	89.04
Asian/Pacific Islander	0.23	3.60	6.44 ***
Native American	0.00	0.40	0.00 ***
Minority-owned	11.47	17.46	65.67
Nonminority female	4.59	12.41	36.99 **
DBE total	16.06	29.87	53.76 **
AE-CRS			
African American	3.59	10.81	33.20 **
Hispanic	2.64	3.62	72.88
Asian/Pacific Islander	1.95	11.06	17.59 ***
Native American	0.00	0.38	0.00 ***
Minority-owned	8.17	25.88	31.59 ***
Nonminority female	5.45	16.59	32.88 ***
DBE total	13.63	42.47	32.09 ***
Maintenance			
African American	3.13	19.18	16.29 ***
Hispanic	0.00	6.87	0.00 ***
Asian/Pacific Islander	0.00	5.97	0.00 ***
Native American	0.00	0.21	0.00
Minority-owned	3.13	32.22	9.70 ***
Nonminority female	2.60	17.15	15.18 ***
DBE total	5.73	49.38	11.60 ***
IT			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
Services			
African American	15.33	17.96	85.34
Hispanic	4.07	3.51	
Asian/Pacific Islander	0.45	9.20	4.84 ***
Native American	0.00	0.30	0.00 ***
Minority-owned	19.84	30.98	64.06
Nonminority female	0.16	18.67	0.85 ***
DBE total	20.00	49.65	40.29 ***

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	7.89	0.00 ***
Hispanic	0.00	2.37	0.00 ***
Asian/Pacific Islander	0.00	9.64	0.00 ***
Native American	0.00	0.85	0.00 ***
Minority-owned	0.00	20.75	0.00 ***
Nonminority female	0.00	17.43	0.00 ***
DBE total	0.00	38.18	0.00 ***
All Contracting			
African American	7.18	13.24	54.25
Hispanic	2.44	4.71	51.78
Asian/Pacific Islander	0.48	7.14	6.70 ***
Native American	0.00	0.34	0.00 ***
Minority-owned	10.10	25.43	39.73 ***
Nonminority female	3.06	15.57	19.64 ***
DBE total	13.16	41.00	32.10 ***

Source and Notes: See Table 5.5. There were no contracts in IT.

**Table 5.19. Utilization, Availability, and Disparity Results for Federally-Assisted MAA Contracting, Overall and by Contracting Category (Dollars Awarded)**

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
Construction			
African American	7.55	8.16	92.58
Hispanic	4.64	3.75	
Asian/Pacific Islander	0.01	2.00	0.59 ***
Native American	0.00	0.34	0.00 ***
Minority-owned	12.20	14.25	85.63
Nonminority female	5.71	11.33	50.42
DBE total	17.92	25.58	70.04
AE-CRS			
African American	4.50	11.02	40.79
Hispanic	3.41	3.46	98.43
Asian/Pacific Islander	2.03	10.44	19.44 *
Native American	0.00	0.36	0.00 ***
Minority-owned	9.93	25.28	39.30 *
Nonminority female	5.01	17.59	28.47 *
DBE total	14.94	42.87	34.85 ***
Maintenance			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
IT			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
Services			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	9.56	0.00 ***
Hispanic	0.00	3.47	0.00 ***
Asian/Pacific Islander	0.00	6.50	0.00 ***
Native American	0.00	0.98	0.00 ***
Minority-owned	0.00	20.51	0.00 ***
Nonminority female	0.00	14.89	0.00 ***
DBE total	0.00	35.40	0.00 ***
All Contracting			
African American	5.38	10.52	51.21
Hispanic	3.67	3.51	
Asian/Pacific Islander	1.13	8.95	12.63 **
Native American	0.00	0.36	0.00 ***
Minority-owned	10.18	23.33	43.63 *
Nonminority female	4.96	16.48	30.11 *
DBE total	15.15	39.82	38.04 ***

Source and Notes: See Table 5.5. There were no federally-assisted contracts in Maintenance, IT, or Services.

**Table 5.20. Utilization, Availability, and Disparity Results for Federally-Assisted MAA Contracting, Overall and by Contracting Category (Dollars Paid)**

<b>Contracting Category/DBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
Construction			
African American	5.31	8.54	62.16
Hispanic	5.35	3.62	
Asian/Pacific Islander	0.01	2.16	0.57 **
Native American	0.00	0.34	0.00
Minority-owned	10.67	14.66	72.79
Nonminority female	5.30	10.85	48.82
DBE total	15.97	25.51	62.60
AE-CRS			
African American	4.60	10.82	42.49
Hispanic	3.24	3.50	92.63
Asian/Pacific Islander	0.93	10.58	8.83 **
Native American	0.00	0.36	0.00
Minority-owned	8.77	25.26	34.73 *
Nonminority female	5.05	17.25	29.30
DBE total	13.83	42.51	32.53 ***
Maintenance			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
IT			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a
Services			
African American	n/a	n/a	n/a
Hispanic	n/a	n/a	n/a
Asian/Pacific Islander	n/a	n/a	n/a
Native American	n/a	n/a	n/a
Minority-owned	n/a	n/a	n/a
Nonminority female	n/a	n/a	n/a
DBE total	n/a	n/a	n/a

Contracting Category/DBE Type	Utilization	Availability	Disparity Ratio
CSE			
African American	0.00	9.56	0.00 ***
Hispanic	0.00	3.47	0.00 ***
Asian/Pacific Islander	0.00	6.50	0.00 ***
Native American	0.00	0.98	0.00 **
Minority-owned	0.00	20.51	0.00 ***
Nonminority female	0.00	14.89	0.00 ***
DBE total	0.00	35.40	0.00 ***
All Contracting			
African American	4.56	10.17	44.82
Hispanic	4.07	3.53	
Asian/Pacific Islander	0.36	8.18	4.36 ***
Native American	0.00	0.36	0.00
Minority-owned	8.99	22.25	40.39
Nonminority female	4.72	15.44	30.59
DBE total	13.71	37.69	36.37 **

Source and Notes: See Table 5.5. There were no federally-assisted contracts in Maintenance, IT, or Services.

It would be a mistake to interpret a lack of statistical significance in any of the categories in Tables 5.5 through 5.20, or in Appendix IV, as a lack of adverse disparity. While statistical significance tests are useful for assessing whether phenomena other than chance can results that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It means only that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (*e.g.*, discrimination). In the particular statistical application presented in this chapter, the likelihood that a test for statistical significance will incorrectly attribute to chance disparities that are, in fact, due to discrimination becomes greater when (a) we examine a relatively small number of procurements involving the affected group, (b) the expected utilization of particular race/ethnic/gender groups—measured by their availability—is relatively small, and (c) there are large variations in the relative dollar size of contracts and subcontracts.

## 5. Results By Detailed Industry

Utilization, availability, and disparity results comparable to those presented above in Tables 5.5 through 5.20 were also produced according to detailed industry categories. In the interest of space, these tables are presented below in Appendix IV.<sup>147</sup>

### D. Current versus Expected Availability

Finally, Table 5.21 provides a comparison between current levels of DBE availability for MDOT and levels that we would expect to observe in a race- and gender-neutral market area. The latter, referred to as “expected availability,” is derived by dividing the current availability figures, as documented in Tables 2.23 and 2.24, by the disparity ratios documented in column (3) of Table 3.12. If no disparity is present in the relevant market area, the disparity ratio will be equal to 100 and expected availability will be equivalent to current availability. In cases where adverse disparities are present in the relevant market area, the disparity ratio will be less than 100 and, consequently, expected availability will exceed current availability. In all 98 cases examined in Table 5.21, expected DBE availability in MDOT’s market area exceeds current DBE availability.<sup>148</sup>

**Table 5.21. Current Availability and Expected Availability for MDOT**

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
CONSTRUCTION				
African American	9.88	13.97	9.94	14.05
Hispanic	3.20	6.25	3.29	6.43
Asian/Pacific Islander	4.88	7.13	5.15	7.53
Native American	0.36	0.56	0.37	0.58
Minority	18.32	33.20	18.76	34.00
Nonminority female	15.17	23.32	15.08	23.19
DBE total	33.49	53.61	33.84	54.17

<sup>147</sup> Disparity tests were also carried out at the NAICS Industry Sub-Sector and NAICS Industry level, with similar results to those observed at the Industry Group level. In the interest of space, these results are not reported here.

<sup>148</sup> Tables 5.21.A-5.21.C in Appendix III show comparable data for SHA, MTA, and MAA, respectively.

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
<b>AE-CRS</b>				
African American	10.19	14.41	10.52	14.87
Hispanic	3.87	7.56	3.83	7.48
Asian/Pacific Islander	11.40	16.66	11.33	16.56
Native American	0.40	0.62	0.40	0.62
Minority	25.85	46.85	26.08	47.26
Nonminority female	15.42	23.71	15.74	24.20
DBE total	41.27	66.06	41.82	66.94
<b>MAINTENANCE</b>				
African American	13.47	19.04	14.05	19.86
Hispanic	4.84	9.45	5.09	9.94
Asian/Pacific Islander	4.42	6.46	4.57	6.68
Native American	0.27	0.42	0.27	0.42
Minority	23.01	41.70	23.97	43.44
Nonminority female	14.92	22.94	15.25	23.45
DBE total	37.92	60.70	39.22	62.78
<b>IT</b>				
African American	14.60	32.89	13.36	30.10
Hispanic	3.82	6.13	3.70	5.94
Asian/Pacific Islander	13.51	17.11	13.19	16.70
Native American	0.52	0.66	0.47	0.60
Minority	32.45	49.53	30.71	46.88
Nonminority female	16.31	20.10	16.67	20.55
DBE total	48.76	65.39	47.39	63.55
<b>SERVICES</b>				
African American	15.49	34.90	15.81	35.62
Hispanic	3.72	5.97	3.43	5.51
Asian/Pacific Islander	8.56	10.84	8.53	10.80
Native American	0.30	0.38	0.28	0.36
Minority	28.07	42.85	28.05	42.82
Nonminority female	19.18	23.64	19.84	24.45
DBE total	47.25	63.36	47.89	64.22
<b>CSE</b>				
African American	8.51	19.17	8.51	19.17
Hispanic	2.39	3.84	2.39	3.84
Asian/Pacific Islander	8.43	10.67	8.43	10.67
Native American	0.91	1.16	0.91	1.16
Minority	20.25	30.91	20.25	30.91
Nonminority female	15.80	19.47	15.80	19.47
DBE total	36.05	48.34	36.05	48.34

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
OVERALL				
African American	10.66	19.67	10.76	19.85
Hispanic	3.63	5.59	3.60	5.55
Asian/Pacific Islander	7.89	9.27	7.37	8.66
Native American	0.37	0.46	0.38	0.47
Minority	22.55	35.00	22.10	34.30
Nonminority female	15.46	19.91	15.54	20.01
DBE total	38.00	52.33	37.64	51.84

Source: See Tables 2.23, 2.24, 3.12.

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## VI. Qualitative Evidence of Disparity

We have presented a variety of economic and statistical findings above that are consistent with or indicative of the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to MDOT's contracting and procurement activities. Chapters III, IV, and V in particular have documented large and statistically significant adverse disparities in MDOT's relevant markets impacting minority and female entrepreneurs. Commercial loan denial rates are higher, the cost of credit is higher, business formation rates are lower, and business owner earnings are lower—even when comparisons are restricted to similarly situated businesses and business owners.

As a further check on these findings, we investigated qualitative (*i.e.*, anecdotal) evidence of disparities in MDOT's market area.<sup>149</sup> First, we conducted a large scale survey of business establishments in these markets—both DBE and non-DBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination and other related issues.

Briefly, among respondents to our survey we found that DBEs in MDOT's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-DBEs. These differences remain statistically significant when firm size and owner characteristics are held constant. We also find that DBEs in these markets are more likely than similarly situated non-DBEs to report that specific aspects of the regular business environment make it harder for them to conduct business, and less likely than similarly situated non-DBEs to report that specific aspects of the regular business environment make it easier for them to conduct business. Additionally, we find that DBE firms that have been hired in the past by non-DBE prime contractors to work on public sector contracts with DBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without DBE goals. The relative lack of DBE hiring and, even more tellingly, the relative lack of solicitation of DBEs in the absence of affirmative efforts by MDOT, its modal administrations, and other public entities in MDOT's market area shows that business discrimination continues to fetter DBE business opportunities in MDOT's relevant markets. We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

Next, we conducted in-depth personal interviews with minority, women and majority business owners about their experiences in seeking and performing contracts in MDOT's market area. These focus groups confirmed the results of the statistical evidence and the mail surveys: minorities and women encounter significant barriers to the success of their firms in seeking public and private sector work, and these barriers are often the result of discrimination.

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<sup>149</sup> The underlying data in this document is drawn from the NERA's 2011 Study, including the results of the contract and subcontract data collection, telephone surveys, econometric analyses, mail surveys, and business owner interviews. Further, as discussed at the beginning of Chapter II, the term "DBE" is, in general, used interchangeably with "MBE" and "M/WBE" throughout the report.

The remainder of this Chapter is organized as follows. We first discuss the mail survey results in Section A. In Section A.1, we discuss the survey questionnaire, sample frame, and response rate. Section A.2 presents evidence on willingness of firms to do business with the public sector. Section A.3 presents the key findings from the DBE and non-DBE respondents concerning disparate treatment. Section A.4 presents the key findings concerning the impact of the regular business environment on DBEs' ability to conduct their businesses. Section A.5 presents key findings to our questions concerning whether prime contractors solicit or hire DBEs for work on public or private contracts without DBE goals. Section A.6 then examines whether DBEs and non-DBEs that responded to the mail surveys are representative of all DBEs and non-DBEs in the relevant markets. To do so, we surveyed a random sample of DBEs and non-DBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents.

Finally, Section B describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing DBEs and non-DBEs.

## **A. Business Experience Surveys**

### ***1. Survey Questionnaire, Sample, and Responses***

The survey questionnaires asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in MDOT's relevant markets. We also asked about the relative frequency with which firms that have been used as subcontractors, subconsultants, or suppliers by prime contractors on contracts *with* DBE goals have been hired to work, or even solicited to bid, on similar contracts *without* DBE goals. Finally, we posed questions about the characteristics of the firm, including firm age, owner's education, employment size, and revenue size to facilitate comparisons of similarly situated firms.

The mail survey sample was stratified by industry and drawn directly from the Master DBE Directory and the Baseline Business Universe compiled for this Study. Firms were sampled randomly within strata. DBE firms were oversampled to facilitate statistical comparisons with non-DBEs.<sup>150</sup> Of 18,088 businesses that received the questionnaire,<sup>151</sup> 2,210 (12.2 percent)

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<sup>150</sup> See Chapter I for a discussion of how the product and geographic markets were defined. See Chapter II for discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

<sup>151</sup> These figures exclude surveys that were returned undelivered or were otherwise undeliverable.

provided usable responses.<sup>152</sup> The distribution of total responses according to the race and gender of the business owner, by major procurement category, appears in Table 6.1.

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<sup>152</sup> The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

**Table 6.1. Race, Gender and Procurement Category of Mail Survey Respondents (Number of Respondents)**

Group	Construction	AE-CRS	Services	Commodities	Total
<b>African American</b>	99	22	293	35	449
<b>Hispanic</b>	70	8	75	16	169
<b>Asian</b>	32	36	141	17	226
<b>Native American</b>	10	1	21	3	35
<b>Minorities with unknown race/ethnicity</b>	10	2	8	6	26
<b>Nonminority Women</b>	143	48	342	111	644
<b>Total DBE</b>	364	117	880	188	1,549
<b>Nonminority Men</b>	280	46	251	84	661
<b>Total</b>	644	163	1,131	272	2,210

Source: NERA Maryland mail surveys.

## ***2. Willingness of Firms to Contract with the Public Sector***

The probative value of anecdotal evidence of discrimination increases when it comes from active businesses in the relevant geographic and procurement markets. The value of such evidence increases further when it comes from firms that have actually worked or attempted to work for the public sector within those markets. Such is the present case.

As shown below in Table 6.2, there is a strong linkage between the firms responding to our mail survey and the public sector of the Maryland economy. All respondents operate establishments in the relevant geographic and product markets. Moreover, significant numbers of survey respondents have worked or attempted to do work for the State of Maryland or other public entities in the market area in the last five years. This is observed for virtually all types of DBEs and non-DBEs in all procurement categories. Overall, more than half of non-DBEs and over three-fifths of DBEs have worked or attempted to work for the State of Maryland or some other public entity in the market area in the previous five years. This phenomenon is especially apparent for DBEs and non-DBEs in Construction, where 69 percent of DBEs and 61 percent of non-DBEs have attempted to work for the State of Maryland or some other public entity in the market area in the previous five years; and in AE-CRS, where 77 percent of DBEs and 59

percent of non-DBEs have attempted to work for the State of Maryland or some other public entity in the market area in the previous five years.

**Table 6.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years**

Worked or Attempted to Work, Last Five Years	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
<b>ALL INDUSTRIES</b>								
<b>With Maryland</b>	53.5%	50.9%	50.2%	42.4%	51.7%	40.4%	46.9%	38.5%
	(445)	(167)	(223)	(33)	(868)	(639)	(1507)	(657)
<b>With Other Public Entity in Market Area</b>	59.7%	52.1%	57.1%	61.8%	57.7%	48.4%	53.7%	45.9%
	(444)	(167)	(224)	(34)	(869)	(638)	(1507)	(660)
<b>With any Public Entity in Market Area</b>	67.9%	58.7%	65.0%	61.8%	65.2%	55.3%	61.0%	52.0%
	(443)	(167)	(223)	(34)	(867)	(638)	(1505)	(659)
<b>CONSTRUCTION</b>								
<b>With Maryland</b>	63.3%	57.1%	56.3%	62.5%	60.1%	57.0%	58.9%	47.1%
	(98)	(70)	(32)	(8)	(208)	(142)	(350)	(280)
<b>With Other Public Entity in Market Area</b>	71.1%	58.6%	50.0%	80.0%	64.1%	59.3%	62.2%	53.4%
	(97)	(70)	(32)	(10)	(209)	(140)	(349)	(279)
<b>With any Public Entity in Market Area</b>	75.3%	64.3%	62.5%	80.0%	69.9%	68.6%	69.3%	61.1%
	(97)	(70)	(32)	(10)	(209)	(140)	(349)	(280)
<b>AE-CRS</b>								
<b>With Maryland</b>	63.6%	75.0%	68.6%	100.0%	68.2%	54.2%	62.3%	47.8%
	(22)	(8)	(35)	(1)	(66)	(48)	(114)	(46)
<b>With Other Public Entity in Market Area</b>	63.6%	75.0%	72.2%	100.0%	70.1%	68.8%	69.6%	56.5%
	(22)	(8)	(36)	(1)	(67)	(48)	(115)	(46)
<b>With any Public Entity in Market Area</b>	72.7%	87.5%	80.0%	100.0%	78.8%	75.0%	77.2%	58.7%
	(22)	(8)	(35)	(1)	(66)	(48)	(114)	(46)

**Table 6.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years, (cont'd)**

Worked or Attempted to Work, Last Five Years	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
<b>OTHER SERVICES</b>								
<b>With Maryland</b>	49.7%	45.2%	46.0%	38.1%	47.6%	30.9%	41.0%	25.9%
	(290)	(73)	(139)	(21)	(523)	(340)	(863)	(247)
<b>With Other Public Entity in Market Area</b>	56.0%	47.9%	56.8%	60.0%	55.3%	40.2%	49.3%	35.5%
	(291)	(73)	(139)	(20)	(523)	(341)	(864)	(251)
<b>With any Public Entity in Market Area</b>	65.9%	53.4%	63.3%	60.0%	63.2%	46.9%	56.8%	40.6%
	(290)	(73)	(139)	(20)	(522)	(341)	(863)	(249)
<b>COMMODITIES</b>								
<b>With Maryland</b>	51.4%	37.5%	35.3%	0.0%	42.3%	42.2%	42.2%	41.7%
	(35)	(16)	(17)	(3)	(71)	(109)	(180)	(84)
<b>With Other Public Entity in Market Area</b>	55.9%	31.3%	41.2%	0.0%	44.3%	51.4%	48.6%	46.4%
	(34)	(16)	(17)	(3)	(70)	(109)	(179)	(84)
<b>With any Public Entity in Market Area</b>	61.8%	43.8%	52.9%	0.0%	52.9%	56.0%	54.7%	52.4%
	(34)	(16)	(17)	(3)	(70)	(109)	(179)	(84)

Source: NERA calculations from Maryland mail surveys.

Note: Total number of valid responses in parentheses.

### ***3. Experiences of Disparate Treatment in Business Dealings***

The survey included questions about instances of disparate treatment based on race and/or gender experienced in various business dealings during the past five years. As shown in the last row of Table 6.3, 44 percent of DBE firms said they had experienced at least one instance of disparate treatment in one or more areas of business dealings identified on the survey. Reports of disparate treatment were substantially and statistically significantly higher for DBEs than for nonminority males, casting doubt on claims of widespread “reverse discrimination.” Reports were highest among African Americans and Native Americans, with overall rates at or near 60 percent. Similar patterns were observed when the results were disaggregated by procurement category.

The balance of Table 6.3 shows results for each of 14 distinct types of disparate treatment inquired about in the survey. In all but one category (hiring workers from union hiring halls), the difference in reported amounts of disparate treatment between DBEs and non-DBEs is large and

statistically significant. In joining or dealing with construction trade associations, for example, DBEs reported being discriminated against almost eight times more frequently than nonminority males. In applying for commercial loans and for surety bonds DBEs reported being discriminated against roughly five times more frequently than nonminority males.<sup>153</sup> For African Americans and Native Americans, the figures are even more stark. For example, in the three areas identified above, African Americans reported experiencing disparate treatment 11, 8, and 9 times more frequently, respectively, than nonminority males. For Native Americans, the figures are 26, 7, and 16 times more frequently, respectively, than nonminority males. Even where differences are smallest, DBEs report being discriminated against roughly 1.5 to 2 times more frequently than nonminority males.

Evidence of the impact of public sector DBE programs is seen in that the smallest differences between DBEs and non-DBEs appear in the categories of working or attempting to work on public sector prime and subcontracts—although even here the figures are still 1.35 and 1.4 times higher, respectively, for DBEs than for non-DBEs.

Table 6.4 represents the same disparate treatment information as in Table 6.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked within each race/gender group according to the frequency with which disparate treatment was reported, with “1” representing the most frequent and “14” representing the least frequent.

The worst reported problem overall for DBEs was receiving timely payment for work performed. This was followed closely by working or attempting to work on public sector prime contracts, working or attempting to work on public sector subcontracts, working or attempting to work on private sector prime contracts, working or attempting to work on private sector subcontracts, and applying for commercial loans.

For African Americans, the worst reported problem overall was receiving timely payment for work performed; followed by applying for commercial loans, working or attempting to work on private sector prime contracts, and working or attempting to work on private sector subcontracts, working or attempting to work on public sector prime contracts, and working or attempting to work on public sector subcontracts.

For Hispanics, the worst reported problem overall was receiving timely payment for work performed; followed by working or attempting to work on private sector prime contracts, working or attempting to work on public sector prime contracts, working or attempting to work on private sector subcontracts, applying for commercial loans, and working or attempting to work on public sector subcontracts.

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<sup>153</sup> Discrimination in access to commercial credit and capital is the most widely and commonly cited problem facing minority-owned firms. See Chapter IV for an extensive discussion of the theory and analysis of the evidence behind this phenomenon.

**Table 6.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings**

Business Dealings	African American	Hispanic	Asian	Native American	Minority	WBE	DBE	Non-DBE
Applying for commercial loans	<b>43.1%</b>	<b>21.7%</b>	<b>32.2%</b>	<b>38.9%</b>	<b>35.2%</b>	<b>9.5%</b>	<b>25.1%</b>	<b>5.3%</b>
	(239)	(120)	(115)	(18)	(492)	(317)	(809)	(361)
Applying for surety bonds	<b>23.7%</b>	<b>17.8%</b>	<b>12.4%</b>	<b>43.8%</b>	<b>20.4%</b>	4.8%	<b>14.7%</b>	<b>2.7%</b>
	(186)	(101)	(89)	(16)	(392)	(228)	(620)	(297)
Applying for commercial or professional insurance	<b>14.9%</b>	<b>7.1%</b>	<b>12.4%</b>	<b>20.0%</b>	<b>12.7%</b>	2.1%	<b>8.2%</b>	<b>2.0%</b>
	(281)	(127)	(153)	(20)	(581)	(430)	(1011)	(443)
Hiring workers from union hiring halls	<b>9.9%</b>	0.0%	7.8%	0.0%	6.6%	2.6%	5.2%	3.3%
	(142)	(76)	(64)	(8)	(290)	(151)	(441)	(184)
Obtaining price quotes from suppliers or subcontracts	<b>25.6%</b>	<b>15.1%</b>	<b>18.9%</b>	<b>27.8%</b>	<b>21.6%</b>	7.0%	<b>15.6%</b>	<b>4.4%</b>
	(270)	(126)	(127)	(18)	(541)	(374)	(915)	(406)
Working or attempting to obtain work on public-sector prime contracts	<b>38.9%</b>	<b>23.0%</b>	<b>34.3%</b>	<b>37.5%</b>	<b>34.2%</b>	16.4%	<b>27.6%</b>	<b>19.7%</b>
	(283)	(122)	(140)	(16)	(561)	(330)	(891)	(350)
Working or attempting to obtain work on public-sector subcontracts	<b>38.6%</b>	19.5%	<b>35.0%</b>	29.4%	<b>33.5%</b>	17.4%	<b>27.4%</b>	<b>20.3%</b>
	(290)	(118)	(143)	(17)	(568)	(340)	(908)	(360)
Working or attempting to obtain work on private-sector prime contracts	<b>42.3%</b>	<b>24.8%</b>	<b>28.8%</b>	<b>29.4%</b>	<b>34.8%</b>	<b>14.8%</b>	<b>27.1%</b>	<b>9.8%</b>
	(291)	(121)	(146)	(17)	(575)	(358)	(933)	(379)
Working or attempting to obtain work on private-sector subcontracts	<b>40.3%</b>	<b>22.7%</b>	<b>27.4%</b>	<b>27.8%</b>	<b>32.7%</b>	<b>15.5%</b>	<b>26.1%</b>	<b>9.9%</b>
	(283)	(128)	(146)	(18)	(575)	(355)	(930)	(394)
Receiving timely payment for work performed	<b>43.5%</b>	<b>26.7%</b>	<b>24.4%</b>	<b>47.1%</b>	<b>35.0%</b>	<b>19.4%</b>	<b>28.5%</b>	<b>13.7%</b>
	(313)	(135)	(164)	(17)	(629)	(448)	(1077)	(446)
Functioning without hindrance or harassment on the work site	<b>25.1%</b>	<b>12.3%</b>	<b>16.8%</b>	<b>31.3%</b>	<b>20.1%</b>	<b>11.5%</b>	<b>16.5%</b>	<b>5.6%</b>
	(259)	(130)	(143)	(16)	(548)	(392)	(940)	(412)
Joining or dealing with construction trade associations	<b>14.9%</b>	<b>7.9%</b>	<b>12.8%</b>	<b>33.3%</b>	<b>13.2%</b>	<b>5.3%</b>	<b>10.0%</b>	<b>1.3%</b>
	(188)	(101)	(86)	(12)	(387)	(263)	(650)	(319)
Having to do inappropriate or extra work not required of comparable non-DBEs	<b>30.7%</b>	<b>14.3%</b>	<b>23.7%</b>	<b>26.7%</b>	<b>25.0%</b>	<b>11.1%</b>	<b>19.3%</b>	<b>6.0%</b>
	(254)	(119)	(131)	(15)	(519)	(368)	(887)	(386)
Double standards not required of comparable non-DBEs	<b>26.9%</b>	<b>15.0%</b>	<b>20.4%</b>	13.3%	<b>22.1%</b>	7.2%	<b>16.0%</b>	<b>8.8%</b>
	(260)	(127)	(137)	(15)	(539)	(375)	(914)	(397)
In any one of the business dealings listed above	<b>57.3%</b>	<b>50.0%</b>	<b>47.1%</b>	<b>60.0%</b>	<b>53.3%</b>	30.9%	<b>44.1%</b>	<b>27.4%</b>
	(377)	(152)	(191)	(25)	(745)	(518)	(1263)	(500)

Source: See Table 6.2.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-DBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

**Table 6.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings (Rankings)**

<b>Business Dealings</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>MBE</b>	<b>WBE</b>	<b>DBE</b>
Applying for commercial loans	2	5	3	3	1	8	6
Applying for surety bonds	11	7	13	2	10	12	11
Applying for commercial or professional insurance	12	13	12	10	13	14	13
Hiring workers from union hiring halls	14	14	14	12	14	13	14
Obtaining price quotes from suppliers or subs	9	8	9	8	9	10	10
Working or attempting to obtain work on public sector prime contracts	5	3	2	4	4	3	2
Working or attempting to obtain work on public sector subcontracts	6	6	1	7	5	2	3
Working or attempting to obtain work on private sector prime contracts	3	2	4	7	3	5	4
Working or attempting to obtain work on private sector subcontracts	4	4	5	8	6	4	5
Receiving timely payment for work performed	1	1	6	1	2	1	1
Functioning without hindrance or harassment on the work site	10	11	10	6	11	6	8
Joining or dealing with trade associations	13	12	11	5	12	11	12
Having to do extra work not required of others	7	10	7	9	7	7	7
Having to meet quality or performance standards not required of others	8	9	8	11	8	9	9

Source: See Table 6.2.

For Asians, the worst reported problem overall was working or attempting to work on public sector subcontracts; followed by working or attempting to work on public sector prime contracts, applying for commercial loans, working or attempting to work on private sector prime contracts,

working or attempting to work on private sector subcontracts, and receiving timely payment for work performed.

For Native Americans, the worst reported problem overall was receiving timely payment for work performed; followed by applying for surety bonds, applying for commercial loans, working or attempting to work on public sector prime contracts, joining or dealing with trade associations, and functioning without hindrance or harassment on the work site.

For nonminority women, the worst reported problem overall was receiving timely payment for work performed; followed by working or attempting to work on public sector subcontracts, working or attempting to work on public sector prime contracts, working or attempting to work on private sector subcontracts, working or attempting to work on private sector prime contracts, and functioning without hindrance or harassment on the work site.

Some courts and other observers have asserted that findings such as those in Tables 6.3 and 6.4 tell us nothing about discrimination against DBEs since, even though they are current, even though they come directly from the businesses alleging disparate treatment, and even though they are restricted to the relevant geographic and product markets, they still do not compare firms of similar size, qualifications, or experience. Elsewhere in this Study, we have argued against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination.<sup>154</sup> Nevertheless, if disparities are still observed even when such “capacity” factors are held constant, the case becomes even more compelling.

The results reported below in Table 6.5 show that even when levels of size, qualifications, and experience are held constant across firms, measures of disparate treatment of African American-, Hispanic-, Asian-, Native American-, and nonminority women-owned businesses are still large, adverse, and statistically significant.

In Table 6.5, we report the results from a series of Probit regressions using the survey data on disparate treatment.<sup>155</sup> As indicated earlier, the survey questionnaire collected data related to each firm’s size, qualifications, and experience. The reported estimates from these models can be interpreted as changes or differences in the probability of disparate treatment conditional on the control variables. The estimates in the table show large differences in disparate treatment probabilities between DBEs and non-DBEs. In column (1) of Table 6.5 (in which the regression model contains only DBE status and procurement category indicators), the estimated coefficient of 0.195 on the DBE indicator indicates that the likelihood of experiencing disparate treatment for DBE firms is 19.5 percentage points higher than that for non-DBE firms.<sup>156</sup> This difference is

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<sup>154</sup> See Wainwright and Holt (2010, 65-67); Wainwright (2000, 86-87).

<sup>155</sup> See Chapter III for a description of Probit regression.

<sup>156</sup> This estimate largely replicates the raw difference in disparate treatment rates between M/WBE and non-M/WBE firms reported in the last row of Table 6.3. The raw differential observed there ( $44.1\% - 27.4\% = 16.7\%$ ) differs slightly from the 19.5% differential reported here since the regression specification also controls for industry category.

statistically significant within a 99 percent confidence interval or better. Column (2) of Table 6.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or gender, including the owner's education, the age of the firm, and the size of the firm measured by employment and by sales. Even after controlling for these differences, however, DBE firms remain 18.0 percentage points more likely than non-DBE firms to experience disparate treatment. This difference is also statistically significant within a 99 percent confidence interval.

**Table 6.5. Prevalence of Disparate Treatment Facing DBEs**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>DBE</b>	0.195 (7.45)	0.180 (6.40)				
<b>MBE</b>			0.293 (9.93)	0.291 (9.12)		
<b>WBE</b>			0.068 (2.08)	0.054 (1.57)	0.069 (2.10)	0.054 (1.57)
<b>African American</b>					0.342 (9.68)	0.340 (8.97)
<b>Hispanic</b>					0.247 (5.30)	0.247 (5.07)
<b>Asian/Pacific Islanders</b>					0.252 (5.73)	0.246 (5.26)
<b>Native American</b>					0.348 (3.47)	0.332 (3.24)
<b>Owner's Education (3 indicator variables)</b>	No	Yes	No	Yes	No	Yes
<b>Firm Age (4 indicators)</b>	No	Yes	No	Yes	No	Yes
<b>Employment size bracket (6 indicators)</b>	No	Yes	No	Yes	No	Yes
<b>Sales/revenue size bracket (4 indicators)</b>	No	Yes	No	Yes	No	Yes
<b>Industry category (3 indicators)</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>N</b>	1781.00	1716.00	1781.00	1716.00	1781.00	1716.00
<b>Pseudo R<sup>2</sup></b>	0.03	0.04	0.06	0.07	0.06	0.07
<b>Chi<sup>2</sup></b>	71.12	86.33	136.48	152.94	143.86	160.21
<b>Log likelihood</b>	(1160.01)	(1112.37)	(1127.33)	(1079.07)	(1123.64)	(1075.43)

Source: See Table 6.2.

Note: Reported estimates are coefficients from Probit models (re-expressed as percentage differences), t-statistics are in parentheses; t-statistics of (2.58) (1.96) (1.64) or larger indicate that the result is significant within a (99) (95) (90) percent confidence interval, respectively.

Firm size and other characteristics account for little of the disparate treatment reported by DBEs in the MDOT market area.

The exercise is repeated in columns (3) and (4). The only difference is that the DBE indicator is separated into two components—one for minority-owned firms and one for nonminority-female owned firms. The results in column (3) indicate that minority-owned firms in MDOT’s market area are 29.3 percentage points more likely to experience disparate treatment than non-DBE firms. When controls are added in column (4), this difference falls only slightly to 29.1 percentage points, indicating that disparate treatment is occurring even among similarly sized, qualified, and experienced firms. A similar, though less pronounced, result occurs for nonminority females, although the p-value in column (4) falls just short of the 90 percent threshold.

The exercise is repeated again in columns (5) and (6) with separate indicators for each type of DBE. The results for nonminority females are nearly identical to those in columns (3) and (4). For African American-owned firms, the differential is 34.2 percentage points in column (5), falling only slightly to 34.0 percentage points once controls are added. For Hispanic-owned firms, the differentials are 24.7 percentage points in columns (5) and (6). For Asian-owned firms, the differentials are 25.2 and 24.6 percentage points, respectively. For Native American-owned firms, the differentials are 34.8 and 33.2 percentage points, respectively. All of these differences for African Americans, Hispanics, Asians, and Native Americans are statistically significant.

The regression models reported in Table 6.5 used as their dependent variable an indicator of whether or not a survey respondent reported having been treated less favorably in any of the 14 different types of business dealings described in the first column of Table 6.3.<sup>157</sup> We re-estimated the regression model reported in Column (2) of Table 6.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 6.6. As Table 6.6 shows, African American-owned firms in particular experience a wide variety of disparate treatment compared to non-DBEs. In all 14 categories the differences for African American-owned firms are both large and statistically significant. For Hispanic-owned firms, this is true in 11 of 14 cases. For Asian-owned firms, this is true in all 14 cases. For Native American-owned firms, this is true in 9 of 14 cases. For nonminority female-owned firms, this is true in 7 of 14 cases. For DBEs as a group it is true in 13 of the 14 cases.

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<sup>157</sup> Our disparate treatment question also allowed respondents to indicate the quantity of disparate treatment experienced (never, 1-5 times, 6-20 times, more than 20-times). Although not reported here, we also ran regressions using a dependent variable measuring high frequency of disparate treatment (6 or more times) during the prior five years. Results were more limited due to smaller sample sizes but were qualitatively similar to those obtained in Tables 6.5 and 6.6.

Table 6.6. Prevalence of Disparate Treatment Facing DBEs, by Type of Business Dealing

Business Dealings	African American	Hispanic	Asian	Native American	MBE	WBE	DBE
Applying for commercial loans	<b>43.5%</b> (9.33)	<b>23.1%</b> (4.28)	<b>36.6%</b> (6.27)	<b>40.6%</b> (3.65)	<b>29.5%</b> (8.70)	5.2% (1.36)	<b>17.6%</b> (6.64)
Applying for surety bonds	<b>24.8%</b> (5.77)	<b>18.5%</b> (3.88)	<b>16.8%</b> (3.27)	<b>52.1%</b> (4.69)	<b>16.0%</b> (5.64)	2.7% (0.82)	<b>9.6%</b> (4.45)
Applying for commercial or professional insurance	<b>14.2%</b> (5.37)	<b>7.6%</b> (2.49)	<b>14.1%</b> (4.25)	<b>24.4%</b> (3.32)	<b>9.6%</b> (5.33)	-0.4% (-0.25)	<b>5.3%</b> (3.74)
Hiring workers from union hiring halls	<b>8.8%</b> (2.45)	0.0% (0.00)	<b>13.5%</b> (2.25)	0.0% (0.00)	<b>4.9%</b> (1.99)	-0.3% (-0.12)	2.9% (1.38)
Obtaining price quotes from suppliers or subcontracts	<b>26.3%</b> (6.92)	<b>18.6%</b> (4.02)	<b>25.4%</b> (5.13)	<b>34.5%</b> (3.34)	<b>19.3%</b> (7.01)	<b>5.5%</b> (1.85)	<b>11.1%</b> (5.45)
Working or attempting to obtain work on public sector prime contracts	<b>19.2%</b> (4.74)	3.2% (0.64)	<b>15.8%</b> (3.11)	14.2% (1.19)	<b>13.9%</b> (4.23)	-5.0% (-1.37)	<b>6.8%</b> (2.28)
Working or attempting to obtain work on public sector subcontracts	<b>18.3%</b> (4.60)	-2.5% (-0.51)	<b>15.0%</b> (2.99)	3.7% (0.34)	<b>12.1%</b> (3.72)	-4.5% (-1.25)	<b>5.7%</b> (1.92)
Working or attempting to obtain work on private sector prime contract	<b>36.6%</b> (8.66)	<b>19.4%</b> (3.64)	<b>24.8%</b> (4.77)	<b>22.0%</b> (1.88)	<b>26.0%</b> (7.94)	<b>6.4%</b> (1.73)	<b>16.4%</b> (6.06)
Working or attempting to obtain work on private sector subcontracts	<b>34.1%</b> (8.24)	<b>15.4%</b> (3.05)	<b>23.1%</b> (4.54)	17.4% (1.58)	<b>23.3%</b> (7.38)	<b>6.8%</b> (1.90)	<b>15.0%</b> (5.75)
Receiving timely payment for work performed	<b>37.6%</b> (9.29)	<b>18.8%</b> (3.70)	<b>21.5%</b> (4.31)	<b>37.4%</b> (3.09)	<b>26.8%</b> (8.43)	<b>11.3%</b> (3.29)	<b>17.4%</b> (6.84)
Functioning without hindrance or harassment on the work site	<b>25.9%</b> (6.77)	<b>10.3%</b> (2.40)	<b>18.6%</b> (4.12)	<b>31.7%</b> (2.85)	<b>16.8%</b> (6.21)	<b>9.1%</b> (3.09)	<b>10.7%</b> (5.33)
Joining or dealing with construction trade associations	<b>23.2%</b> (5.22)	<b>13.7%</b> (2.96)	<b>21.1%</b> (3.83)	<b>48.1%</b> (3.97)	<b>14.4%</b> (5.09)	<b>8.2%</b> (2.70)	<b>7.7%</b> (4.39)
Having to do inappropriate or extra work not required of comparable non-DBEs	<b>32.6%</b> (7.82)	<b>12.4%</b> (2.58)	<b>27.6%</b> (5.35)	<b>27.8%</b> (2.42)	<b>21.8%</b> (7.25)	<b>8.5%</b> (2.60)	<b>13.2%</b> (5.83)
Having to meet quality, inspection, or performance standards not required of comparable non-DBEs	<b>25.6%</b> (6.98)	<b>10.3%</b> (2.48)	<b>20.2%</b> (4.46)	5.9% (0.60)	<b>16.3%</b> (6.27)	-0.6% (-0.22)	<b>8.6%</b> (4.07)
In any one of the business dealings listed above	<b>34.0%</b> (8.97)	<b>24.7%</b> (5.07)	<b>24.6%</b> (5.26)	<b>33.2%</b> (3.24)	<b>29.1%</b> (9.12)	5.4% (1.57)	<b>18.0%</b> (6.40)

Source: See Table 6.2. Note: Reported estimates are coefficients from Probit models (re-expressed as percentage differences) with specification such as in Table 6.5, columns (2); t-statistics are in parentheses; t-statistics of 1.96 (1.64) or larger indicate that the result is significant within a 95 (90) percent confidence interval. Results with t-statistics of 1.96 or higher are **boldfaced**. Results with t-statistics of 1.64 or higher are **boldfaced italicized**.

#### **4. Impact of Current Business Environment on Ability to Win Contracts**

The survey asked questions about some common features of the business environment to determine which factors were perceived by DBEs as serious impediments to obtaining contracts.

As Table 6.7 shows, substantial percentages of both DBEs and non-DBEs report that certain factors, such as “Obtaining working capital,” “Late notice of bid/proposal deadlines,” and “Large project sizes,” make it harder or impossible for firms to obtain contracts. Among non-DBEs, for example, 37.4 percent reported that obtaining working capital made it harder or impossible for them to win contracts, 49.1 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, and 38.6 percent reported that large project sizes made it harder or impossible for them to win contracts. The figures for DBEs, however, at 50.9 percent, 56.3 percent, and 53.4 percent, respectively, are significantly higher than for non-DBEs. Indeed, as Table 6.7 shows, DBEs reported relatively more difficulty on all nine factors about which they were polled.

To control for firm and owner characteristics, we used a regression technique known as ordered Probit.<sup>158</sup> Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—helps me (1), no effect (2), makes it harder (3), and makes it impossible (4)—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, the education level of the primary owner of the firm, and the major industry group. To report results from ordered Probit analysis, we use a “+” to indicate that DBEs had more difficulty than non-DBEs with similar firm characteristics, and a “–” to indicate that DBEs had less difficulty than non-DBEs with similar firm characteristics.

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<sup>158</sup> For a textbook discussion of ordered Probit, see, for example, Greene (1997).

**Table 6.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Sample Differences**

Business Environment	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
<b>Bonding Requirements</b>	<b>51.6%</b> (223)	40.7% (91)	38.1% (84)	44.4% (18)	<b>46.2%</b> (416)	36.4% (217)	<b>42.8%</b> (633)	<b>31.9%</b> (276)
<b>Insurance Requirements</b>	<b>21.0%</b> (281)	12.5% (96)	<b>24.5%</b> (143)	<b>28.6%</b> (21)	<b>20.7%</b> (541)	14.5% (332)	<b>18.3%</b> (873)	<b>12.8%</b> (384)
<b>Previous Experience Requirements</b>	<b>32.1%</b> (308)	18.5% (108)	<b>30.5%</b> (154)	<b>31.8%</b> (22)	<b>29.2%</b> (592)	<b>18.4%</b> (380)	<b>25.0%</b> (972)	<b>12.7%</b> (394)
<b>Cost of Bidding or Proposing</b>	<b>45.2%</b> (292)	<b>42.3%</b> (104)	<b>43.9%</b> (139)	22.7% (22)	<b>43.4%</b> (557)	35.5% (355)	<b>40.4%</b> (912)	<b>30.6%</b> (372)
<b>Large Project Sizes</b>	<b>60.4%</b> (285)	<b>50.5%</b> (101)	<b>63.4%</b> (134)	50.0% (18)	<b>58.9%</b> (538)	44.4% (333)	<b>53.4%</b> (871)	<b>38.6%</b> (352)
<b>Price of Supplies or Materials</b>	31.8% (277)	35.7% (98)	25.0% (120)	35.0% (20)	31.1% (515)	27.1% (332)	29.5% (847)	28.6% (374)
<b>Obtaining Working Capital</b>	<b>65.2%</b> (296)	<b>58.0%</b> (100)	42.0% (138)	<b>61.9%</b> (21)	<b>58.0%</b> (555)	38.4% (320)	<b>50.9%</b> (875)	<b>37.4%</b> (358)
<b>Late Notice of Bid/Proposal Deadlines</b>	<b>56.8%</b> (292)	50.5% (97)	<b>60.3%</b> (126)	50.0% (18)	<b>56.3%</b> (533)	<b>56.3%</b> (318)	<b>56.3%</b> (851)	<b>49.1%</b> (338)
<b>Prior Dealings with Owner</b>	<b>23.6%</b> (284)	13.7% (102)	<b>21.4%</b> (140)	16.7% (18)	<b>21.0%</b> (544)	9.8% (358)	<b>16.5%</b> (902)	<b>10.0%</b> (379)

Source: See Table 6.2.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-DBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

Table 6.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, eight of the nine factors we inquired about prove to be greater difficulties for DBEs than for non-DBEs (as indicated by the “+” sign). In particular, the disparities for “Large project size,” “Obtaining working capital,” and “Late notice of bid/proposal deadlines,” are all statistically significant with respect to DBEs.

**Table 6.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results**

<b>Business Environment</b>	<b>DBE</b>
<b>Bonding Requirements</b>	+
<b>Insurance Requirements</b>	—
<b>Previous Experience Requirements</b>	+
<b>Cost of Bidding or Proposing</b>	+
<b>Large Project Sizes</b>	+ <sup>*</sup>
<b>Price of Supplies or Materials</b>	+
<b>Obtaining Working Capital</b>	+ <sup>†</sup>
<b>Late Notice of Bid/Proposal Deadlines</b>	+ <sup>†</sup>
<b>Prior Dealings with Owner</b>	+

Source: See Table 6.2.

Note: A plus (+) indicates that a group is more likely than non-DBEs to report difficulty with business environment factors. A minus (–) indicates that a group is less likely than non-DBEs to experience difficulty. An asterisk (\*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

## **5. Solicitation and Use of DBEs on Public and Private Projects Without Affirmative Action Goals**

Our second to last survey question asked, “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses also hire your firm on projects (public or private) *without* such goals or requirements?” As Table 6.9 shows, 70 percent of African American-owned firms, 58 percent of Hispanic-owned firms, 69 percent of Asian-owned firms, 79 percent of Native American-owned

firms, and 63 percent of nonminority female-owned firms, responded that this seldom or never occurs. Similar results were observed in each major procurement category as well.

At least one court has held that the failure of prime contractors to even *solicit* qualified minority- and women-owned firms is a “market failure” that serves to establish a government’s compelling interest in remedying that failure.<sup>159</sup> Among the evidence relied upon for this holding was a NERA survey similar to the current one in which approximately 50 percent of the respondents reported that they were seldom or never even *solicited* for non-goals work.<sup>160</sup>

**Table 6.9. Percent of DBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with DBE Goals Seldom or Never Hire Them on Projects without Such Goals**

DBE Group	All Industries	Construction	AE-CRS	Services	Commodities
<b>African American</b>	70.1% (234)	58.7% (63)	64.3% (14)	74.1% (139)	83.3% (18)
<b>Hispanic</b>	57.8% (90)	52.4% (42)	66.7% (3)	63.2% (38)	57.1% (7)
<b>Asian</b>	69.0% (116)	73.7% (19)	63.2% (19)	68.6% (70)	75.0% (8)
<b>Native American</b>	78.9% (19)	85.7% (7)	- (0)	81.8% (11)	0.0% (1)
<b>MBE</b>	67.3% (474)	59.1% (137)	65.8% (38)	71.0% (262)	73.0% (37)
<b>WBE</b>	63.3% (218)	55.4% (74)	60.0% (20)	67.1% (82)	71.4% (42)
<b>Total DBE</b>	66.0% (692)	57.8% (211)	63.8% (58)	70.1% (344)	72.2% (79)

Source: See Table 6.2.

Note: Total number of valid responses in parentheses.

Our final survey question therefore asked “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) without such goals or

<sup>159</sup> *Builders Association of Greater Chicago v. Authority of Chicago*, 298 F.Supp.2d 725, 737 (N.D. Ill. 2003).

<sup>160</sup> *Id.*

requirements?” Responses to this question are tabulated in Table 6.10, which shows the same pattern as in Table 6.9. In Table 6.10, 67 percent of African American-owned firms, 58 percent of Hispanic-owned firms, 69 percent of Asian-owned firms, 63 percent of Native American-owned firms, and 61 percent of nonminority female-owned firms responded that this seldom or never occurs. Similar results were also observed in each major procurement category.

**Table 6.10. Percent of DBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with DBE Goals Seldom or Never *Solicit* Them on Projects without Such Goals**

DBE Group	All Industries	Construction	AE-CRS	Services	Commodities
<b>African American</b>	66.7% (222)	59.0% (61)	72.7% (11)	68.7% (134)	75.0% (16)
<b>Hispanic</b>	58.0% (88)	52.4% (42)	66.7% (3)	64.9% (37)	50.0% (6)
<b>Asian</b>	69.0% (113)	73.7% (19)	63.2% (19)	66.2% (68)	100.0% (7)
<b>Native American</b>	63.2% (19)	50.0% (8)	100.0% (1)	77.8% (9)	0.0% (1)
<b>MBE</b>	65.1% (458)	56.9% (137)	69.4% (36)	67.5% (252)	75.8% (33)
<b>WBE</b>	61.4% (220)	47.9% (73)	44.4% (18)	72.1% (86)	69.8% (43)
<b>Total DBE</b>	63.9% (678)	53.8% (210)	61.1% (54)	68.6% (338)	72.4% (76)

Source: See Table 6.2.

Note: Total number of valid responses in parentheses.

## 6. Impact of Survey Non-Response

Since the mail survey was voluntary, it is important to account for the fact that a majority of those who received it did not respond. As a check on the usefulness of the information obtained from our mail survey respondents, we conducted telephone surveys of 1,500 randomly selected DBEs and non-DBEs that did not respond to our mail survey. The purpose of this “non-response” survey is to test whether their answers to key survey questions were different from the answers of respondents in ways that would call into question the relevance of the information obtained from our mail survey respondents.

We obtained responses from 358 firms, for a raw response rate of 26.2 percent. After removing duplicate records, records where the firm was no longer in business, and records where the telephone number was disconnected, the effective response rate was 41.1 percent.

Of the firms with which we completed interviews, 38.8 percent were minority-owned, compared with a rate of 41.0 percent in the mail survey. The percentage of women-owned firms was 39.0 percent, compared to 43.7 percent in the mail survey. Neither difference is statistically significant.

In addition to determining minority-owned and women-owned status, we selected three questions from the mail survey to pose to non-respondents. The first question asked whether large project sizes helped or harmed the firm's ability to obtain public or private sector contracts. The second question asked whether and how frequently the firm had experienced discrimination in attempting to apply for commercial loans. The final question asked whether and how frequently the firm had experienced discrimination in working or attempting to work on private sector prime contracts.

Not surprisingly, one difference that we observed between respondents and non-respondents was greater general interest in the questions being asked. Among survey respondents, only 26.5 percent indicated that the question about large project sizes was "not applicable." Among non-respondents, the figure was 56.6 percent. Only 45.4 percent of survey respondents indicated that the question about discrimination in applying for commercial loans was not applicable, compared to 91.7 percent among non-respondents. Only 38.2 percent of survey respondents indicated that the question about discrimination in working or attempting to work on private sector prime contracts was not applicable, compared to 92.9 percent among non-respondents. This phenomenon was observed regardless of whether the firm was minority-owned, women-owned, or nonminority male-owned.

Among those firms to which the question was applicable, 51.0 percent of DBE firms who did not respond to the mail survey indicated that large project sizes made it harder or impossible to obtain contract awards. Among those who did respond to the survey, the figure was 53.2 percent. This difference is not statistically significant. The comparable figures for non-DBE firms were 25.0 percent and 38.6 percent, respectively. This difference is statistically significant using a 90 percent confidence interval but is not significant using a 95 percent interval. This result implies that the estimate of adverse disparity for DBE firms with regard to large project size that was reported from the mail survey (*see* Table 6.5) may in fact be understated (*i.e.*, less severe) than in the universe as a whole, since the ratio of DBE firms to non-DBE firms reporting that large project sizes make it hard or impossible for them to obtain contracts is actually slightly greater among non-respondents than among respondents. In other words, the disparity between DBEs and non-DBEs was even more pronounced among the non-respondents than among the respondents, indicating that the disparities reported above in this Chapter may be somewhat conservatively estimated.

Among those firms to which the question was applicable, 26.3 percent of minority-owned firms who did not respond to the mail survey indicated that they had experienced one or more

instances of discrimination during the previous five years in applying for commercial loans. Among those who did respond to the survey, the figure was 35.3 percent. This difference is not statistically significant. The comparable figures for women-owned firms were 10 percent and 20.6 percent, respectively. This difference is not statistically significant. The comparable figures for non-DBE firms were 0 percent and 5.3 percent, respectively. This difference is not statistically significant (because few non-DBE firms considered this question to be applicable to them at all).<sup>161</sup>

Among those firms to which the question was applicable, 25.0 percent of minority-owned firms who did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in working or attempting to work on private sector prime contracts. Among those who did respond to the survey, the figure was 35.3 percent. This difference is not statistically significant. The comparable figures for women-owned firms were 42.9 percent and 22.9 percent, respectively. This difference is not statistically significant. The comparable figures for non-DBE firms were 66.7 percent and 9.8 percent, respectively. This difference is not statistically significant (because few non-DBE firms considered this question to be applicable to them at all).

These results of our non-respondent survey, in general, indicate that both DBEs and non-DBEs are more likely to have responded to the mail survey if they had experienced the difficulties identified in the mail survey. In some cases this means the actual disparities facing DBEs may be somewhat larger than what we have estimated in our mail survey. For all three questions examined, the basic qualitative finding of more problems and greater disparities being observed among DBEs than among non-DBEs is unchanged.

## **B. Business Owner Interviews**

As part of the 2011 Maryland Disparity Study,<sup>162</sup> we explored anecdotal evidence of possible discrimination against minorities and women in Maryland's market area.<sup>163</sup> We conducted 21 group interviews with 229 business owners from a broad cross section of the industries from which the State purchases services and goods. This effort gathered individual perspectives to augment the statistical information from the business experience and credit access surveys. In general, interviewees' individual experiences mirrored the responses to those surveys.<sup>164</sup>

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<sup>161</sup> The percentages reported in this section may differ slightly from comparable figures reported elsewhere in Chapter VI, since minorities of unknown race or ethnicity were excluded from the tallies in the mail survey.

<sup>162</sup> NERA Economic Consulting (2011).

<sup>163</sup> As discussed in Chapter I, MDOT's market area is contiguous with Maryland's.

<sup>164</sup> We also elicited feedback regarding Maryland's current MBE, DBE, and ACDBE policies and procedures. This feedback is reported in NERA Economic Consulting (2011) (pp. 499-554). Maryland has adopted a contracting affirmative action program for its State-funded contracts across all industries that largely mirrors the federal DBE program. MDOT serves as the certifying agency for both programs, and many of the policies, procedures and forms are similar. For these reasons, most participants in the interviews did not distinguish between the state and federal programs.

Interviewed firms ranged in size from large national businesses to many decades-old family-owned firms to new start-ups. Owners' backgrounds included individuals with extensive experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts, with emphasis on state-administered contracts, whether federally-assisted or entirely state-funded.

The following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed over the many sessions by many participants.

## **1. *Barriers to a Level Playing Field for DBEs***

### **a. *Stereotypes, Negative Perceptions of Competence, and Higher Performance Standards***

Many minority and women owners reported that while progress has been made in integrating them into public sector contracting activities in Maryland through affirmative action contracting programs, many barriers remain. Perhaps the most subtle and difficult to address is that of stereotypes, misperceptions and higher performance standards. These biases, while sometimes subtle,<sup>165</sup> about minorities' and women's lack of competence infect all aspects of their attempts to obtain contracts and to be treated equally in performing contract work. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities in the business world.

We've worked with minority firms and it hasn't worked out. I have heard that.

I agree [that if people know you are a minority owned that they will therefore assume you are less competent].

No one knew who [name] was because that could have been an Italian guy, you know. And thus, I was extremely successful until they found out I was, in fact, black. Perception. ...Once I became black then all of a sudden the perception of these programs are welfare.

When I do get a contract, a lot of times I do feel like I have to over perform just to show that as a woman that I can do it because I feel like I'm tested against a higher standard all the time. Like oh sure, you can do this. So, we outperform and do really well but I feel like it has to be that. You know, it's always like, I've always got to prove myself. Over and over.

[The perception is that if you are an M/W/DBE] you don't have the background, you don't have the experience. You are small. You may not be able to adapt. And,

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<sup>165</sup> See <http://www.projectimplicit.net/articles.php>.

in fact, my first thing, I stopped calling myself [M/W/DBE]. Basically, the way I look at it is at the end of the day, this is like going to a restaurant. You go there for the food, you go there for the service, you go for the ambiance. At the end of the meal he tells you, I will accept American Express, Visa or Discover. That's the way my [M/W/DBE] comes in. So I basically say, you know, you look at my value for what I'm providing. Forget about my certification. At the end of it, you as an agency get to leverage that. That has had some success but it took seven years. Still it could be lot better. No question. But my lights are on.

Yes, I am a minority business but as part of my business values, I did not want to compete as a minority business. I want to compete based on the quality of the service, my past performance, the experience that I brought to the table and I just truly could not justify it.

There are some negatives [being known as an M/W/DBE] and we have built our reputation on quality as well, and oh by the way we just happen to be minority and when people discover that we are a minority business it is sort of a ah-hah moment because when they come to our office they say this is a real good firm here and so I mean, I have a little different position. I am willing to let the law help me if it helps me open the door.... There is kind of a begrudging, oh we have to do this, so once they find out who we are they are very happy to team with us over other firms because they find out we are really faithful.... They just have to meet their percentage so once they get to know us I don't really worry too much about that. We have built our business model on that.

Women of all races often experienced gender bias and exclusion.

I've been in a lot of situations where, you know, I'm dealing with a prime. He's screaming and yelling at me and I'll say, Mr. Jones, and he'll say, don't get "hysterical".... I've been dressed down as a bitch for asking people to adhere to contract documents. You know, yea, I think there is a significant amount of harassment out there. Typically, when, you know, you are doing your job. Yea, there's, you know, there's a lot of effort to sort of get you in line. Knock you back in line.

There's that perception that there must have been the man [involved in a woman-owned business].

A large construction company, I won't name names, did say to me just recently, well you're trying to sell your husband. I have the educational qualifications. I was trying to sell the company and he made this blatant statement, you're trying to sell your husband. And, I just had to stare for a few minutes.

I was at a conference and they wanted to know how I liked working for my [male] sales rep.... I had a call a month ago from an attorney who had asked to speak to the owner and I answered the phone and he said, I don't know who you are but I

asked to speak to the owner.... You find a male voice to represent whatever you do.

I won't go up to a group of men at a conference because they're talking football and golf and they don't want me going up there.... I grew up before there was any perception of women's lib and so you learn to work around it.

Engineering is male dominated.... The older engineers, they want to talk to the men, you know. It's like the old school, boys club.

There are some jobs that I have to send a male project manager. Well I have men and women because construction is still that backward. And if they see a guy show up, they basically, well [assume] he knows what he's talking about. But if I show up, it's like, blonde hair blue eyes what could she possibly know about how to pick up structural steel. So, there definitely is still [discrimination]. I don't know about race but I know when gender is in play that women still, even though there are a lot more of us in the industry, that there definitely is still a perception that we don't really know as much as our male counterparts do.

I've been around for a long time, so my company is well known, so if I feel like when I go on a job and people ask me what department I work in [I'm outraged]. I got to definitely tell you that as an owner of a company, that that discrimination still exists. It's not near as bad as when my grandmother ran the company or whatever. But you don't see women in construction.... [We are] a third generation woman owned construction company.

Women in architecture, women in construction, have been and continue to be discriminated against. I've been in this business over twenty years. I have not seen it get any better. So we have more women, I mean more than 50 percent are in architecture schools than are out there but you will not see 50 percent of architectural firm, a large firm, being 50 percent women. I've seen women basically run out of large firms. In fact, that's why I'm independent.... It is a problem and we keep bucking our heads against it and we keep on trying to get equal pay for equal work.

I tend to let my, please no offense, but my older white guys go out and talk to the contractor.

When I show up I'm probably the only female minority that's in the room at our pre-bid meetings or even, even companies, insurance companies when I go out to their product fairs they always ask me, who do I work for, who do you work for? And I will bring maybe one of my employees, which is a male. And this one particular time this young man that I brought with me, I said I'm stepping into the ladies room and you know, I'll be right back out. I come back out and I didn't see him and there was this gentleman and he was like, your boss just left.... African Americans make up less than five percent of the financial industry and African

American women make up even less than that, so when we show up it's like, who did she work for? Who are you representing?

I've been in the construction management industry for about seven, eight years. And I, I still feel like every time I go into, you know, a pre bid or what have you, I'm the only black female in the room. And I mean that's okay with me. I don't have a problem with that. But I just wish that and hope and hopefully this, it'll come to this at some point where, when you walk in the room it's not automatically assumed you're you know, the, the employee or the you know, don't have any credibility walking in.

Two woman in construction reported that they had not been subjected to discrimination.

People always say, well you know, you being a woman in construction, you know, how does it feel? I don't know. I mean, as far as I'm concerned I, it's something that I'm very comfortable and I've never been approached. Maybe they do [have] eyebrows raised.

I've been in the business for seven years [as a woman-owned firm] and it's been very well received.... I spearhead the company, I'm the decision maker and not only am I a decision maker, when I started the company I have scars on my knees and you know, I've learned the business. So, when I go in it's very easily they're convinced. And on top of that, you have this nurturing spirit which has been a benefit for me to go in and really care about them. So, it's like construction, caring, and then you know, that combination has actually worked out very well for me.

Despite the barriers experienced by almost all minorities and women, many participants advocated the need to persevere and succeed.

Perceptions can be changed.

I will say there [are] barriers [because he is an African American man] but you can get through those just by being the businessperson, the best businessperson that you can be. Service is number one. You got to be a people person. And know when you're not. When people just don't want your service. And don't take it personally. Just keep it moving.

## ***b. Exclusion from Industry Networks***

Many minorities and women reported that there still exists a "good old boys" network that makes it difficult for them to fairly obtain contract opportunities.

If you think the good old boy network is not alive in Maryland, you all got a real serious issue.

[It's alive] everywhere.

There are informal networks to which we don't have access. This, I haven't been in a room with this many women in five years.

It's almost like it's a fraternity and in a way it is a good old boys' club.... If you're not part of that, the way things are done it's kind of like you're left on the outside. You're not part of that fraternity.

All of us know that it's a good old boy network. And if we don't want you in, you're not going to get in. We'll do it through bonding. We'll do it through pricing. But we're going to do it [because it's both monopolistic behavior and part of the monopoly is that everybody in it is big and white].

A good old boy network exists because it's allowed to exist.... What we have here is a situation where we're trying to correct something that's been wrong for a long, long time. There are a lot of people who don't want it corrected. Okay? They have most of the money and most of the guns.

Eighty percent, if not more, of the school work being done in state are being done by a group of six or seven firms.... It is a good old boy system.

### ***c. Discrimination in Applying for Commercial Loans***

Many women owners reported that sexist assumptions and barriers still hamper their ability to obtain working capital.

I went to get a loan about five years ago and went in with a non-liquid asset to collateralize the loan. And they told me that they would be happy to give me the money if my husband would cosign for it.... I have been told, bring your husband in here. You know, we'll put your muni bonds in an account, but bring your husband in here and we'll give you the money.

I had exactly that same experience where when I went for my first line of credit it was, bring your husband in and he has to cosign.... But I refused. And I borrowed from another investor. And, in order to get through that period. But, it's still happening now. Now I've been in business for fifteen years. Just two weeks ago, I had to renegotiate my line of credit. And I'm in [a business group] now here and so I'm with CEOs of other types of businesses and, yes, there's one woman but the rest of them are men. And, interestingly enough, we swapped who's paying what in, on their line of credit and what the terms of their lines of credit are, and I am always paying more. My interest rate is higher and my terms are more stringent and I always have to give a personal guarantee. And more collateral. No question about it. It just infuriates me.

## **d. Barriers to Obtaining Work on Public Sector Projects**

### **i. Prime Contracts**

Most M/W/DBEs expressed frustration with obtaining public sector contracts as prime contractors. This sentiment crossed industries, size of firms, and length of time in business. While all small firms find it more difficult to receive prime contract awards than do large firms, minorities and women felt that their race, ethnicity and gender created additional barriers. That the Maryland program, unlike the federal program, did not permit M/W/DBEs to count their own participation as prime vendors to meet contract goals was a particular source of frustration.<sup>166</sup>

I want the State to be allowed to count me as the [M/W/DBE]. Instead, I'm being requested to give five percent to another [M/W/DBE].

You work very hard to get to be a prime and then you eliminate yourself from the process.

It's beyond wrong, it's just stupid.

### **i. Subcontracts**

Most M/W/DBEs reported that without the requirement that prime firms make good faith efforts to meet contract goals, they would receive little or no work. While minorities and women found it is easier to obtain subcontracts than prime contracts on public projects because of affirmative action goals, it is still difficult to get work, receive fair treatment, and be paid on time. Many believed that majority prime firms use them only if forced to do so.

The goals are critical.... If there wasn't a [M/W/DBE] goal, they wouldn't have called us. They would use their own people.

If there are no goals, you won't get selected. Period.

Right.

You won't get solicited, you won't get called.

[You won't get solicited] even from your good friends or good friend colleague company.

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<sup>166</sup> Although at the time of the business owner interviews, Maryland MBE program law did not allow MBEs to count their own participation, the law (at Md. Code Ann., State Fin. & Proc. § 14-302(7)) was changed in 2012 to provide for the establishment of procedures governing how the participation of MBEs is to be counted toward contract goals.

You are dead in the water if there are no goals. Nobody's going to call you. Nobody, I mean, I'll give you an example. They are doing, they are rebuilding the stop centers on the way to Delaware, two stop centers. Maryland House and Chesapeake House. And they invited me, I wonder why, but I was invited out to an outreach. I drove all the way to Aberdeen for this outreach. You know, and they have giant companies that they do the financing and rebuild. People like HMS Host. The first statement by the people from the Maryland Department of Transportation were that there were no goals on this contract because the companies were financing these things themselves..... Nobody was interested in talking to me anymore except for HMS Host, which on their own, realizing that the State of Maryland would like to see [M/W/DBEs] but can't enforce it, HMS Host has taken [the] initiative and said we will use [M/W/DBEs] and we will require everybody working on the project to come with [M/W/DBEs]. No other group [did that].... It was like I was invisible.

If there is no requirement, they won't use you. I mean there are contracts that come out, RFPs that come out and say, you know, [M/W/DBE] is encouraged. There is no goals but it's encouraged. And nine out of ten times, they're not going to use [M/W/DBE] because it's not a requirement. It's like, okay, we're only doing this to be compliant. We're not doing this because this is the right thing to do. This is the most professional thing to do. But it is a requirement that the state has in order for me to gain this contract I'm going to use [M/W/DBE].

I think that that is a, a perception to some degree, that [using M/W/DBEs] makes [the cost of the job] much higher. It does take the cost up some. I'm not going to sit here and say it doesn't. But it doesn't take it up through the roof like some would like to make you believe.... If everybody runs the program then there's nobody way underbidding everybody. Because everybody's using the same guidelines. If everybody is using [M/W/DBEs] and minority participation then there is nobody who is way lower than anybody else. Everybody's participating. Everybody's going to be at about the same, same place.... But, if we allow people to go around that with waivers, then it does create a real big gap.

Some owners reported that although their firms have been listed on the contract, they were underutilized or not utilized at all.

We oftentimes find that we will, on the front end of a contract, get a contract for \$75,000 or \$100,000 and by the end of the work we've done \$1,200 worth of work. Now what they've done is they've doctored their numbers so that they are, you know, they're compliant on the front end but there really isn't any effort to make certain that, you know, that that work was, in fact, done.

Some firms had their names listed by bidders without even being contacted, let alone reaching an agreement.

Compliance notified me and said, well we want to know how this job is going? How are you working with this company? Whatever, whatever. Then, I said, what are you talking about? They never notified me of anything.

**e. *Barriers to Obtaining Work on Private Sector or “Non- Goals” Projects***

Many M/W/DBEs reported that they had not received work on non-goal State contracts, and rarely are even solicited for private jobs.

Never.

Not, no.

In the private sector, we’re still a little bit short.

If they call now and there’s no goals, I’m almost reluctant to participate in any pre discussions because I think they’re going to use my information again without putting me on the team.

Only firms with unusual niches reported much success outside of affirmative action contracting programs.

Yea [we get private work], because our discipline is a specialty discipline.

A few women reported that they found private sector work easier to obtain than public contracts.

Those are the better conversations I’ve had.... I’m significant in the non-goal. For some reason it reverses. I have value in the non-goal. The goal is like, pulling these ridiculous technical specifications to match me and to match their compliance.

We do 90 percent of our work private and most again, the work we do are because of price and because of the quality of our workmanship so while I’m [M/W/DBE] certified I get most of my contracts based on merit basically because they know.

Some certified firms, especially those owned by White women, stated that once they were used on public jobs, they were solicited on that prime contractor’s projects.

I do probably 50/50 with contracts with goals and contracts without goals and the contracts without goals are much more difficult to get because you’re competing against a pool of everyone versus a contract with goals.... But I find that when I get a contract with a goal and I do a good job for that contractor that they will use me a lot of times on contracts without goals regardless if they need to use me or not.

## C. Conclusion

Consistent with other evidence reported in this Study, anecdotal interview information strongly suggests that DBEs continue to suffer discriminatory barriers to full and fair access to State and private sector contracts. This evidence includes stereotypes, perceptions of DBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans; difficulties in receiving fair treatment in obtaining public sector prime contracts and subcontracts; and exclusion from private sector opportunities to perform as either prime contractors or as subcontractors. While not definitive proof that MDOT has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of evidence that, especially when considered alongside the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether MDOT would be a passive participant in a discriminatory market area without affirmative interventions.



## References

- Acs, Z. and D. Evans (1994), "The determinants of variations in self-employment rates across countries and over time," working paper.
- Alba-Ramirez, A. (1994), "Self-employment in the midst of unemployment; the case of Spain and the United States," Applied Economics, 2, 189-204.
- Arai A. B. (1997), "The road not taken, The transition from unemployment to self-employment in Canada, 1961-1994," Canadian Journal of Sociology 22, Summer, 365-382.
- Areeda, P., L. Kaplow, and A. Edlin (2004). Antitrust Analysis: Problems, Text, Cases. New York: Aspen Publishers, 6<sup>th</sup> ed.
- Aronson, R. L. (1991), Self-employment. ILR Press, Ithaca, NY, ILR Press.
- Bates, T. (1973), Black capitalism, a quantitative analysis. New York, Praeger.
- Bates, T. (1989), "The changing nature of minority business, a comparative analysis of Asian, non-minority, and black-owned businesses," The Review of Black Political Economy, 25-42.
- Bates, T. (1991a), "Discrimination and the capacity of Chicago metropolitan area minority and women-owned businesses," Report to the City of Chicago Department of Law.
- Bates, T. (1991b), "Commercial bank financing of white- and black-owned small business startups," Quarterly Review of Economics and Business, 31(1), 64-80.
- Bates, T. (1993), "Banking on black enterprise, the potential of emerging firms for revitalizing urban economies," Washington D.C., Joint Center for Political and Economic Studies.
- Bauer, P. W. and B. A. Cromwell (1994), "A Monte Carlo examination of bias tests in mortgage lending," Federal Reserve Bank of Cleveland Economic Review, 30(3), 27-40.
- Becker, G. S. (1957), The economics of discrimination, University of Chicago Press, Chicago, Illinois.
- Bernhardt, I. (1994) "Comparative advantage in self-employment and paid work," Canadian Journal of Economics, May 1994, 273-289.
- Black, J., D. de Meza, and D. Jeffreys (1996), "House price, the supply of collateral and the enterprise economy," Economic Journal, 106(434), January, 60-75.
- Blanchflower, D.G. (2000), "Self-employment in OECD countries," Labour Economics, 7, September, 471-505.

- Blanchflower, D.G. (2009), "Minority self-employment in the United States and the impact of affirmative action programs," Annals of Finance, (5)3-4, 361-396.
- Blanchflower, D.G., P. Levine and D. Zimmerman (2003), "Discrimination In The Small Business Credit Market," Review of Economics and Statistics, 85(4), 930-943.
- Blanchflower, D.G. and B. Meyer (1994), "A longitudinal analysis of the young self-employed in Australia and the United States," Small Business Economics, 6, 1-20.
- Blanchflower, D.G. and A. J. Oswald (1990), "Self-employment and the enterprise culture," British Social Attitudes: The 1990 Report. Edited by R. Jowell, S. Witherspoon and L. Brook, Gower.
- Blanchflower, D.G. and A. J. Oswald (1998), "What makes an entrepreneur?," Journal of Labor Economics, 16(1), January, 26-60.
- Blanchflower, D.G. and A.J. Oswald (2008), "What makes a young entrepreneur?," International Handbook on Youth and Young Adulthood edited by Andy Furlong, in the Routledge International Handbook series.
- Blanchflower, D.G., A. J. Oswald, and A. Stutzer (2001), "Latent entrepreneurship across nations," European Economic Review, 45, no.4-6, May, 680-691.
- Blanchflower, D.G. and C. Shadforth (2007), "Entrepreneurship in the UK," Foundations and Trends in Entrepreneurship, 3(4), 257-364.
- Blanchflower, D.G. and J. S. Wainwright (2005), "An Analysis of the Impact of Affirmative Action Programs on Self-Employment in the Construction Industry?," National Bureau of Economic Research Working Paper Series, #11793, November.
- Blau, D. (1987), "A time-series analysis of self-employment in the United States," Journal of Political Economy, 95, 445-467.
- Bogenhold, D. and U. Staber (1991), "The decline and rise of self-employment," Employment and Society, 5, 223-239.
- Borjas, G.J. and S. Bronars (1989), "Consumer discrimination and self-employment," Journal of Political Economy, 97, 581-605.
- Bourdon, C. C. and R. E. Levitt (1980), Union and open-shop construction, compensation, work practices, and labor markets. Lexington, MA: Lexington Books.
- Broussard, N., R. Chami, and G. Hess (2003), "(Why) do self-employed parents have more children?," working paper, September.
- Browne, L.E. and G. M. B. Tootell (1995), "Mortgage Lending in Boston-A Response to the Critics," New England Economic Review, September-October, 53-78.

- Cagetti, M., and M. DeNardi (2006), "Entrepreneurship, frictions and wealth," Journal of Political Economy, 114(5), 835-70.
- Cavalluzzo, K. S. and L. C. Cavalluzzo (1998), "Market structure and discrimination, the case of small businesses," Journal of Money, Credit, and Banking, 30(4), November, 771-792.
- Cavalluzzo, K. S., L. C. Cavalluzzo, and J. Wolken (1999), "Competition, small business financing, and discrimination, evidence from a new survey," unpublished manuscript, Georgetown University, February.
- Cloud, C. and G. Galster (1993), "What do we know about racial discrimination in mortgage markets," Review of Black Political Economy, 22(1), Summer, 101-120.
- Coate, S. and S. Tennyson (1992), "Labor market discrimination, imperfect information and self-employment," Oxford Economic Papers, 44, 272-288.
- Cole, R. A. (1998), "Availability of credit to small and minority-owned businesses, evidence from the 1993 National Survey of Small Business Finances," unpublished manuscript, Employment Policies Institute, Washington, DC. April 13.
- Cowling, M. and P. Mitchell (1997), "The evolution of UK self-employment, A study of government policy and the role of the macroeconomy," Manchester School of Economic and Social Studies, 65 no.4, September, 427-442.
- Day, T. S. and S. J. Liebowitz (1998), "Mortgage lending to minorities, where's the bias?," Economic Inquiry, XXXVI, January, 3-28.
- DeWit, G. and F. A. Van Winden (1990), "An empirical analysis of self-employment in the Netherlands," Economics Letters, 32, 97-100.
- Dunn, T. A. and D.J. Holtz-Eakin (2000), "Financial capital, human capital, and the transition to self-employment: evidence from intergenerational links," Journal of Labor Economics, 18 (2): 282-305.
- Eccles, R. G. (1981), "Bureaucratic versus craft administration: The relationship of market structure to the construction Firm." Administrative Science Quarterly, 26.
- Enchautegui, Maria E., M. Fix, P. Loprest, S. von der Lippe, D. Wissoker (1996), Do minority-owned businesses get a fair share of government contracts? Washington, DC.: The Urban Institute.
- Evans, D. and B. Jovanovic (1989), "An estimated model of entrepreneurial choice under liquidity constraints," Journal of Political Economy, 97, 808-827.
- Evans, D. and L. Leighton (1989), "Some empirical aspects of entrepreneurship," American Economic Review, 79, 519-535.

Executive Office of the President, Office of Management and Budget (2007), North American Industrial Classification system: United States, 2007, Lanham, MD: Bernan.

Fairlie, R. W. (1999), "The absence of the African American owned business, an analysis of the dynamics of self-employment," Journal of Labor Economics, 17(1), 80-108.

Fairlie, R.W. (2006), "Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education," Handbook of Entrepreneurship, Volume 2, eds. Simon C. Parker, Zoltan J. Acs, and David R. Audretsch, New York: Springer Verlag.

Fairlie R. W. and B. D. Meyer (1996), "Ethnic and Racial Self-Employment Differences and Possible Explanations," Journal of Human Resources, 31(4), 757-793.

Fairlie R. W. and B. D. Meyer (1998), "Does immigration hurt Black self-employment?" Help or Hindrance? The Economic Implications of Immigration for Blacks. Edited by D. S. Hamermesh and F. D. Bean. New York, Russell Sage Foundation.

Fairlie R. W. and B. D. Meyer (2003), "The effect of immigration on native self-employment," Journal of Labor Economics, 21(3), 619-650.

Fairlie, R.W. and B.D. Meyer (2000), "Trends in self-employment among white and black men during the twentieth century," Journal of Human Resources, XXXV(4), 643-669.

Fairlie, R.W. and H.A. Krashinsky (2006), "Liquidity constraints, household wealth and entrepreneurship revisited," Working Paper, University of California, Santa Cruz.

Fairlie, R.W. and A. Robb (2007a), "Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital," Journal of Labor Economics, 25(2), 289-323.

Fairlie, R.W. and A. Robb (2007b) "Families, human capital, and small business: evidence from the Characteristics of Business Owners Survey," Industrial and Labor Relations Review, 60(2), 225-245.

Ferri, G. and P. Simon (1997), "Constrained consumer lending, exploring business cycle patterns using the Survey of Consumer Finances," working paper, Princeton University.

Foti, A. and M. Vivarelli (1994), "An econometric test of the self-employment model - the case of Italy," Small Business Economics, 6, no.2, April, 81-93.

Fuchs, V. (1982), "Self-employment and labor force participation of older males," Journal of Human Resources 17, Fall, 339-357.

Gould, F. E. (1980), "Investigation in construction entrepreneurship" Masters Thesis, MIT, May.

Greene, W. H. (1997), Econometric Analysis, Third Edition, New Jersey, Prentice-Hall, 926-931.

- Haggerty, C., K. Grigorian, R. Harter and J. D. Wolken (2000), "The 1998 Survey of Small Business Finances: Sampling and Level of Effort Associated with Gaining Cooperation from Minority-Owned Businesses," *Proceedings of the Second International Conference on Establishment Surveys*, Buffalo, NY, June 17-21.
- Hall, R. E. and F. Mishkin (1982), "The sensitivity of consumption to transitory income, estimates from panel data on households," *Econometrica*, 50(2), 461-81.
- Harrison, G. W. (1998), "Mortgage lending in Boston, a reconsideration of the evidence," *Economic Inquiry*, XXXVI, January, 29-38.
- Hayashi, F. (1985), "The effect of liquidity constraints on consumption, a cross-sectional analysis," *Quarterly Journal of Economics*, 100(1), February, 183-206.
- Heckman, J. J. (1998), "Detecting discrimination," *Journal of Economic Perspectives*, 12(2), Spring, pp. 101-116.
- Holmes T. J. and J. A. Schmitz (1990), "A theory of entrepreneurship and its application to the study of business transfers," *Journal of Political Economy* 89, 265-294.
- Holtz-Eakin, D. D. Joulfaian, and R. S. Harvey (1994a), "Entrepreneurial decisions and liquidity constraints," *Journal of Political Economy*, 102, 53-75.
- Holtz-Eakin, D. D. Joulfaian, and R. S. Harvey, (1994b), "Sticking it out, entrepreneurial survival and liquidity constraints," *Rand Journal of Economics*, 25(2), Summer, 334-347.
- Horne, D. (1994), "Evaluating the role of race in mortgage lending," *FDIC Banking Review*, 7(1), Spring/Summer, 1-15.
- Hout, M. and H. Rosen (2000), "Self-Employment, family background, and race," *Journal of Human Resources*, 35 no.4, Fall, 670-92.
- Hurst, E. and A. Lusardi (2004), "Liquidity Constraints, Household Wealth, and Entrepreneurship," *Journal of Political Economy*, April, Vol. 112(2), 319-347.
- Jappelli, J. (1990), "Who is credit constrained in the U.S. economy?," *Quarterly Journal of Economics*, 105(1), February, 219-234.
- Kanbur, S.M.R. (1990), "Entrepreneurial risk taking, inequality, and public policy, an application of inequality decomposition analysis to the general equilibrium effects of progressive taxation," *Journal of Political Economy*, 90, 1-21.
- Kidd, M. (1993) "Immigrant wage differentials and the role of self-employment in Australia," *Australian Economic Papers*, 32, no.60, June, 92-115.
- Kihlstrom, R.E. and J. J. Laffont (1979), "A general equilibrium entrepreneurial theory of firm formation based on risk aversion," *Journal of Political Economy*, 87, 719-848.

Kuhn, P.J. and H. J. Schuetze (1998), "The dynamics of self-employment in Canada," working paper, McMaster University.

La Noue, G. (2006), "Remarks of George LaNoue" in Disparity Studies as Evidence of Discrimination in Federal Contracting, U.S. Commission on Civil Rights, Washington DC.

Ladd, H.F. (1998), "Evidence on discrimination in mortgage lending," Journal of Economic Perspectives, 12(2), Spring, 41-62.

LaFerrere, A. and P. McEntee (1995), "Self-employment and intergenerational transfers of physical and human capital, An empirical analysis of French data," Economic and Social Review 27 no.1, October, 43-54.

Lentz, B. F. and D. N. Laband (1990), "Entrepreneurial success and occupational inheritance among proprietors," Canadian Journal of Economics, 23, 563-579.

Lindh, T. and H. Ohlsson (1996), "Self-employment and windfall gains, Evidence from the Swedish lottery," Economic Journal, 106(439), November, 1515-1526.

Long, J. E., (1982), "The income tax and self-employment," National Tax Journal 35, March, 31-42.

Mach, T.L. and J.D. Wolken (2006). "Financial services used by small businesses: evidence from the 2003 Survey of Small Business Finances," Federal Reserve Bulletin, October 2006.

Maddala, G.S. (1983) Limited Dependent and Qualitative Variables in Econometrics, Cambridge, Cambridge University Press.

Maddala, G. S. and R. P. Trost (1994), "On measuring discrimination in loan markets," United Kingdom, Elgar, G.S. Maddala (ed.), Econometric Methods and Applications, 2, 267-290.

Meager, N. (1992), "Does unemployment lead to self-employment?," Small Business Economics, 4, 87-103.

Mora, M.T. and A. Dávila (2006), "Mexican immigrant self-employment along the U.S.-Mexico border: an analysis of 2000 Census data", Social Science Quarterly, 87(1), March.

Munnell, A. G., M. B. Tootell, L. E. Browne, and J. McEneaney (1996), "Mortgage lending in Boston, interpreting HMDA data," American Economic Review, March 1996, 86(1), 25-53.

Myrdal, G. (1944), An American dilemma, the negro problem and modern democracy, Volume 1, New York, Harper & Row.

NERA Economic Consulting (2011). The State of Minority- and Women-Owned Business Enterprise: Evidence from Maryland.

- Oaxaca, R. L. (1973), "Male-female wage differences in urban labor markets," International Economic Review, 14(3), October, 693-709.
- Olson, P.D., V. S. Zuiker and C.P. Montalto (2000), "Self-employed Hispanics and Hispanic wage earners: differences in earnings," Hispanic Journal of Behavioral Sciences, 22, 114-130.
- Parker, S. C. (2004), The Economics of Self-Employment and Entrepreneurship. Cambridge: Cambridge University Press.
- Pickles, A. R. A. R. and P. N. O'Farrell (1987), "An analysis of entrepreneurial behavior from male work histories," Regional Studies, 21, 425-444.
- Quinn, J. F. (1980), "Labor force participation patterns of older self-employed workers," Social Security Bulletin, 43, 17-28.
- Reardon, E. (1998), "Are the self-employed misfits or superstars?" working paper, Rand Corporation.
- Rees, H. and A. Shah (1986), "An empirical analysis of self-employment in the UK," Journal of Applied Econometrics, 1, 95-108.
- Robb, A. (2012). "Access to Capital among Young Firms, Minority-owned Firms, Women-owned Firms, and High-tech Firms," for SBA Office of Advocacy. April.
- Robb, A. (2010). "Beyond the Late, Lamented Survey of Small Business Finances," *Newsletter of the Association of Public Data Users*, 33, no. 2, March/April.
- Robles, B.J. and H. Cordero-Guzmán (2007), "Latino self-employment and entrepreneurship in the United States: an overview of the literature and data sources," The Annals of the American Academy of Political and Social Science, 613; 18-31.
- Robson, M. T. (1998a), "The rise in self-employment amongst UK males," Small Business Economics, 10, no.3, 199-212
- Robson, M. T. (1998b), "Self-employment in the UK regions," Applied Economics, 30, no.3, March, pp. 313-322.
- Schuetze, H.J. (1998), "Taxes, economic conditions and recent trends in male self-employment; a Canada-U.S. comparison," working paper, McMaster University, Hamilton, Ontario, Canada.
- Taylor, M. P. (1996), "Earnings, independence or unemployment; why become self-employed?" Oxford Bulletin of Economics and Statistics, 58, 2, 253-265.
- Taylor, P., R. Kochhar, R. Fry, G. Velasco, and S. Motel, (2011), "Twenty-to-One: Wealth Gaps Rise to Record Highs Between Whites, Blacks and Hispanics," Washington, DC: Pew Research Center.

Tootell, G. M. B. (1996), “Turning a critical eye on the critics,” Mortgage lending, racial discrimination and federal policy, edited by J. Goering and R. Wienk, Urban Institute Press, Washington, D.C.

U.S. Chamber of Commerce (2005), Access to capital, what funding sources work for you? U.S. Chamber of Commerce, Washington DC.

Yezer, M. J., R. F. Phillips, and R. P. Trost (1994), “Bias in estimates of discrimination and default in mortgage lending; the effects of simultaneity and self-selection,” Journal of Real Estate Finance and Economics, 9(3), 196-215.

Wainwright, J. (2012), Report of Defendant Intervenor’s Expert in Geyer Signal, Inc. and Kevin Kissell v. Minnesota Department of Transportation, Thomas K. Sorel in his capacity as the Minnesota Commissioner of Transportation, and Mary Prescott in her capacity as Acting Director of the Office of Civil Rights, United States District Court for the District of Minnesota, Case No. 0:11-cv-00321-JRT, December 30.

Wainwright, J. S. (2010), Report of Defendant’s Expert in Kevcon, Inc. v. The United States, No. 09 625C (United States Court of Federal Claims), April 29.

Wainwright, J. S. (2008), “Discrimination Facing Small Minority-Owned and Women-Owned Businesses in Commercial Credit Markets.” Testimony before the United States Senate, Committee on Small Business and Entrepreneurship, Hearing on “Business Start-up Hurdles in Underserved Communities: Access to Venture Capital and Entrepreneurship Training,” September 11.

Wainwright, J. S. (2000), “Racial discrimination and minority business enterprise, evidence from the 1990 Census,” Studies in Entrepreneurship Series. Edited by S. Bruchey. New York, Garland Publishing.

Wainwright, J. and C. Holt (2010), Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program, Transportation Research Board of the National Academies, NCHRP Report, Issue No. 644.

## Appendix I. Glossary

**Aggregation, aggregated:** Refers to the practice of combining smaller groups into larger groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for the “Construction” sector as a whole are more aggregated than separate statistics for “Building Construction,” “Heavy Construction,” and Special Trades Construction” industries. See also “Disaggregation, disaggregated.”

**Anecdotal evidence:** Qualitative data regarding business owners’ accounts of experiences with disparate treatment and other barriers to business success.

**Availability:** A term of art in disparity studies that refers to the percentage of a given population of businesses owned by one or more groups of interest. For example. *See also* Utilization, Disparity Ratio.

**Baseline Business Universe:** The underlying population of business establishments that is used in an availability analysis. The denominator in an M/WBE availability measure.

**Capacity:** This term has no single definition. See Chapter II for an extended discussion of this concept and its role in disparity studies.

**MSA:** Metropolitan Statistical Area. As defined by the federal Office of Management and Budget, contains at least one urbanized area that has a total population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

**Constitutional significance or substantive significance:** An indication of the how large or small a given disparity is. Under the EEOC’s “four-fifths” rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1 or 80 or less on a scale of 1 to 100.

**DBE:** Disadvantaged Business Enterprise. In this document, DBE is used interchangeably with MBE and M/WBE. See the discussion above at Chapter II, Section A. For the formal definition, governing participation in the federal program, *see* 49 CFR Part 26.5.

**Decennial:** Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2000. The next is currently underway as of this writing (in 2010).

**Demand-side:** Refers to activity on the demand-side of an economic market. For example, when State agencies hire contractors or vendors they are creating market demand. *See also* “Supply-side.”

**Dependent variable:** In a regression analysis, a variable whose value is postulated to be influenced by one or more other, “independent” or “exogenous” or “explanatory,” variables. For example, in business owner earnings regressions, business owner earnings is the dependent

variable, and other variables, such as industry, geographic location, or age are the explanatory variables. *See also* “Independent variable,” “Exogenous variable.”

**Disaggregation, disaggregated:** Refers to the practice of splitting larger groups into smaller groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for “Building Construction,” “Heavy Construction,” and Special Trades Construction” industries are more disaggregated than statistics for the “Construction” sector as a whole.

**Disparate impact:** A synonym for “disparity,” often used in the employment discrimination litigation context. A disparate impact occurs when a “good” outcome for a given group occurs significantly less often than expected given that group’s relative size, or when a “bad” outcome occurs significantly more often than expected.

**Disparity ratio:** A measure derived from dividing utilization by availability and multiplying the result by 100. A disparity ratio of less than 100 indicates that utilization is less than availability. A disparity ratio of 80 or less can be taken as evidence of disparate impact. *See also* Availability, Constitutional Significance, Utilization.

**Econometrics, econometrically:** Econometrics is the field of economics that concerns itself with the application of statistical inference to the empirical measurement of relationships postulated by economic theory. *See also* “Regression.”

**Endogenous variable:** A variable that is correlated with the residual in a regression analysis or equation. Endogenous variables should not be used in statistical tests for the presence of disparities. *See also* “Exogenous variable.”

**Exogenous variable:** A variable that is uncorrelated with the residual in a regression analysis or equation. Exogenous variables are appropriate for use in statistical tests for the presence of disparities. *See also* “Endogenous variable,” “Independent variable,” “Dependent variable.”

**SFY:** State Fiscal Year. Maryland’s State Fiscal Year runs from July 1 through June 30.

**First-tier subcontractors:** Subcontractors or suppliers hired directly by the prime contractor.

**Independent variable:** In a regression analysis, one or more variables that are postulated to influence or explain the value of another, “dependent” variable. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age are the independent or explanatory variables. *See also* “Dependent variable,” “Exogenous variable.”

**MBE:** Minority-Owned Business Enterprise. A business establishment that is 51 percent or more owned and controlled by racial or ethnic minorities (*i.e.* African Americans, Hispanics, Asians, or Native Americans).

**Mean:** A term of art in statistics, synonymous in this context with the arithmetic average. For example, the mean value of the series 1, 1, 2, 2, 2, 4, 5 is 2.43. This is derived by calculating the sum of all the values in the series (*i.e.* 17) and dividing that sum by the number of elements in the series (*i.e.* 7).

**Median:** A term of art in statistics, meaning the middle value of a series of numbers. For example, the median value of the series 1, 1, 2, 2, 2, 4, 5 is 2.

**Microdata or micro-level data:** Quantitative data rendered at the level of the individual person or business, as opposed to data rendered for groups or aggregates of individuals or businesses. For example, Dun and Bradstreet provides micro-level data on business establishments. The Census Bureau's *Survey of Business Owners*, provides grouped or aggregated data on businesses.

**Misclassification:** In the present context, this term refers to a situation when a listing or directory of minority-owned or women-owned firms has incorrectly classified a firm's race or gender status. For example, when a firm listed as Hispanic-owned is actually African American owned, or when a firm listed as White female-owned is actually White male-owned. *See also* "Nonclassification."

**M/WBE.** *See* MBE and WBE.

**NAICS:** North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superseded the Standard Industrial Classification (SIC) System in 1997. *See also* "SIC."

**Nonclassification:** In the present context, this term refers to a type of misclassification when a listing or directory has not identified firms as minority-owned or women-owned when, in fact, they are. *See* "Misclassification."

**PUMS:** Public Use Microdata Sample. Both the decennial census and the American Community Survey publish PUMS products.

**p-value:** A standard measure used to represent the level of statistical significance. It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or 5% indicates that the chance a given statistical difference is due purely to chance is 1-in-20. *See also* "Statistical Significance."

**Regression, multiple regression, multivariate regression:** A type of statistical analysis which examines the correlation between two variables ("regression") or three or more variables ("multiple regression" or "multivariate regression") in a mathematical model by determining the line of best fit through a series of data points. Econometric research typically employs regression analysis. *See also* "Econometrics."

**SBO:** The Census Bureau's *Survey of Business Owners* statistical data series. Part of the five-year *Economic Census* series.

**Set-aside, set-asides:** A contracting practice where certain contracts or classes of contracts are reserved for competitive bidding exclusively among a given subset of contractors, for example minority-owned and women-owned contractors.

**SIC:** Standard Industrial Classification System. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superseded by the North American Industry Classification System (NAICS). *See also* “NAICS.”

**Statistical significance:** A statistical outcome or result that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. *See also* “p-value.”

**Stratified:** In the present context, this refers to a statistical practice where random samples are drawn within different categories or “strata” such as time period, industry sector, or DBE status.

**Substantive significance or constitutional significance:** An indication of the how large or small a given disparity is. Under the EEOC’s “four-fifths” rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1.

**Supply-side:** Refers to activity on the supply-side of an economic market. For example, when new businesses are formed, other things equal, the supply of contractors to the market is increased. *See also* “Demand-side.”

**t-test, t-statistic, t-distribution:** Often employed in disparity studies to determine the statistical significance of a particular disparity statistic. A t-test is a statistical hypothesis test based on a test statistic whose sampling distribution is a t-distribution. Various t-tests, strictly speaking, are aimed at testing hypotheses about populations with normal probability distributions. However, statistical research has shown that t-tests often provide quite adequate results for non-normally distributed populations as well.

**Two-tailed (or two-sided) statistical test:** A “two-tailed” test means that one is testing the hypothesis that two values, say  $u$  (utilization) and  $a$  (availability), are equal against the alternate hypothesis that  $u$  is not equal to  $a$ . In contrast, a one-sided test means that you are testing the hypothesis that  $u$  and  $a$  are equal against the alternate hypothesis  $u$  is not equal to  $a$  in only one direction. That is, that it is either larger than  $a$  or smaller than  $a$ .

**Utilization:** A term of art in disparity studies that refers to the percentage of a given amount of contracting and/or procurement dollars that is awarded or paid to businesses owned by one or more groups of interest. *See also* Availability, Disparity Ratio.

**WBE:** Women-Owned Business Enterprise: A business establishment that is 51 percent or more owned and controlled by nonminority women. In this Study, unless otherwise indicated, WBE refers to nonminority women-owned firms.

## Appendix II. Master Directory Sources

### A. Entities with lists of M/W/DBE firms that were duplicative of previously collected lists

African American Business Association of Montgomery County  
 African American Chamber of Commerce of Montgomery County  
 Anne Arundel County Economic Development Corporation  
 Arlington County  
 Baltimore City Public School System  
 Baltimore County Dept of Economic Development  
 Baltimore County Office of Fair Practices and Community Affairs  
 Baltimore County Public Schools  
 Baltimore-Washington International Airport  
 Bowie State University  
 Cecil County  
 Charles County Economic Development Commission  
 City of Annapolis, Small and Minority Business Enterprise Development  
 City of Baltimore  
 Coppin State University  
 Dorchester County  
 Dulles International Airport  
 Frederick County – Office of Economic Development  
 Frostburg State University  
 Greater Baltimore Committee  
 Harford County  
 Howard County Government Administration Office  
 Maryland Aviation Administration  
 Maryland Department of Business and Economic Development  
 Maryland Department of General Services  
 Maryland Department of Labor, Licensing & Regulation  
 Maryland Department of Public Safety and Correctional Services  
 Maryland Dept of Budget and Management  
 Maryland Dept of Education  
 Maryland Dept of Human Resources  
 Maryland Dept of Information Technology (through DBM)  
 Maryland Dept of Juvenile Services  
 Maryland Dept of Mental Health and Hygiene  
 Maryland Environmental Service  
 Maryland Interagency Commission for Public School Construction  
 Maryland Mass Transit Administration-Baltimore  
 Maryland Minority Contractors Association, Inc.  
 Maryland Port Authority  
 Maryland Small Business Development Center – Frederick County

Maryland Small Business Development Center – Garrett County  
 Maryland Small Business Development Center – Central Region  
 Maryland Stadium Authority  
 Maryland State Highway  
 Maryland State Lottery Agency  
 Maryland State Police  
 Maryland Transit Administration  
 Maryland Transportation Authority  
 Maryland Vehicle Administration  
 MDOT – The Secretary’s Office  
 Minority Business Advocacy Council  
 Montgomery County  
 Montgomery County Minority Procurement Officer  
 Morgan State University  
 National Association of Women in Construction – Virginia – Central Virginia  
 National Association of Women in Construction – Virginia – Blue Ridge  
 National Association of Women in Construction – Virginia – Roanoke  
 National Association of Women in Construction – Virginia – Richmond  
 National Association of Women in Construction – Washington DC  
 National Association of Women in Construction – Maryland (chapter 135)  
 National Association of Women in Construction – Delaware (chapter 96)  
 Naval Air Systems Command  
 Prince George County Public Schools  
 Prince George’s County  
 Prince George’s County Minority Business Opportunity Commission  
 Queen Anne’s County – Department of Economic Development and Agriculture  
 Queen Anne’s County – Department of Business & Tourism  
 Salisbury State University  
 St. Mary’s County, MD  
 Towson University  
 University of Baltimore  
 University of Maryland Baltimore  
 University of Maryland Baltimore County  
 University of Maryland College Park  
 University of Maryland Eastern Shore  
 University of Maryland University College  
 Virginia Department of Transportation  
 Washington County  
 Washington Suburban Sanitary Commission  
 West Virginia Small Business Development Center  
 Women Presidents’ Educational Organization

## **B. Entities from which lists or directories were not available**

Allegany County  
 Allegany County Chamber of Commerce  
 Asian Pacific American Chamber of Commerce  
 Baltimore American Indian Center  
 Baltimore City Chamber of Commerce  
 Baltimore Development Corporation  
 Berkeley County  
 Berkeley County Chamber of Commerce  
 Brunswick MD Economic Development Commission  
 Calvert County Economic Development Corporation  
 Caroline County  
 Cecil County  
 Coalition of Korean American Organizations  
 DC Sports and Entertainment Commission  
 District of Columbia Public Schools  
 Downtown Frederick Partnership  
 Downtown Partnership of Baltimore  
 Economic Alliance of Greater Baltimore  
 Empower Baltimore  
 Entrepreneur Council of Frederick MD  
 Fiesta DC  
 Frederick County Chamber of Commerce  
 Harford County  
 Host Marriott  
 Howard County Chamber of Commerce  
 Japan-America Society  
 Jefferson County Chamber of Commerce  
 Jefferson County Development Authority  
 Kent County Chamber of Commerce  
 Kent County, MD  
 Maryland Commission for Women  
 Maryland Small Business Development Center – Capital Region Serving  
 Maryland Small Business Development Center – Northern Region  
 Maryland State Conference of NAACP Branches  
 Minority Business Enterprise Coalition  
 National Black Chamber of Commerce  
 Norfolk International Airport  
 Ocean City Chamber of Commerce  
 Prince George's County  
 Prince George's County Black Chamber of Commerce  
 Queen Anne's County Chamber of Commerce  
 Salisbury – Wicomico Economic Development  
 Small Business Resource Center (Baltimore)

Somerset County, MD  
 Southern Maryland Consortium of African American Community Organizations  
 St. Mary's County Chamber of Commerce  
 St. Mary's County Community Development Corporation Inc.  
 St. Mary's County, MD  
 Talbot Chamber of Commerce  
 Upper Shore Workforce Investment Board  
 Virginia Department of Transportation  
 Virginia State Conference of NAACP Branches  
 West Virginia Secretary of State  
 Wicomico County, MD  
 Women Business Owners of Montgomery County  
 Women's Business Network  
 Women's Transportation Seminar – National  
 Women's Transportation Seminar – Baltimore  
 Worcester County, MD  
 American Subcontractors Association of Baltimore  
 Annapolis & Anne Arundel Chamber of Commerce  
 Asian American Business Development Council  
 Baltimore Black Pages  
 Baltimore Gas & Energy Supplier Diversity Program  
 Baltimore Washington Corridor Chamber of Commerce  
 Black Chamber of Commerce of Anne Arundel County  
 Building Congress and Exchange of Metropolitan Baltimore  
 Calvert County Chamber of Commerce  
 Cecil County Chamber of Commerce  
 Charles County Business Network  
 Charles County Chamber of Commerce  
 Charles County Technology Council  
 Chesapeake Women's Network  
 City of Frederick Department of Economic Development  
 DC Department of Public Works  
 Dorchester County Chamber of Commerce  
 Frederick County – Fort Detrick Business Development Office  
 Garrett County Chamber of Commerce  
 Howard County  
 Jacob France Institute (University of Baltimore)  
 Maryland Chamber of Commerce  
 Maryland Hispanic Chamber of Commerce  
 Mid-Atlantic Hispanic Chamber of Commerce – District of Columbia  
 Mid-Atlantic Hispanic Chamber of Commerce – Bowie  
 Mid-Atlantic Hispanic Chamber of Commerce – Hyattsville  
 Mid-Atlantic Hispanic Chamber of Commerce – Gaithersburg/Rockville/Germantown  
 Mid-Atlantic Hispanic Chamber of Commerce – Frederick  
 Mid-Atlantic Hispanic Chamber of Commerce – Hagerstown/Washington City

Mid-Atlantic Hispanic Chamber of Commerce – Northern Virginia  
 Minority Business & Consumer Resource Directory  
 Montgomery County Chamber of Commerce  
 National Association of Minority Contractors (DC)  
 National Association of Women in Construction  
 Prince George’s Chamber of Commerce Small and Minority Business Committee  
 Richmond Metropolitan Business League  
 Talbot County, MD  
 UGI Electric  
 USAMRMC Office of Small Business Programs  
 West Virginia Small Business Development Center  
 City of Richmond Virginia  
 Concerned Black Women of Calvert County  
 DC Conference of NAACP Branches  
 Frederick County African American Chamber of Commerce  
 Governor’s Commission on Hispanic Affairs  
 Governor’s Commission on Indian Affairs  
 Greater Baltimore Black Chamber of Commerce  
 Hispanic Chamber of Commerce of Montgomery County  
 Korean American Association of the State of Maryland  
 Korean Business Enterprise Association  
 Korean MBE Association  
 Korean Society of Maryland  
 Maryland Alliance of Black Chambers of Commerce  
 Minority Building Industry Association  
 Prince George’s Hispanic/Latino Chamber of Commerce  
 Virginia Asian Chamber of Commerce  
 Virginia Hispanic Chamber of Commerce  
 West Virginia Dept of Commerce  
 Women Construction Owners and Executives  
 Allegany Trade/Business Association  
 Baltimore Hispanic Chamber of Commerce  
 Baltimore Orioles  
 Caribbean-American Chamber of Commerce and Industry for the Greater Washington Area  
 Network  
 Dominion Electric  
 Greater Washington Hispanic Chamber of Commerce  
 Maryland Small Business Development Center – Allegany County  
 Maryland Small Business Development Center – Washington County  
 Maryland Small Business Development Center – Southern Region  
 Maryland Small Business Development Center – Eastern Region  
 Maryland/DC Minority Supplier Development Council  
 National Association of Minority Contractors  
 National Association of Women Business Owners – Baltimore Regional  
 National Association of Women Business Owners – Greater DC

National Association of Women Business Owners – National Chapter  
Tri-State Minority Supplier Development Council  
Virginia Minority Supplier Development Council  
Women Business Owners of Prince George’s County  
Women Entrepreneurs of Baltimore  
Women’s Business Enterprise National Council  
Women’s Transportation Seminar

## Appendix III. Individual Modal Administration Tables

**Table 1.2.A. Distribution of SHA Prime Contracts and Purchase Orders by Procurement Category and Subcontracting Opportunities**

Procurement Category	In the Sample Universe		Total
	No	Yes	
CONSTRUCTION	26	543	569
	4.57	95.43	100.00
	3.70	29.85	22.57
AE-CRS	3	355	358
	0.84	99.16	100.00
	0.43	19.52	14.20
MAINTENANCE	180	761	941
	19.13	80.87	100.00
	25.64	41.84	37.33
IT	82	54	136
	60.29	39.71	100.00
	11.68	2.97	5.39
SERVICES	40	106	146
	27.40	72.60	100.00
	5.70	5.83	5.79
CSE	371	0	371
	100.00	0.00	100.00
	52.85	0.00	14.72
TOTAL	702	1,819	2,521
	27.85	72.15	100.00
	100.00	100.00	100.00

**Table 1.2.B. Distribution of MTA Prime Contracts and Purchase Orders by Procurement Category and Subcontracting Opportunities**

Procurement Category	In the Sample Universe		Total
	No	Yes	
CONSTRUCTION	2	50	53
	3.85	96.15	100.00
	0.21	17.79	4.24
AE-CRS	0	46	46
	0.00	100.00	100.00
	0.00	16.37	3.76
MAINTENANCE	32	67	99
	32.32	67.68	100.00
	3.39	23.84	8.08
IT	53	23	76
	69.74	30.26	100.00
	5.61	8.19	6.20
SERVICES	35	95	131
	26.92	73.08	100.00
	3.71	33.81	10.61
CSE	822	0	822
	100.00	0.00	100.00
	87.08	0.00	67.10
TOTAL	944	281	1,225
	77.06	22.94	100.00
	100.00	100.00	100.00

**Table 1.2.C. Distribution of MAA Prime Contracts and Purchase Orders by Procurement Category and Subcontracting Opportunities**

Procurement Category	In the Sample Universe		Total
	No	Yes	
CONSTRUCTION	3	64	67
	4.48	95.52	100.00
	1.20	27.83	13.99
AE-CRS	1	36	37
	2.70	97.30	100.00
	0.40	15.65	7.72
MAINTENANCE	10	54	64
	15.62	84.38	100.00
	4.02	23.48	13.36
IT	2	0	2
	100.00	0.00	100.00
	0.80	0.00	0.42
SERVICES	23	76	99
	23.23	76.77	100.00
	9.24	33.04	20.67
CSE	210	0	210
	100.00	0.00	100.00
	84.34	0.00	43.84
TOTAL	249	230	479
	51.98	48.02	100.00
	100.00	100.00	100.00

**Table 1.3.A. Summary of Master Contract/Subcontract Database: SHA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i>CONSTRUCTION</i>			2,798,100,819	1,444,270,830
<i>Prime Contracts</i>	176	167	1,585,339,129	784,472,360
<i>Subcontracts</i>	2,542	2,218	1,212,761,690	659,798,470
<i>AE-CRS</i>			584,695,286	193,895,924
<i>Prime Contracts</i>	146	142	380,070,407	139,829,236
<i>Subcontracts</i>	697	628	204,624,879	54,066,688
<i>MAINTENANCE</i>			218,437,685	145,589,903
<i>Prime Contracts</i>	124	112	179,954,606	110,566,184
<i>Subcontracts</i>	464	411	38,483,079	35,023,719
<i>IT</i>			56,994,821	25,175,125
<i>Prime Contracts</i>	15	14	44,481,655	18,865,647
<i>Subcontracts</i>	19	18	12,513,166	6,309,478
<i>SERVICES</i>			60,166,414	12,259,463
<i>Prime Contracts</i>	33	33	51,692,874	8,442,478
<i>Subcontracts</i>	94	94	8,473,540	3,816,985
<i>CSE</i>			4,599,560	4,599,560
<i>Prime Contracts</i>	3	3	4,599,560	4,599,560
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			3,722,994,585	1,825,790,805
<i>Prime Contracts</i>	497	471	2,246,138,231	1,066,775,465
<i>Subcontracts</i>	3,816	3,369	1,476,856,354	759,015,340

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.3.B. Summary of Master Contract/Subcontract Database: MTA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

<b>CONTRACT CATEGORY</b>	<b>NUMBER OF AWARDED CONTRACTS</b>	<b>NUMBER OF PAID CONTRACTS</b>	<b>DOLLARS AWARDED</b>	<b>DOLLARS PAID</b>
<i>CONSTRUCTION</i>			130,703,368	98,683,931
<i>Prime Contracts</i>	19	17	68,291,292	38,868,559
<i>Subcontracts</i>	207	171	62,412,076	59,815,372
<i>AE-CRS</i>			178,271,741	78,357,873
<i>Prime Contracts</i>	30	28	119,988,251	56,355,106
<i>Subcontracts</i>	229	212	58,283,490	22,002,767
<i>MAINTENANCE</i>			69,909,940	64,747,088
<i>Prime Contracts</i>	18	18	65,792,370	60,416,206
<i>Subcontracts</i>	13	13	4,117,570	4,330,882
<i>IT</i>			21,241,881	13,013,933
<i>Prime Contracts</i>	13	12	19,324,989	13,013,933
<i>Subcontracts</i>	18	0	1,916,892	0
<i>SERVICES</i>			514,970,126	335,334,741
<i>Prime Contracts</i>	53	51	462,822,303	314,822,837
<i>Subcontracts</i>	354	347	52,147,823	20,511,904
<i>CSE</i>			266,255,412	266,255,412
<i>Prime Contracts</i>	44	44	266,255,412	266,255,412
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			1,181,352,468	856,392,978
<i>Prime Contracts</i>	177	170	1,002,474,617	749,732,053
<i>Subcontracts</i>	821	743	178,877,851	106,660,925

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.3.C. Summary of Master Contract/Subcontract Database: MAA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

<b>CONTRACT CATEGORY</b>	<b>NUMBER OF AWARDED CONTRACTS</b>	<b>NUMBER OF PAID CONTRACTS</b>	<b>DOLLARS AWARDED</b>	<b>DOLLARS PAID</b>
<i>CONSTRUCTION</i>			146,627,925	137,940,405
<i>Prime Contracts</i>	18	18	80,151,868	75,361,700
<i>Subcontracts</i>	206	206	66,476,057	62,578,705
<i>AE-CRS</i>			116,216,425	62,058,726
<i>Prime Contracts</i>	24	23	88,156,504	47,259,635
<i>Subcontracts</i>	190	184	28,059,921	14,799,091
<i>MAINTENANCE</i>			155,678,879	93,139,873
<i>Prime Contracts</i>	18	15	127,006,428	72,133,585
<i>Subcontracts</i>	40	36	28,672,451	21,006,288
<i>IT</i>			0	0
<i>Prime Contracts</i>	0	0	0	0
<i>Subcontracts</i>	0	0	0	0
<i>SERVICES</i>			150,481,244	86,123,564
<i>Prime Contracts</i>	20	19	118,697,806	67,802,494
<i>Subcontracts</i>	39	33	31,783,438	18,321,070
<i>CSE</i>			22,281,691	22,281,691
<i>Prime Contracts</i>	15	15	22,281,691	22,281,691
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			591,286,164	401,544,259
<i>Prime Contracts</i>	95	90	436,294,297	284,839,105
<i>Subcontracts</i>	475	459	154,991,867	116,705,154

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.4.A. Summary of Master Contract/Subcontract Database: Federally-Assisted SHA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
<i>CONSTRUCTION</i>			2,496,792,072	1,154,485,707
<i>Prime Contracts</i>	120	112	1,428,961,587	641,059,090
<i>Subcontracts</i>	1,780	1,475	1,067,830,485	513,426,617
<i>AE-CRS</i>			573,453,575	186,338,177
<i>Prime Contracts</i>	141	138	373,290,029	134,618,685
<i>Subcontracts</i>	589	536	200,163,546	51,719,492
<i>MAINTENANCE</i>			126,834,343	78,177,334
<i>Prime Contracts</i>	43	35	110,623,796	61,641,615
<i>Subcontracts</i>	224	188	16,210,547	16,535,719
<i>IT</i>			22,420,445	16,667,231
<i>Prime Contracts</i>	4	4	11,345,915	11,613,736
<i>Subcontracts</i>	7	7	11,074,530	5,053,495
<i>SERVICES</i>			50,862,705	8,070,208
<i>Prime Contracts</i>	11	11	43,704,281	5,568,339
<i>Subcontracts</i>	84	84	7,158,424	2,501,869
<i>CSE</i>			0	0
<i>Prime Contracts</i>	0	0	0	0
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			3,270,363,140	1,443,738,657
<i>Prime Contracts</i>	319	300	1,967,925,608	854,501,465
<i>Subcontracts</i>	2,684	2,290	1,302,437,532	589,237,192

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.4.B. Summary of Master Contract/Subcontract Database: Federally-Assisted MTA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

<b>CONTRACT CATEGORY</b>	<b>NUMBER OF AWARDED CONTRACTS</b>	<b>NUMBER OF PAID CONTRACTS</b>	<b>DOLLARS AWARDED</b>	<b>DOLLARS PAID</b>
<i>CONSTRUCTION</i>			130,703,368	98,683,931
<i>Prime Contracts</i>	19	17	68,291,292	38,868,559
<i>Subcontracts</i>	207	171	62,412,076	59,815,372
<i>AE-CRS</i>			172,719,483	74,830,771
<i>Prime Contracts</i>	28	26	117,223,738	55,607,973
<i>Subcontracts</i>	200	183	55,495,745	19,222,798
<i>MAINTENANCE</i>			69,855,878	64,693,026
<i>Prime Contracts</i>	16	16	65,738,308	60,362,144
<i>Subcontracts</i>	13	13	4,117,570	4,330,882
<i>IT</i>			20,788,208	12,560,260
<i>Prime Contracts</i>	7	6	18,871,316	12,560,260
<i>Subcontracts</i>	18	0	1,916,892	0
<i>SERVICES</i>			514,486,907	334,947,018
<i>Prime Contracts</i>	44	42	462,508,772	314,528,960
<i>Subcontracts</i>	353	346	51,978,135	20,418,058
<i>CSE</i>			257,616,760	257,616,760
<i>Prime Contracts</i>	37	37	257,616,760	257,616,760
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			1,166,170,604	843,331,766
<i>Prime Contracts</i>	151	144	990,250,186	739,544,656
<i>Subcontracts</i>	791	713	175,920,418	103,787,110

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.4.C. Summary of Master Contract/Subcontract Database: Federally-Assisted MAA Prime Contracts and Subcontracts by Procurement Category, 2005-2009**

<b>CONTRACT CATEGORY</b>	<b>NUMBER OF AWARDED CONTRACTS</b>	<b>NUMBER OF PAID CONTRACTS</b>	<b>DOLLARS AWARDED</b>	<b>DOLLARS PAID</b>
<i>CONSTRUCTION</i>			54,020,779	51,732,495
<i>Prime Contracts</i>	3	3	34,451,792	33,270,189
<i>Subcontracts</i>	36	36	19,568,987	18,462,306
<i>AE-CRS</i>			78,307,424	36,309,909
<i>Prime Contracts</i>	12	12	59,545,255	27,608,975
<i>Subcontracts</i>	100	100	18,762,169	8,700,934
<i>MAINTENANCE</i>			0	0
<i>Prime Contracts</i>	0	0	0	0
<i>Subcontracts</i>	0	0	0	0
<i>IT</i>			0	0
<i>Prime Contracts</i>	0	0	0	0
<i>Subcontracts</i>	0	0	0	0
<i>SERVICES</i>			0	0
<i>Prime Contracts</i>	0	0	0	0
<i>Subcontracts</i>	0	0	0	0
<i>CSE</i>			8,841,892	8,841,892
<i>Prime Contracts</i>	4	4	8,841,892	8,841,892
<i>Subcontracts</i>	0	0	0	0
<i>GRAND TOTAL</i>			141,170,095	96,884,296
<i>Prime Contracts</i>	19	19	102,838,939	69,721,056
<i>Subcontracts</i>	136	136	38,331,156	27,163,240

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

**Table 1.5.A. Distribution of SHA Contracting and Procurement Dollars by Geographic Location**

<b>Location</b>	<b>Construc- tion (%)</b>	<b>AE-CRS (%)</b>	<b>Main- tenance (%)</b>	<b>IT (%)</b>	<b>Services (%)</b>	<b>CSE (%)</b>	<b>Overall (%)</b>
	<b>Awarded Dollars</b>						
Inside SHA Market Area	90.9	91.0	88.8	87.3	94.2	0.0	90.8
Outside SHA Market Area	9.1	9.0	11.2	12.7	5.8	0.0	9.2
Inside State of Maryland	84.2	88.9	84.4	77.4	91.3	67.4	84.9
Outside State of Maryland	15.8	11.1	15.6	22.6	8.7	32.6	15.1
	<b>Paid Dollars</b>						
Inside SHA Market Area	87.1	94.3	86.8	90.0	83.4	0.0	87.9
Outside SHA Market Area	12.9	5.7	13.2	10.0	16.6	0.0	12.1
Inside State of Maryland	81.4	92.8	85.0	73.1	73.1	67.4	82.7
Outside State of Maryland	18.6	7.2	15.0	26.9	26.9	32.6	17.3

Source: See Table 1.3.

**Table 1.5.B. Distribution of MTA Contracting and Procurement Dollars by Geographic Location**

<b>Location</b>	<b>Construc- tion (%)</b>	<b>AE-CRS (%)</b>	<b>Main- tenance (%)</b>	<b>IT (%)</b>	<b>Services (%)</b>	<b>CSE (%)</b>	<b>Overall (%)</b>
	<b>Awarded Dollars</b>						
Inside MTA Market Area	93.1	94.4	93.2	79.7	79.4	58.1	79.2
Outside MTA Market Area	6.9	5.6	6.8	20.3	20.6	41.9	20.8
Inside State of Maryland	93.0	92.1	73.6	79.7	78.3	58.1	77.2
Outside State of Maryland	7.0	7.9	26.4	20.3	21.7	41.9	22.8
	<b>Paid Dollars</b>						
Inside MTA Market Area	90.9	94.5	92.7	79.6	71.8	58.1	73.5
Outside MTA Market Area	9.1	5.5	7.3	20.4	28.2	41.9	26.5
Inside State of Maryland	90.8	92.2	71.5	79.6	71.0	58.1	71.4
Outside State of Maryland	9.2	7.8	28.5	20.4	29.0	41.9	28.6

Source: See Table 1.3.

**Table 1.5.C. Distribution of MAA Contracting and Procurement Dollars by Geographic Location**

<b>Location</b>	<b>Construc- tion (%)</b>	<b>AE-CRS (%)</b>	<b>Main- tenance (%)</b>	<b>IT (%)</b>	<b>Services (%)</b>	<b>CSE (%)</b>	<b>Overall (%)</b>
	<b>Awarded Dollars</b>						
Inside MAA Market Area	88.2	83.5	94.0	0.0	88.2	46.2	87.3
Outside MAA Market Area	11.8	16.5	6.0	0.0	11.8	53.8	12.7
Inside State of Maryland	87.7	77.2	80.9	0.0	84.6	46.2	81.5
Outside State of Maryland	12.3	22.8	19.1	0.0	15.4	53.8	18.5
	<b>Paid Dollars</b>						
Inside MAA Market Area	88.9	82.3	94.0	0.0	89.8	46.2	86.9
Outside MAA Market Area	11.1	17.7	6.0	0.0	10.2	53.8	13.1
Inside State of Maryland	88.4	76.0	75.0	0.0	86.2	46.2	80.5
Outside State of Maryland	11.6	24.0	25.0	0.0	13.8	53.8	19.5

Source: See Table 1.3.

**Table 1.6.A. Distribution of SHA Prime Contract and Subcontract Award Dollars by State and County, 2005-2009**

STATE	COUNTY	AMOUNT	PERCENT	CUMULATIVE PERCENT
MD	Montgomery	\$447,886,244	21.77	21.77
MD	Baltimore	\$366,471,349	17.81	39.58
MD	Baltimore City	\$338,040,964	16.43	56.01
MD	Howard	\$216,087,268	10.50	66.51
MD	Frederick	\$141,514,646	6.88	73.39
MD	Anne Arundel	\$107,424,681	5.22	78.61
MD	Prince George's	\$101,359,167	4.93	83.53
MD	Kent	\$53,869,402	2.62	86.15
MD	Carroll	\$41,342,476	2.01	88.16
MD	Wicomico	\$38,056,309	1.85	90.01
MD	Harford	\$31,115,331	1.51	91.52
VA	Fairfax	\$29,433,424	1.43	92.95
MD	Garrett	\$23,879,869	1.16	94.11
MD	Washington	\$15,679,916	0.76	94.88
DC	District of Columbia	\$14,508,056	0.71	95.58
DE	New Castle	\$12,141,421	0.59	96.17
MD	Allegany	\$11,696,949	0.57	96.74
VA	Prince William	\$11,604,218	0.56	97.30
VA	Falls Church City	\$8,725,777	0.42	97.73
VA	Loudoun	\$7,715,520	0.37	98.10
MD	Calvert	\$5,372,358	0.26	98.36
MD	Queen Anne's	\$5,017,776	0.24	98.61
DE	Kent	\$4,589,969	0.22	98.83
MD	Worcester	\$4,262,029	0.21	99.04
Balance (15 counties)		\$19,815,927	0.96	100.00

**Table 1.6.B. Distribution of MTA Prime Contract and Subcontract Award Dollars by State and County, 2005-2009**

STATE	COUNTY	AMOUNT	PERCENT	CUMULATIVE PERCENT
MD	Baltimore City	\$521,676,634	62.02	62.02
MD	Anne Arundel	\$107,380,175	12.77	74.79
MD	Baltimore	\$106,434,309	12.65	87.44
MD	Charles	\$26,446,430	3.14	90.58
MD	Howard	\$19,864,146	2.36	92.94
DC	District of Columbia	\$19,304,317	2.30	95.24
MD	Montgomery	\$15,567,205	1.85	97.09
MD	Frederick	\$6,692,097	0.80	97.89
MD	Prince Georges	\$3,547,746	0.42	98.31
MD	Allegany	\$3,235,565	0.38	98.69
DE	New Castle	\$1,957,793	0.23	98.93
MD	Carroll	\$1,910,810	0.23	99.15
Balance (18 counties)		\$7,128,359	0.85	100.00

**Table 1.6.C. Distribution of MAA Prime Contract and Subcontract Award Dollars by State and County, 2005-2009**

STATE	COUNTY	AMOUNT	PERCENT	CUMULATIVE PERCENT
MD	Baltimore City	\$158,286,310	32.16	32.16
MD	Anne Arundel	\$151,590,325	30.80	62.97
MD	Baltimore	\$74,936,117	15.23	78.20
MD	Prince Georges	\$32,625,310	6.63	84.83
MD	Howard	\$20,406,004	4.15	88.97
VA	Arlington	\$14,586,930	2.96	91.94
MD	Harford	\$12,625,322	2.57	94.50
DE	New Castle	\$9,040,734	1.84	96.34
VA	Prince William	\$5,322,804	1.08	97.42
MD	Montgomery	\$3,980,505	0.81	98.23
DC	District of Columbia	\$3,106,227	0.63	98.86
MD	Carroll	\$1,228,273	0.25	99.11
Balance (9 counties)		\$4,373,815	0.89	100.00

**Table 1.7.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
237	Heavy and Civil Engineering Construction	48.33	48.33
238	Specialty Trade Contractors	12.02	60.35
332	Fabricated Metal Product Manufacturing	10.24	70.59
236	Construction of Buildings	9.51	80.10
541	Professional, Scientific, and Technical Services	6.65	86.76
327	Nonmetallic Mineral Product Manufacturing	4.57	91.33
561	Administrative and Support Services	2.79	94.12
423	Merchant Wholesalers, Durable Goods	1.86	95.98
484	Truck Transportation	1.74	97.72
531	Real Estate	0.48	98.20
339	Miscellaneous Manufacturing	0.43	98.63
444	Building Material and Garden Equipment and Supplies Dealers	0.31	98.94
324	Petroleum and Coal Products Manufacturing	0.25	99.19
	Balance of industries (31 industry sub-sectors)	0.81	100.00
	<i>TOTAL - \$2,798,100,819</i>		

Source: See Table 1.3.

**Table 1.7.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
238	Specialty Trade Contractors	56.93	56.93
237	Heavy and Civil Engineering Construction	18.48	75.41
236	Construction of Buildings	13.62	89.03
811	Repair and Maintenance	2.87	91.90
541	Professional, Scientific, and Technical Services	2.85	94.74
334	Computer and Electronic Product Manufacturing	1.08	95.82
332	Fabricated Metal Product Manufacturing	1.06	96.88
423	Merchant Wholesalers, Durable Goods	0.81	97.69
561	Administrative and Support Services	0.64	98.33
327	Nonmetallic Mineral Product Manufacturing	0.49	98.82
336	Transportation Equipment Manufacturing	0.33	99.15
	Balance of industries (10 industry sub-sectors)	0.85	100.00
	<i>TOTAL - \$130,703,368</i>		

Source: See Table 1.3.

**Table 1.7.C. Distribution of MAA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction**

<b>NAICS Sub-sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
237	Heavy and Civil Engineering Construction	40.90	40.90
238	Specialty Trade Contractors	26.01	66.91
236	Construction of Buildings	15.19	82.10
518	Data Processing, Hosting and Related Services	7.22	89.33
541	Professional, Scientific, and Technical Services	2.79	92.12
423	Merchant Wholesalers, Durable Goods	1.42	93.54
327	Nonmetallic Mineral Product Manufacturing	1.35	94.89
484	Truck Transportation	1.09	95.98
561	Administrative and Support Services	1.02	97.00
811	Repair and Maintenance	0.83	97.84
488	Support Activities for Transportation	0.54	98.37
335	Electrical Equipment, Appliance, and Component Manufacturing	0.35	98.73
332	Fabricated Metal Product Manufacturing	0.33	99.06
	Balance of industries (6 industry sub-sectors)	0.94	100.00
	<i>TOTAL - \$146,627,925</i>		

Source: See Table 1.3.

**Table 1.8.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: AE-CRS**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
541	Professional, Scientific, and Technical Services	98.37	98.37
236	Construction of Buildings	0.42	98.80
561	Administrative and Support Services	0.26	99.05
	Balance of industries (25 industry sub-sectors)	0.95	100.00
	<i>TOTAL - \$584,695,286</i>		

Source: See Table 1.3.

**Table 1.8.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: AE-CRS**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
541	Professional, Scientific, and Technical Services	94.61	94.61
238	Specialty Trade Contractors	3.40	98.01
334	Computer and Electronic Product Manufacturing	1.60	99.61
	Balance of industries (12 industry sub-sectors)	0.39	100.00
	<i>TOTAL - \$178,271,741</i>		

Source: See Table 1.3.

**Table 1.8.C. Distribution of MAA Contract and Subcontract Dollars Awarded by Industry Sub-sector: AE-CRS**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
541	Professional, Scientific, and Technical Services	95.55	95.55
561	Administrative and Support Services	2.30	97.85
237	Heavy and Civil Engineering Construction	1.10	98.96
323	Printing and Related Support Activities	0.45	99.41
	Balance of industries (14 industry sub-sectors)	0.59	100.00
	<i>TOTAL - \$116,216,425</i>		

Source: See Table 1.3.

**Table 1.9.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Maintenance**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
238	Specialty Trade Contractors	34.08	34.08
237	Heavy and Civil Engineering Construction	31.51	65.59
561	Administrative and Support Services	8.25	73.84
236	Construction of Buildings	7.78	81.62
811	Repair and Maintenance	5.06	86.68
339	Miscellaneous Manufacturing	3.35	90.03
541	Professional, Scientific, and Technical Services	2.24	92.26
335	Electrical Equipment, Appliance, and Component Manufacturing	1.89	94.16
423	Merchant Wholesalers, Durable Goods	1.17	95.33
621	Ambulatory Health Care Services	1.15	96.48
334	Computer and Electronic Product Manufacturing	0.87	97.35
812	Personal and Laundry Services	0.51	97.86
327	Nonmetallic Mineral Product Manufacturing	0.50	98.35
484	Truck Transportation	0.39	98.75
115	Support Activities for Agriculture and Forestry	0.32	99.07
	Balance of industries (19 industry sub-sectors)	0.93	100.00
	<i>TOTAL - \$218,437,685</i>		

Source: See Table 1.3.

**Table 1.9.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Maintenance**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
485	Transit and Ground Passenger Transportation	34.67	34.67
811	Repair and Maintenance	20.50	55.17
336	Transportation Equipment Manufacturing	19.63	74.80
624	Social Assistance	9.81	84.60
238	Specialty Trade Contractors	6.04	90.64
334	Computer and Electronic Product Manufacturing	3.15	93.79
484	Truck Transportation	2.97	96.76
333	Machinery Manufacturing	1.20	97.96
482	Rail Transportation	0.71	98.67
561	Administrative and Support Services	0.65	99.32
	Balance of industries (6 industry sub-sectors)	0.68	100.00
	<i>TOTAL - \$69,909,940</i>		

Source: See Table 1.3.

**Table 1.9.C. Distribution of MAA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Maintenance**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
561	Administrative and Support Services	54.41	54.41
221	Utilities	7.73	62.14
541	Professional, Scientific, and Technical Services	7.07	69.21
238	Specialty Trade Contractors	5.57	74.78
237	Heavy and Civil Engineering Construction	5.54	80.32
236	Construction of Buildings	5.37	85.70
488	Support Activities for Transportation	5.10	90.79
562	Waste Management and Remediation Services	4.32	95.12
447	Gasoline Stations	1.75	96.87
484	Truck Transportation	1.69	98.56
423	Merchant Wholesalers, Durable Goods	0.64	99.19
	Balance of industries (4 industry sub-sectors)	0.81	100.00
	<i>TOTAL - \$155,678,879</i>		

Source: See Table 1.3.

**Table 1.10.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: IT**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
541	Professional, Scientific, and Technical Services	92.35	92.35
511	Publishing Industries (except Internet)	6.85	99.20
	Balance of industries (3 industry sub-sectors)	0.80	100.00
	<i>TOTAL - \$56,994,821</i>		

Source: See Table 1.3.

**Table 1.10.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: IT**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
541	Professional, Scientific, and Technical Services	70.50	70.50
334	Computer and Electronic Product Manufacturing	16.10	86.60
423	Merchant Wholesalers, Durable Goods	5.53	92.13
453	Miscellaneous Store Retailers	3.05	95.18
443	Electronics and Appliance Stores	1.83	97.02
482	Rail Transportation	0.74	97.75
335	Electrical Equipment, Appliance, and Component Manufacturing	0.71	98.46
561	Administrative and Support Services	0.54	99.00
	Balance of industries (4 industry sub-sectors)	1.00	100.00
	<i>TOTAL - \$21,241,881</i>		

Source: See Table 1.3.

**Table 1.11.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services**

<b>NAICS Sub-sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
561	Administrative and Support Services	65.02	65.02
541	Professional, Scientific, and Technical Services	28.53	93.55
624	Social Assistance	3.48	97.02
323	Printing and Related Support Activities	0.68	97.70
334	Computer and Electronic Product Manufacturing	0.42	98.12
481	Air Transportation	0.40	98.53
512	Motion Picture and Sound Recording Industries	0.30	98.82
812	Personal and Laundry Services	0.16	98.98
237	Heavy and Civil Engineering Construction	0.13	99.11
	Balance of industries (18 industry sub-sectors)	0.89	100.00
	<i>TOTAL - \$60,166,414</i>		

Source: See Table 1.3.

**Table 1.11.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
485	Transit and Ground Passenger Transportation	49.69	49.69
482	Rail Transportation	31.06	80.75
541	Professional, Scientific, and Technical Services	5.32	86.07
532	Rental and Leasing Services	2.84	88.91
423	Merchant Wholesalers, Durable Goods	1.86	90.77
522	Credit Intermediation and Related Activities	1.52	92.29
424	Merchant Wholesalers, Nondurable Goods	1.00	93.29
488	Support Activities for Transportation	0.91	94.20
238	Specialty Trade Contractors	0.87	95.07
721	Accommodation	0.76	95.83
561	Administrative and Support Services	0.73	96.56
453	Miscellaneous Store Retailers	0.60	97.15
524	Insurance Carriers and Related Activities	0.55	97.71
811	Repair and Maintenance	0.53	98.24
621	Ambulatory Health Care Services	0.30	98.54
221	Utilities	0.26	98.80
337	Furniture and Related Product Manufacturing	0.26	99.06
	Balance of industries (29 industry sub-sectors)	0.94	100.00
	<i>TOTAL - \$514,970,126</i>		

Source: See Table 1.3.

**Table 1.11.C. Distribution of MAA Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services**

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
485	Transit and Ground Passenger Transportation	85.29	85.29
541	Professional, Scientific, and Technical Services	12.52	97.82
236	Construction of Buildings	0.59	98.41
532	Rental and Leasing Services	0.41	98.82
447	Gasoline Stations	0.37	99.19
	Balance of industries (11 industry sub-sectors)	0.81	100.00
	<i>TOTAL - \$150,481,244</i>		

Source: See Table 1.3.

**Table 1.12.A. Distribution of SHA Contract and Subcontract Dollars Awarded by Industry Sub-sector: CSE**

NAICS Sub- sector	NAICS Description	Percentage	Cumulative Percentage
424	Merchant Wholesalers, Nondurable Goods	43.48	43.48
423	Merchant Wholesalers, Durable Goods	32.61	76.09
323	Printing and Related Support Activities	23.91	100.00
	<i>TOTAL - \$4,599,560</i>		

Source: See Table 1.3.

**Table 1.12.B. Distribution of MTA Contract and Subcontract Dollars Awarded by Industry Sub-sector: CSE**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
336	Transportation Equipment Manufacturing	82.30	82.30
441	Motor Vehicle and Parts Dealers	5.72	88.02
541	Professional, Scientific, and Technical Services	2.10	90.12
811	Repair and Maintenance	2.05	92.17
423	Merchant Wholesalers, Durable Goods	2.01	94.18
448	Clothing and Clothing Accessories Stores	1.91	96.09
331	Primary Metal Manufacturing	1.43	97.52
333	Machinery Manufacturing	0.75	98.27
532	Rental and Leasing Services	0.66	98.93
517	Telecommunications	0.32	99.26
	Balance of industries (3 industry sub-sectors)	0.74	100.00
	<i>TOTAL - \$266,255,412</i>		

Source: See Table 1.3.

**Table 1.12.C. Distribution of MAA Contract and Subcontract Dollars Awarded by Industry Sub-sector: CSE**

<b>NAICS Sub- sector</b>	<b>NAICS Description</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
334	Computer and Electronic Product Manufacturing	31.12	31.12
423	Merchant Wholesalers, Durable Goods	28.04	59.16
441	Motor Vehicle and Parts Dealers	11.54	70.71
325	Chemical Manufacturing	9.42	80.13
333	Machinery Manufacturing	5.98	86.11
332	Fabricated Metal Product Manufacturing	5.38	91.50
236	Construction of Buildings	3.29	94.78
481	Air Transportation	2.83	97.61
532	Rental and Leasing Services	2.39	100.00
<i>TOTAL - \$22,281,691</i>			

Source: See Table 1.3.

**Table 2.1.A. Construction—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2373	Highway, Street, and Bridge Construction	872	47.05	47.05
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	9.82	56.87
2362	Nonresidential Building Construction	3007	9.06	65.93
2381	Foundation, Structure, and Building Exterior Contractors	3794	6.47	72.40
5413	Architectural, Engineering, and Related Services	9207	6.00	78.40
3273	Cement and Concrete Product Manufacturing	247	4.52	82.92
2382	Building Equipment Contractors	9288	2.76	85.68
5614	Business Support Services	16807	2.12	87.80
2389	Other Specialty Trade Contractors	5383	1.80	89.60
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	1.45	91.05
2371	Utility System Construction	531	1.20	92.25
4842	Specialized Freight Trucking	855	1.12	93.36
2383	Building Finishing Contractors	5479	0.98	94.35
4841	General Freight Trucking	3643	0.62	94.97
5416	Management, Scientific, and Technical Consulting Services	30840	0.60	95.57
5312	Offices of Real Estate Agents and Brokers	10717	0.48	96.05
2361	Residential Building Construction	16765	0.46	96.51
5617	Services to Buildings and Dwellings	9843	0.45	96.95
3399	Other Miscellaneous Manufacturing	1083	0.43	97.38
3323	Architectural and Structural Metals Manufacturing	434	0.42	97.80
4442	Lawn and Garden Equipment and Supplies Stores	474	0.30	98.09
4233	Lumber and Other Construction Materials Merchant Wholesalers	1496	0.26	98.35
3241	Petroleum and Coal Products Manufacturing	102	0.25	98.60
1151	Support Activities for Crop Production	74	0.24	98.84
5612	Facilities Support Services	311	0.13	98.96
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.12	99.09
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2459	0.10	99.18
2123	Nonmetallic Mineral Mining and Quarrying	85	0.07	99.25
2372	Land Subdivision	1480	0.06	99.31
4889	Other Support Activities for Transportation	1164	0.05	99.36
5616	Investigation and Security Services	2115	0.05	99.41
5619	Other Support Services	1147	0.05	99.46
3351	Electric Lighting Equipment Manufacturing	21	0.04	99.50
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.04	99.53
4543	Direct Selling Establishments	308	0.03	99.57
5415	Computer Systems Design and Related Services	12903	0.03	99.60
3271	Clay Product and Refractory Manufacturing	12	0.03	99.62
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.03	99.65

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3279	Other Nonmetallic Mineral Product Manufacturing	76	0.02	99.68
5622	Waste Treatment and Disposal	300	0.02	99.70
2379	Other Heavy and Civil Engineering Construction	118	0.02	99.72
4471	Gasoline Stations	1925	0.02	99.74
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	201	0.02	99.76
3339	Other General Purpose Machinery Manufacturing	128	0.02	99.78
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.02	99.80
4539	Other Miscellaneous Store Retailers	3201	0.02	99.82
4441	Building Material and Supplies Dealers	1807	0.01	99.83
5418	Advertising, Public Relations, and Related Services	891	0.01	99.85
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	597	0.01	99.86
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	0.01	99.87
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.88
8111	Automotive Repair and Maintenance	3735	0.01	99.89
3329	Other Fabricated Metal Product Manufacturing	79	0.01	99.90
5322	Consumer Goods Rental	383	0.01	99.90
5613	Employment Services	2505	0.01	99.91
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.01	99.92
5419	Other Professional, Scientific, and Technical Services	3353	0.01	99.92
8139	Business, Professional, Labor, Political, and Similar Organizations	1733	0.01	99.93
3315	Foundries	4	0.01	99.93
4884	Support Activities for Road Transportation	853	0.01	99.94
6211	Offices of Physicians	15872	0.00	99.94
5179	Other Telecommunications	1387	0.00	99.95
5629	Remediation and Other Waste Management Services	307	0.00	99.95
3332	Industrial Machinery Manufacturing	37	0.00	99.96
5311	Lessors of Real Estate	852	0.00	99.96
3219	Other Wood Product Manufacturing	16	0.00	99.96
2211	Electric Power Generation, Transmission and Distribution	38	0.00	99.97
3353	Electrical Equipment Manufacturing	46	0.00	99.97
3372	Office Furniture (including Fixtures) Manufacturing	2	0.00	99.97
3149	Other Textile Product Mills	78	0.00	99.98
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.00	99.98
5321	Automotive Equipment Rental and Leasing	417	0.00	99.98
1119	Other Crop Farming	2303	0.00	99.98
3231	Printing and Related Support Activities	1206	0.00	99.98
4232	Furniture and Home Furnishing Merchant Wholesalers	398	0.00	99.99
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.00	99.99
8114	Personal and Household Goods Repair and Maintenance	3000	0.00	99.99
3326	Spring and Wire Product Manufacturing	31	0.00	99.99
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.00	99.99

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	127	0.00	99.99
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	99.99
5221	Depository Credit Intermediation	488	0.00	100.00
5171	Wired Telecommunications Carriers	124	0.00	100.00
2213	Water, Sewage and Other Systems	142	0.00	100.00
4422	Home Furnishings Stores	180	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	21	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	0.00	100.00
3335	Metalworking Machinery Manufacturing	29	0.00	100.00
5152	Cable and Other Subscription Programming	257	0.00	100.00
2212	Natural Gas Distribution	87	0.00	100.00
5621	Waste Collection	190	0.00	100.00
3261	Plastics Product Manufacturing	139	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	332	0.00	100.00
8129	Other Personal Services	9147	0.00	100.00
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	0.00	100.00
1114	Greenhouse, Nursery, and Floriculture Production	104	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	25	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	13	0.00	100.00
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	123	0.00	100.00

Source: See Table 2.1.

**Table 2.1.B. Construction—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2382	Building Equipment Contractors	9288	44.90	44.90
2373	Highway, Street, and Bridge Construction	872	17.65	62.55
2362	Nonresidential Building Construction	3007	12.57	75.12
2381	Foundation, Structure, and Building Exterior Contractors	5010	7.19	82.32
2389	Other Specialty Trade Contractors	5383	3.91	86.23
5413	Architectural, Engineering, and Related Services	9207	2.56	88.79
8111	Automotive Repair and Maintenance	940	1.54	90.33
8114	Personal and Household Goods Repair and Maintenance	1333	1.19	91.52
3344	Semiconductor and Other Electronic Component Manufacturing	202	1.08	92.60
2361	Residential Building Construction	12000	1.05	93.65
3323	Architectural and Structural Metals Manufacturing	218	0.93	94.57
2383	Building Finishing Contractors	5223	0.92	95.49
2371	Utility System Construction	420	0.83	96.32
3273	Cement and Concrete Product Manufacturing	246	0.49	96.81
5614	Business Support Services	16807	0.43	97.24
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.39	97.64
3365	Railroad Rolling Stock Manufacturing	13	0.33	97.97
4233	Lumber and Other Construction Materials Merchant Wholesalers	1288	0.27	98.24
3399	Other Miscellaneous Manufacturing	608	0.22	98.46
5416	Management, Scientific, and Technical Consulting Services	15824	0.19	98.65
5617	Services to Buildings and Dwellings	3782	0.16	98.82
3372	Office Furniture (including Fixtures) Manufacturing	24	0.15	98.96
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.13	99.10
4841	General Freight Trucking	2725	0.13	99.23
5311	Lessors of Real Estate	3726	0.12	99.35
3325	Hardware Manufacturing	35	0.12	99.47
5415	Computer Systems Design and Related Services	8643	0.10	99.57
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.08	99.65
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1249	0.07	99.71
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.06	99.78
2123	Nonmetallic Mineral Mining and Quarrying	27	0.05	99.83
4242	Drugs and Druggists' Sundries Merchant Wholesalers	312	0.05	99.88
5616	Investigation and Security Services	925	0.04	99.92
3241	Petroleum and Coal Products Manufacturing	57	0.04	99.95
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	0.01	99.97
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	238	0.01	99.98

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	0.01	99.99
5619	Other Support Services	1147	0.01	99.99
5419	Other Professional, Scientific, and Technical Services	662	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	89	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	13	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	100.00

Source: See Table 2.1.

**Table 2.1.C. Construction—Number of Businesses and Industry Weight, by NAICS Code (MAA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	872	38.46	38.46
2382	Building Equipment Contractors	9373	19.03	57.49
2362	Nonresidential Building Construction	3007	11.48	68.97
5182	Data Processing, Hosting, and Related Services	1340	7.22	76.19
2381	Foundation, Structure, and Building Exterior Contractors	4697	3.73	79.93
2361	Residential Building Construction	4365	3.71	83.64
2371	Utility System Construction	420	2.44	86.08
2389	Other Specialty Trade Contractors	5383	2.36	88.44
5413	Architectural, Engineering, and Related Services	7420	1.92	90.35
3273	Cement and Concrete Product Manufacturing	104	1.35	91.71
2383	Building Finishing Contractors	5515	0.89	92.59
5416	Management, Scientific, and Technical Consulting Services	15824	0.84	93.43
8112	Electronic and Precision Equipment Repair and Maintenance	691	0.83	94.26
4841	General Freight Trucking	2725	0.81	95.07
5619	Other Support Services	1147	0.67	95.74
4889	Other Support Activities for Transportation	1164	0.54	96.28
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.53	96.81
4233	Lumber and Other Construction Materials Merchant Wholesalers	1399	0.49	97.29
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	815	0.40	97.69
3351	Electric Lighting Equipment Manufacturing	21	0.35	98.05
3323	Architectural and Structural Metals Manufacturing	337	0.33	98.38
5629	Remediation and Other Waste Management Services	75	0.32	98.70
4842	Specialized Freight Trucking	336	0.28	98.98
5617	Services to Buildings and Dwellings	8129	0.26	99.25
2123	Nonmetallic Mineral Mining and Quarrying	10	0.21	99.46
4422	Home Furnishings Stores	792	0.17	99.62
4246	Chemical and Allied Products Merchant Wholesalers	282	0.10	99.72
3339	Other General Purpose Machinery Manufacturing	100	0.10	99.82
5616	Investigation and Security Services	925	0.09	99.91
4441	Building Material and Supplies Dealers	501	0.04	99.95
5414	Specialized Design Services	1717	0.04	99.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	597	0.01	99.99
4232	Furniture and Home Furnishing Merchant Wholesalers	499	0.00	99.99
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.00	100.00
8114	Personal and Household Goods Repair and Maintenance	1164	0.00	100.00
5614	Business Support Services	16807	0.00	100.00
5415	Computer Systems Design and Related Services	8643	0.00	100.00

Source: See Table 2.1.

**Table 2.2.A. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	9207	88.28	88.28
5416	Management, Scientific, and Technical Consulting Services	32871	7.85	96.13
5415	Computer Systems Design and Related Services	13366	0.95	97.09
5418	Advertising, Public Relations, and Related Services	2550	0.59	97.68
2362	Nonresidential Building Construction	385	0.42	98.10
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	4999	0.34	98.45
5411	Legal Services	14396	0.23	98.67
5614	Business Support Services	16807	0.21	98.89
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	21	0.17	99.06
5419	Other Professional, Scientific, and Technical Services	3353	0.10	99.16
8134	Civic and Social Organizations	4249	0.09	99.25
2382	Building Equipment Contractors	9288	0.08	99.34
5629	Remediation and Other Waste Management Services	349	0.07	99.41
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1611	0.07	99.47
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.07	99.54
2389	Other Specialty Trade Contractors	5383	0.07	99.61
2371	Utility System Construction	420	0.06	99.67
2381	Foundation, Structure, and Building Exterior Contractors	1015	0.04	99.71
2373	Highway, Street, and Bridge Construction	872	0.03	99.74
4532	Office Supplies, Stationery, and Gift Stores	386	0.03	99.78
5613	Employment Services	1184	0.03	99.80
4821	Rail Transportation	55	0.02	99.83
5417	Scientific Research and Development Services	1787	0.02	99.84
5611	Office Administrative Services	1035	0.02	99.86
5622	Waste Treatment and Disposal	300	0.02	99.88
4812	Nonscheduled Air Transportation	84	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.91
4841	General Freight Trucking	2725	0.01	99.92
5182	Data Processing, Hosting, and Related Services	1340	0.01	99.93
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.01	99.94
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	113	0.01	99.95
5322	Consumer Goods Rental	383	0.01	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.01	99.96
6117	Educational Support Services	812	0.01	99.97
2123	Nonmetallic Mineral Mining and Quarrying	34	0.00	99.97
4543	Direct Selling Establishments	205	0.00	99.98
3271	Clay Product and Refractory Manufacturing	12	0.00	99.98
2383	Building Finishing Contractors	3272	0.00	99.98
8111	Automotive Repair and Maintenance	940	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	11	0.00	99.99

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Estab-lishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	565	0.00	99.99
3273	Cement and Concrete Product Manufacturing	215	0.00	99.99
6215	Medical and Diagnostic Laboratories	539	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	893	0.00	100.00
5619	Other Support Services	1147	0.00	100.00
1151	Support Activities for Crop Production	74	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	612	0.00	100.00
2131	Support Activities for Mining	18	0.00	100.00
4854	School and Employee Bus Transportation	164	0.00	100.00
5612	Facilities Support Services	311	0.00	100.00
5617	Services to Buildings and Dwellings	3782	0.00	100.00
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.00	100.00
3399	Other Miscellaneous Manufacturing	9	0.00	100.00

Source: See Table 2.1.

**Table 2.2.B. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	9463	68.84	68.84
5416	Management, Scientific, and Technical Consulting Services	32677	19.21	88.05
5415	Computer Systems Design and Related Services	13207	5.06	93.11
2382	Building Equipment Contractors	3734	3.40	96.51
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	70	1.52	98.03
5418	Advertising, Public Relations, and Related Services	2166	1.08	99.11
5419	Other Professional, Scientific, and Technical Services	743	0.28	99.39
4885	Freight Transportation Arrangement	598	0.21	99.60
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.08	99.68
3341	Computer and Peripheral Equipment Manufacturing	123	0.07	99.75
5417	Scientific Research and Development Services	1781	0.06	99.81
5182	Data Processing, Hosting, and Related Services	1340	0.05	99.86
2371	Utility System Construction	420	0.05	99.92
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	858	0.03	99.95
5612	Facilities Support Services	311	0.02	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	1188	0.01	99.97
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.01	99.98
6211	Offices of Physicians	15872	0.01	99.99
3342	Communications Equipment Manufacturing	67	0.00	99.99
2389	Other Specialty Trade Contractors	1204	0.00	100.00
5616	Investigation and Security Services	925	0.00	100.00
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	328	0.00	100.00
4441	Building Material and Supplies Dealers	501	0.00	100.00
5322	Consumer Goods Rental	383	0.00	100.00
1151	Support Activities for Crop Production	74	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	11	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	893	0.00	100.00
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	815	0.00	100.00

Source: See Table 2.1.

**Table 2.2.C. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	7582	67.56	67.56
5416	Management, Scientific, and Technical Consulting Services	32533	22.98	90.55
5415	Computer Systems Design and Related Services	8947	4.50	95.05
5614	Business Support Services	16807	2.22	97.26
2371	Utility System Construction	420	0.96	98.22
3231	Printing and Related Support Activities	911	0.45	98.67
5418	Advertising, Public Relations, and Related Services	2166	0.34	99.01
8114	Personal and Household Goods Repair and Maintenance	1333	0.19	99.20
2373	Highway, Street, and Bridge Construction	872	0.15	99.34
5419	Other Professional, Scientific, and Technical Services	5005	0.12	99.47
4885	Freight Transportation Arrangement	598	0.09	99.56
5616	Investigation and Security Services	1444	0.09	99.64
4431	Electronics and Appliance Stores	1303	0.07	99.71
5313	Activities Related to Real Estate	800	0.05	99.76
2389	Other Specialty Trade Contractors	5383	0.05	99.81
6215	Medical and Diagnostic Laboratories	539	0.05	99.86
5112	Software Publishers	1070	0.04	99.90
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	237	0.04	99.94
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.02	99.96
5417	Scientific Research and Development Services	1787	0.02	99.98
1151	Support Activities for Crop Production	74	0.01	99.99
5322	Consumer Goods Rental	383	0.00	100.00
3342	Communications Equipment Manufacturing	67	0.00	100.00
7115	Independent Artists, Writers, and Performers	1269	0.00	100.00
6117	Educational Support Services	812	0.00	100.00

Source: See Table 2.1.

**Table 2.3.A. Maintenance—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2373	Highway, Street, and Bridge Construction	872	31.13	31.13
2382	Building Equipment Contractors	9373	21.83	52.96
2381	Foundation, Structure, and Building Exterior Contractors	1148	6.96	59.92
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	4.98	64.90
2362	Nonresidential Building Construction	3007	4.74	69.64
2383	Building Finishing Contractors	3272	4.50	74.14
5616	Investigation and Security Services	671	3.64	77.79
3399	Other Miscellaneous Manufacturing	614	3.35	81.13
2361	Residential Building Construction	16365	3.05	84.18
5617	Services to Buildings and Dwellings	10546	2.39	86.57
5613	Employment Services	2505	1.93	88.50
3351	Electric Lighting Equipment Manufacturing	51	1.89	90.39
5416	Management, Scientific, and Technical Consulting Services	30840	1.78	92.17
6212	Offices of Dentists	5627	1.14	93.31
2389	Other Specialty Trade Contractors	5383	0.78	94.09
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.59	94.69
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1533	0.56	95.25
8129	Other Personal Services	299	0.51	95.76
5413	Architectural, Engineering, and Related Services	7420	0.39	96.15
4841	General Freight Trucking	3639	0.38	96.53
3271	Clay Product and Refractory Manufacturing	12	0.37	96.90
4233	Lumber and Other Construction Materials Merchant Wholesalers	1399	0.36	97.26
1151	Support Activities for Crop Production	74	0.32	97.58
3342	Communications Equipment Manufacturing	90	0.27	97.85
5619	Other Support Services	1147	0.24	98.09
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1443	0.22	98.31
2371	Utility System Construction	531	0.21	98.52
2379	Other Heavy and Civil Engineering Construction	118	0.17	98.69
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.14	98.84
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	0.12	98.96
3273	Cement and Concrete Product Manufacturing	215	0.12	99.09
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.12	99.20
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	0.11	99.31
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.09	99.40
2123	Nonmetallic Mineral Mining and Quarrying	77	0.09	99.49
5622	Waste Treatment and Disposal	46	0.07	99.55

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4431	Electronics and Appliance Stores	1144	0.05	99.61
5614	Business Support Services	16807	0.05	99.66
5418	Advertising, Public Relations, and Related Services	151	0.05	99.70
8112	Electronic and Precision Equipment Repair and Maintenance	39	0.04	99.74
8111	Automotive Repair and Maintenance	4524	0.03	99.77
4921	Couriers and Express Delivery Services	249	0.02	99.79
5415	Computer Systems Design and Related Services	8643	0.02	99.81
4451	Grocery Stores	3432	0.02	99.83
3339	Other General Purpose Machinery Manufacturing	100	0.02	99.85
4842	Specialized Freight Trucking	336	0.02	99.86
4543	Direct Selling Establishments	560	0.02	99.88
4884	Support Activities for Road Transportation	853	0.01	99.89
4853	Taxi and Limousine Service	664	0.01	99.91
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.01	99.92
5322	Consumer Goods Rental	383	0.01	99.93
3323	Architectural and Structural Metals Manufacturing	84	0.01	99.94
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.01	99.95
5241	Insurance Carriers	250	0.01	99.96
6211	Offices of Physicians	15872	0.01	99.96
7211	Traveler Accommodation	2047	0.01	99.97
5629	Remediation and Other Waste Management Services	307	0.00	99.97
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	70	0.00	99.98
3353	Electrical Equipment Manufacturing	46	0.00	99.98
4441	Building Material and Supplies Dealers	501	0.00	99.98
5179	Other Telecommunications	782	0.00	99.99
8114	Personal and Household Goods Repair and Maintenance	1333	0.00	99.99
5321	Automotive Equipment Rental and Leasing	417	0.00	99.99
4539	Other Miscellaneous Store Retailers	3201	0.00	99.99
5323	General Rental Centers	14	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	16	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	25	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	100.00
5171	Wired Telecommunications Carriers	124	0.00	100.00
3279	Other Nonmetallic Mineral Product Manufacturing	14	0.00	100.00

Source: See Table 2.1.

**Table 2.3.B. Maintenance—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4851	Urban Transit Systems	150	34.67	34.67
8114	Personal and Household Goods Repair and Maintenance	1333	19.80	54.46
3365	Railroad Rolling Stock Manufacturing	13	19.63	74.10
6241	Individual and Family Services	589	9.81	83.90
2382	Building Equipment Contractors	9373	6.04	89.94
3342	Communications Equipment Manufacturing	253	3.15	93.09
4841	General Freight Trucking	2725	2.97	96.06
3339	Other General Purpose Machinery Manufacturing	30	1.20	97.26
4821	Rail Transportation	55	0.71	97.97
8111	Automotive Repair and Maintenance	3735	0.70	98.67
2373	Highway, Street, and Bridge Construction	872	0.38	99.05
5616	Investigation and Security Services	671	0.31	99.36
5619	Other Support Services	1147	0.15	99.51
4236	Electrical and Electronic Goods Merchant Wholesalers	619	0.15	99.66
5613	Employment Services	27	0.11	99.78
5617	Services to Buildings and Dwellings	3782	0.07	99.85
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	139	0.06	99.91
5171	Wired Telecommunications Carriers	124	0.04	99.95
5417	Scientific Research and Development Services	1781	0.04	99.99
2362	Nonresidential Building Construction	385	0.01	99.99
2123	Nonmetallic Mineral Mining and Quarrying	10	0.01	100.00

Source: See Table 2.1.

**Table 2.3.C. Maintenance—Number of Businesses and Industry Weight, by NAICS Code (MAA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5617	Services to Buildings and Dwellings	8834	49.15	49.15
2211	Electric Power Generation, Transmission and Distribution	4	7.73	56.89
2362	Nonresidential Building Construction	2622	5.37	62.26
5416	Management, Scientific, and Technical Consulting Services	16296	5.27	67.52
4881	Support Activities for Air Transportation	63	5.10	72.62
2373	Highway, Street, and Bridge Construction	872	5.05	77.67
5622	Waste Treatment and Disposal	46	4.17	81.84
2389	Other Specialty Trade Contractors	1204	3.26	85.10
5616	Investigation and Security Services	1336	2.70	87.80
5611	Office Administrative Services	1035	2.55	90.35
2382	Building Equipment Contractors	9288	2.23	92.58
4471	Gasoline Stations	1925	1.75	94.33
4841	General Freight Trucking	3639	1.69	96.02
5413	Architectural, Engineering, and Related Services	7312	1.28	97.30
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1249	0.64	97.94
5415	Computer Systems Design and Related Services	4260	0.53	98.47
2371	Utility System Construction	420	0.49	98.96
6243	Vocational Rehabilitation Services	783	0.32	99.27
8123	Drycleaning and Laundry Services	31	0.24	99.51
3259	Other Chemical Product and Preparation Manufacturing	89	0.22	99.73
5629	Remediation and Other Waste Management Services	274	0.15	99.89
2381	Foundation, Structure, and Building Exterior Contractors	1015	0.06	99.94
8111	Automotive Repair and Maintenance	3735	0.03	99.97
2383	Building Finishing Contractors	837	0.03	100.00

Source: See Table 2.1.

**Table 2.4.A. IT—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	13062	79.59	79.59
5416	Management, Scientific, and Technical Consulting Services	12354	10.72	90.31
5112	Software Publishers	1070	6.85	97.16
5413	Architectural, Engineering, and Related Services	7312	2.02	99.18
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	833	0.68	99.87
5614	Business Support Services	16807	0.11	99.98
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.02	100.00
2382	Building Equipment Contractors	3734	0.00	100.00

Source: See Table 2.1.

**Table 2.4.B. IT—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	5431	33.23	33.23
5416	Management, Scientific, and Technical Consulting Services	219	29.71	62.94
3342	Communications Equipment Manufacturing	253	15.58	78.52
5415	Computer Systems Design and Related Services	12903	7.56	86.08
4236	Electrical and Electronic Goods Merchant Wholesalers	569	4.68	90.75
4532	Office Supplies, Stationery, and Gift Stores	386	3.05	93.81
4431	Electronics and Appliance Stores	1303	1.83	95.64
4232	Furniture and Home Furnishing Merchant Wholesalers	398	0.85	96.50
4821	Rail Transportation	55	0.74	97.23
3353	Electrical Equipment Manufacturing	46	0.71	97.94
5613	Employment Services	1184	0.54	98.48
3341	Computer and Peripheral Equipment Manufacturing	94	0.52	99.00
5112	Software Publishers	1070	0.32	99.33
3333	Commercial and Service Industry Machinery Manufacturing	50	0.32	99.65
3323	Architectural and Structural Metals Manufacturing	317	0.26	99.91
4543	Direct Selling Establishments	457	0.09	100.00

Source: See Table 2.1.

**Table 2.5.A. Services—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5613	Employment Services	2505	65.01	65.01
5413	Architectural, Engineering, and Related Services	7326	10.88	75.90
5415	Computer Systems Design and Related Services	13207	7.23	83.12
5416	Management, Scientific, and Technical Consulting Services	18486	4.96	88.08
5418	Advertising, Public Relations, and Related Services	2367	3.73	91.82
6242	Community Food and Housing, and Emergency and Other Relief Services	15	3.32	95.14
5419	Other Professional, Scientific, and Technical Services	3057	1.61	96.75
3231	Printing and Related Support Activities	1478	0.68	97.43
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	239	0.42	97.85
4812	Nonscheduled Air Transportation	84	0.40	98.25
5121	Motion Picture and Video Industries	1644	0.22	98.48
8129	Other Personal Services	299	0.16	98.64
6243	Vocational Rehabilitation Services	783	0.15	98.79
2371	Utility System Construction	420	0.13	98.92
5411	Legal Services	14396	0.12	99.04
8139	Business, Professional, Labor, Political, and Similar Organizations	1733	0.10	99.14
5511	Management of Companies and Enterprises	1001	0.10	99.24
3399	Other Miscellaneous Manufacturing	608	0.10	99.34
5622	Waste Treatment and Disposal	122	0.08	99.42
3351	Electric Lighting Equipment Manufacturing	30	0.08	99.50
5122	Sound Recording Industries	419	0.07	99.57
3372	Office Furniture (including Fixtures) Manufacturing	53	0.07	99.64
2213	Water, Sewage and Other Systems	6	0.07	99.71
4431	Electronics and Appliance Stores	1144	0.06	99.77
5191	Other Information Services	621	0.05	99.82
7211	Traveler Accommodation	2047	0.05	99.86
7223	Special Food Services	960	0.05	99.91
5171	Wired Telecommunications Carriers	124	0.04	99.95
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.01	99.97
2389	Other Specialty Trade Contractors	4179	0.01	99.98
7111	Performing Arts Companies	680	0.01	99.98
5179	Other Telecommunications	1387	0.00	99.99
5615	Travel Arrangement and Reservation Services	1624	0.00	99.99
7115	Independent Artists, Writers, and Performers	1269	0.00	100.00
4921	Couriers and Express Delivery Services	249	0.00	100.00
4232	Furniture and Home Furnishing Merchant Wholesalers	499	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	100.00

Source: See Table 2.1.

**Table 2.5.B. Services—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4821	Rail Transportation	55	31.06	31.06
4859	Other Transit and Ground Passenger Transportation	361	17.88	48.94
4851	Urban Transit Systems	150	13.44	62.38
4855	Charter Bus Industry	143	12.43	74.81
4854	School and Employee Bus Transportation	164	5.13	79.94
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	240	2.81	82.75
5413	Architectural, Engineering, and Related Services	9164	2.79	85.54
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	1.83	87.37
5221	Depository Credit Intermediation	2782	1.52	88.89
5416	Management, Scientific, and Technical Consulting Services	33738	1.34	90.23
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.99	91.22
4885	Freight Transportation Arrangement	598	0.82	92.04
4853	Taxi and Limousine Service	370	0.81	92.85
2381	Foundation, Structure, and Building Exterior Contractors	2338	0.77	93.62
7211	Traveler Accommodation	2047	0.76	94.38
5415	Computer Systems Design and Related Services	12903	0.75	95.13
4532	Office Supplies, Stationery, and Gift Stores	2395	0.60	95.72
5242	Agencies, Brokerages, and Other Insurance Related Activities	5011	0.55	96.28
8111	Automotive Repair and Maintenance	5464	0.50	96.77
6213	Offices of Other Health Practitioners	1226	0.30	97.08
5418	Advertising, Public Relations, and Related Services	1775	0.30	97.38
5613	Employment Services	2505	0.29	97.67
5617	Services to Buildings and Dwellings	8129	0.28	97.95
2212	Natural Gas Distribution	87	0.26	98.21
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	57	0.26	98.47
3365	Railroad Rolling Stock Manufacturing	13	0.21	98.68
4543	Direct Selling Establishments	205	0.15	98.83
5616	Investigation and Security Services	925	0.13	98.96
2373	Highway, Street, and Bridge Construction	872	0.10	99.06
4889	Other Support Activities for Transportation	1164	0.09	99.15
3231	Printing and Related Support Activities	1411	0.08	99.23
2382	Building Equipment Contractors	9288	0.08	99.31
4921	Couriers and Express Delivery Services	249	0.07	99.37
3353	Electrical Equipment Manufacturing	95	0.06	99.44
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2441	0.06	99.49
5417	Scientific Research and Development Services	3568	0.05	99.55
5622	Waste Treatment and Disposal	168	0.03	99.58
5311	Lessors of Real Estate	3726	0.03	99.62
5322	Consumer Goods Rental	867	0.03	99.64
5419	Other Professional, Scientific, and Technical Services	1405	0.03	99.67

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5191	Other Information Services	191	0.03	99.70
2389	Other Specialty Trade Contractors	5383	0.02	99.72
4236	Electrical and Electronic Goods Merchant Wholesalers	1188	0.02	99.74
2362	Nonresidential Building Construction	2622	0.02	99.77
3271	Clay Product and Refractory Manufacturing	1	0.02	99.79
5614	Business Support Services	17099	0.02	99.81
3133	Textile and Fabric Finishing and Fabric Coating Mills	230	0.02	99.82
3399	Other Miscellaneous Manufacturing	640	0.02	99.84
8112	Electronic and Precision Equipment Repair and Maintenance	691	0.02	99.86
5111	Newspaper, Periodical, Book, and Directory Publishers	982	0.01	99.87
8114	Personal and Household Goods Repair and Maintenance	1164	0.01	99.89
8129	Other Personal Services	299	0.01	99.90
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.01	99.91
4842	Specialized Freight Trucking	406	0.01	99.92
4441	Building Material and Supplies Dealers	1684	0.01	99.94
4812	Nonscheduled Air Transportation	84	0.01	99.94
8123	Drycleaning and Laundry Services	31	0.01	99.95
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1249	0.01	99.96
3351	Electric Lighting Equipment Manufacturing	51	0.01	99.96
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	122	0.01	99.97
5414	Specialized Design Services	2202	0.00	99.97
5121	Motion Picture and Video Industries	1644	0.00	99.98
3359	Other Electrical Equipment and Component Manufacturing	14	0.00	99.98
4241	Paper and Paper Product Merchant Wholesalers	112	0.00	99.99
4431	Electronics and Appliance Stores	541	0.00	99.99
3323	Architectural and Structural Metals Manufacturing	33	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	99.99
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	269	0.00	99.99
5239	Other Financial Investment Activities	2194	0.00	100.00
5223	Activities Related to Credit Intermediation	166	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	89	0.00	100.00
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	69	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	7	0.00	100.00
3341	Computer and Peripheral Equipment Manufacturing	94	0.00	100.00
3219	Other Wood Product Manufacturing	161	0.00	100.00
2383	Building Finishing Contractors	837	0.00	100.00
8139	Business, Professional, Labor, Political, and Similar Organizations	1849	0.00	100.00
3315	Foundries	5	0.00	100.00

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4233	Lumber and Other Construction Materials Merchant Wholesalers	893	0.00	100.00
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	70	0.00	100.00
3339	Other General Purpose Machinery Manufacturing	100	0.00	100.00
3369	Other Transportation Equipment Manufacturing	15	0.00	100.00
5171	Wired Telecommunications Carriers	124	0.00	100.00
3326	Spring and Wire Product Manufacturing	3	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	1	0.00	100.00
4246	Chemical and Allied Products Merchant Wholesalers	282	0.00	100.00
3372	Office Furniture (including Fixtures) Manufacturing	2	0.00	100.00

Source: See Table 2.1.

**Table 2.5.C. Services—Number of Businesses and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4851	Urban Transit Systems	44	82.35	82.35
5418	Advertising, Public Relations, and Related Services	2166	7.85	90.21
4853	Taxi and Limousine Service	370	2.94	93.15
5416	Management, Scientific, and Technical Consulting Services	31059	2.27	95.41
5415	Computer Systems Design and Related Services	12903	1.75	97.16
2362	Nonresidential Building Construction	385	0.59	97.75
5413	Architectural, Engineering, and Related Services	7175	0.50	98.25
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	181	0.41	98.66
4471	Gasoline Stations	1925	0.37	99.03
6213	Offices of Other Health Practitioners	1302	0.31	99.35
5614	Business Support Services	16807	0.19	99.54
5417	Scientific Research and Development Services	1787	0.13	99.67
8111	Automotive Repair and Maintenance	3735	0.07	99.74
5121	Motion Picture and Video Industries	1644	0.06	99.80
8139	Business, Professional, Labor, Political, and Similar Organizations	1849	0.05	99.85
5171	Wired Telecommunications Carriers	124	0.04	99.89
6113	Colleges, Universities, and Professional Schools	1040	0.04	99.93
4539	Other Miscellaneous Store Retailers	3201	0.03	99.96
5414	Specialized Design Services	2265	0.02	99.99
5179	Other Telecommunications	1387	0.01	100.00
7111	Performing Arts Companies	401	0.00	100.00
3231	Printing and Related Support Activities	67	0.00	100.00
3399	Other Miscellaneous Manufacturing	608	0.00	100.00
5419	Other Professional, Scientific, and Technical Services	662	0.00	100.00

Source: See Table 2.1.

**Table 2.6.A. CSE—Number of Businesses and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4241	Paper and Paper Product Merchant Wholesalers	332	43.48	43.48
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	833	32.61	76.09
3231	Printing and Related Support Activities	911	23.91	100.00

Source: See Table 2.1.

**Table 2.6.B. CSE—Number of Businesses and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3362	Motor Vehicle Body and Trailer Manufacturing	19	46.58	46.58
3365	Railroad Rolling Stock Manufacturing	13	33.80	80.38
4411	Automobile Dealers	1267	5.72	86.10
8111	Automotive Repair and Maintenance	3735	2.05	88.15
4481	Clothing Stores	793	1.91	90.06
5413	Architectural, Engineering, and Related Services	5431	1.63	91.70
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	1.43	93.12
3369	Other Transportation Equipment Manufacturing	15	1.16	94.29
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	815	1.08	95.37
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	893	0.93	96.30
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	54	0.75	97.05
3363	Motor Vehicle Parts Manufacturing	67	0.75	97.80
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	181	0.66	98.46
5416	Management, Scientific, and Technical Consulting Services	219	0.47	98.93
5179	Other Telecommunications	1387	0.32	99.26
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	69	0.28	99.54
3231	Printing and Related Support Activities	911	0.26	99.81
3342	Communications Equipment Manufacturing	90	0.19	100.00

Source: See Table 2.1.

**Table 2.6.C. CSE—Number of Businesses and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3342	Communications Equipment Manufacturing	253	31.12	31.12
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1741	22.77	53.89
4413	Automotive Parts, Accessories, and Tire Stores	1051	11.54	65.44
3259	Other Chemical Product and Preparation Manufacturing	89	9.42	74.86
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	5.98	80.84
3329	Other Fabricated Metal Product Manufacturing	5	5.38	86.23
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	5.27	91.50
2362	Nonresidential Building Construction	2622	3.29	94.78
4811	Scheduled Air Transportation	85	2.83	97.61
5321	Automotive Equipment Rental and Leasing	413	2.39	100.00

Source: See Table 2.1.

**Table 2.7.A. Construction—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2373	Highway, Street, and Bridge Construction	135	47.05	47.05
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	9.82	56.87
2362	Nonresidential Building Construction	618	9.06	65.93
2381	Foundation, Structure, and Building Exterior Contractors	470	6.47	72.40
5413	Architectural, Engineering, and Related Services	1667	6.00	78.40
3273	Cement and Concrete Product Manufacturing	21	4.52	82.92
2382	Building Equipment Contractors	870	2.76	85.68
5614	Business Support Services	1989	2.12	87.80
2389	Other Specialty Trade Contractors	525	1.80	89.60
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	1.45	91.05
2371	Utility System Construction	68	1.20	92.25
4842	Specialized Freight Trucking	160	1.12	93.36
2383	Building Finishing Contractors	583	0.98	94.35
4841	General Freight Trucking	494	0.62	94.97
5416	Management, Scientific, and Technical Consulting Services	8380	0.60	95.57
5312	Offices of Real Estate Agents and Brokers	1138	0.48	96.05
2361	Residential Building Construction	1029	0.46	96.51
5617	Services to Buildings and Dwellings	1884	0.45	96.95
3399	Other Miscellaneous Manufacturing	226	0.43	97.38
3323	Architectural and Structural Metals Manufacturing	53	0.42	97.80
4442	Lawn and Garden Equipment and Supplies Stores	69	0.30	98.09
4233	Lumber and Other Construction Materials Merchant Wholesalers	127	0.26	98.35
3241	Petroleum and Coal Products Manufacturing	10	0.25	98.60
1151	Support Activities for Crop Production	13	0.24	98.84
5612	Facilities Support Services	118	0.13	98.96
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.12	99.09
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	279	0.10	99.18
2123	Nonmetallic Mineral Mining and Quarrying	7	0.07	99.25
2372	Land Subdivision	62	0.06	99.31
4889	Other Support Activities for Transportation	118	0.05	99.36
5616	Investigation and Security Services	428	0.05	99.41
5619	Other Support Services	269	0.05	99.46
3351	Electric Lighting Equipment Manufacturing	5	0.04	99.50
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.04	99.53
4543	Direct Selling Establishments	25	0.03	99.57
5415	Computer Systems Design and Related Services	4564	0.03	99.60
3271	Clay Product and Refractory Manufacturing	3	0.03	99.62
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.03	99.65

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3279	Other Nonmetallic Mineral Product Manufacturing	12	0.02	99.68
5622	Waste Treatment and Disposal	41	0.02	99.70
2379	Other Heavy and Civil Engineering Construction	25	0.02	99.72
4471	Gasoline Stations	138	0.02	99.74
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	29	0.02	99.76
3339	Other General Purpose Machinery Manufacturing	9	0.02	99.78
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.02	99.80
4539	Other Miscellaneous Store Retailers	393	0.02	99.82
4441	Building Material and Supplies Dealers	154	0.01	99.83
5418	Advertising, Public Relations, and Related Services	227	0.01	99.85
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	61	0.01	99.86
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	0.01	99.87
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.88
8111	Automotive Repair and Maintenance	191	0.01	99.89
3329	Other Fabricated Metal Product Manufacturing	9	0.01	99.90
5322	Consumer Goods Rental	46	0.01	99.90
5613	Employment Services	706	0.01	99.91
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.01	99.92
5419	Other Professional, Scientific, and Technical Services	398	0.01	99.92
8139	Business, Professional, Labor, Political, and Similar Organizations	12	0.01	99.93
3315	Foundries	0	0.01	99.93
4884	Support Activities for Road Transportation	63	0.01	99.94
6211	Offices of Physicians	1232	0.00	99.94
5179	Other Telecommunications	154	0.00	99.95
5629	Remediation and Other Waste Management Services	35	0.00	99.95
3332	Industrial Machinery Manufacturing	3	0.00	99.96
5311	Lessors of Real Estate	92	0.00	99.96
3219	Other Wood Product Manufacturing	2	0.00	99.96
2211	Electric Power Generation, Transmission and Distribution	0	0.00	99.97
3353	Electrical Equipment Manufacturing	6	0.00	99.97
3372	Office Furniture (including Fixtures) Manufacturing	0	0.00	99.97
3149	Other Textile Product Mills	22	0.00	99.98
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.00	99.98
5321	Automotive Equipment Rental and Leasing	11	0.00	99.98
1119	Other Crop Farming	76	0.00	99.98
3231	Printing and Related Support Activities	228	0.00	99.98
4232	Furniture and Home Furnishing Merchant Wholesalers	77	0.00	99.99
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.00	99.99
8114	Personal and Household Goods Repair and Maintenance	322	0.00	99.99
3326	Spring and Wire Product Manufacturing	3	0.00	99.99
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.00	99.99

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	20	0.00	99.99
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	99.99
5221	Depository Credit Intermediation	0	0.00	100.00
5171	Wired Telecommunications Carriers	14	0.00	100.00
2213	Water, Sewage and Other Systems	5	0.00	100.00
4422	Home Furnishings Stores	51	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	5	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.00	100.00
3335	Metalworking Machinery Manufacturing	6	0.00	100.00
5152	Cable and Other Subscription Programming	13	0.00	100.00
2212	Natural Gas Distribution	4	0.00	100.00
5621	Waste Collection	33	0.00	100.00
3261	Plastics Product Manufacturing	15	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	114	0.00	100.00
8129	Other Personal Services	1430	0.00	100.00
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	0.00	100.00
1114	Greenhouse, Nursery, and Floriculture Production	17	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	2	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	2	0.00	100.00
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	6	0.00	100.00

Source: See Table 2.1.

**Table 2.7.B. Construction—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2382	Building Equipment Contractors	870	44.90	44.90
2373	Highway, Street, and Bridge Construction	135	17.65	62.55
2362	Nonresidential Building Construction	618	12.57	75.12
2381	Foundation, Structure, and Building Exterior Contractors	553	7.19	82.32
2389	Other Specialty Trade Contractors	525	3.91	86.23
5413	Architectural, Engineering, and Related Services	1667	2.56	88.79
8111	Automotive Repair and Maintenance	70	1.54	90.33
8114	Personal and Household Goods Repair and Maintenance	181	1.19	91.52
3344	Semiconductor and Other Electronic Component Manufacturing	27	1.08	92.60
2361	Residential Building Construction	704	1.05	93.65
3323	Architectural and Structural Metals Manufacturing	24	0.93	94.57
2383	Building Finishing Contractors	572	0.92	95.49
2371	Utility System Construction	46	0.83	96.32
3273	Cement and Concrete Product Manufacturing	21	0.49	96.81
5614	Business Support Services	1989	0.43	97.24
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.39	97.64
3365	Railroad Rolling Stock Manufacturing	3	0.33	97.97
4233	Lumber and Other Construction Materials Merchant Wholesalers	107	0.27	98.24
3399	Other Miscellaneous Manufacturing	133	0.22	98.46
5416	Management, Scientific, and Technical Consulting Services	4495	0.19	98.65
5617	Services to Buildings and Dwellings	307	0.16	98.82
3372	Office Furniture (including Fixtures) Manufacturing	12	0.15	98.96
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.13	99.10
4841	General Freight Trucking	357	0.13	99.23
5311	Lessors of Real Estate	130	0.12	99.35
3325	Hardware Manufacturing	2	0.12	99.47
5415	Computer Systems Design and Related Services	3210	0.10	99.57
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.08	99.65
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	143	0.07	99.71
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.06	99.78
2123	Nonmetallic Mineral Mining and Quarrying	1	0.05	99.83
4242	Drugs and Druggists' Sundries Merchant Wholesalers	65	0.05	99.88
5616	Investigation and Security Services	194	0.04	99.92
3241	Petroleum and Coal Products Manufacturing	4	0.04	99.95
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	0.01	99.97
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	50	0.01	99.98

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	0.01	99.99
5619	Other Support Services	269	0.01	99.99
5419	Other Professional, Scientific, and Technical Services	121	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	14	0.00	100.00
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	2	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	100.00

Source: See Table 2.1.

**Table 2.7.C. Construction—Number of Listed DBEs and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2373	Highway, Street, and Bridge Construction	135	38.46	38.46
2382	Building Equipment Contractors	885	19.03	57.49
2362	Nonresidential Building Construction	618	11.48	68.97
5182	Data Processing, Hosting, and Related Services	379	7.22	76.19
2381	Foundation, Structure, and Building Exterior Contractors	520	3.73	79.93
2361	Residential Building Construction	289	3.71	83.64
2371	Utility System Construction	46	2.44	86.08
2389	Other Specialty Trade Contractors	525	2.36	88.44
5413	Architectural, Engineering, and Related Services	1336	1.92	90.35
3273	Cement and Concrete Product Manufacturing	4	1.35	91.71
2383	Building Finishing Contractors	584	0.89	92.59
5416	Management, Scientific, and Technical Consulting Services	4495	0.84	93.43
8112	Electronic and Precision Equipment Repair and Maintenance	67	0.83	94.26
4841	General Freight Trucking	357	0.81	95.07
5619	Other Support Services	269	0.67	95.74
4889	Other Support Activities for Transportation	118	0.54	96.28
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.53	96.81
4233	Lumber and Other Construction Materials Merchant Wholesalers	122	0.49	97.29
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	90	0.40	97.69
3351	Electric Lighting Equipment Manufacturing	5	0.35	98.05
3323	Architectural and Structural Metals Manufacturing	40	0.33	98.38
5629	Remediation and Other Waste Management Services	24	0.32	98.70
4842	Specialized Freight Trucking	79	0.28	98.98
5617	Services to Buildings and Dwellings	1646	0.26	99.25
2123	Nonmetallic Mineral Mining and Quarrying	0	0.21	99.46
4422	Home Furnishings Stores	168	0.17	99.62
4246	Chemical and Allied Products Merchant Wholesalers	36	0.10	99.72
3339	Other General Purpose Machinery Manufacturing	8	0.10	99.82
5616	Investigation and Security Services	194	0.09	99.91
4441	Building Material and Supplies Dealers	33	0.04	99.95
5414	Specialized Design Services	811	0.04	99.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	61	0.01	99.99
4232	Furniture and Home Furnishing Merchant Wholesalers	72	0.00	99.99
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.00	100.00
8114	Personal and Household Goods Repair and Maintenance	73	0.00	100.00
5614	Business Support Services	1989	0.00	100.00
5415	Computer Systems Design and Related Services	3210	0.00	100.00

Source: See Table 2.1.

**Table 2.8.A. AE-CRS—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	1667	88.28	88.28
5416	Management, Scientific, and Technical Consulting Services	8825	7.85	96.13
5415	Computer Systems Design and Related Services	4737	0.95	97.09
5418	Advertising, Public Relations, and Related Services	665	0.59	97.68
2362	Nonresidential Building Construction	54	0.42	98.10
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	922	0.34	98.45
5411	Legal Services	1078	0.23	98.67
5614	Business Support Services	1989	0.21	98.89
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	2	0.17	99.06
5419	Other Professional, Scientific, and Technical Services	398	0.10	99.16
8134	Civic and Social Organizations	26	0.09	99.25
2382	Building Equipment Contractors	870	0.08	99.34
5629	Remediation and Other Waste Management Services	50	0.07	99.41
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	169	0.07	99.47
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.07	99.54
2389	Other Specialty Trade Contractors	525	0.07	99.61
2371	Utility System Construction	46	0.06	99.67
2381	Foundation, Structure, and Building Exterior Contractors	144	0.04	99.71
2373	Highway, Street, and Bridge Construction	135	0.03	99.74
4532	Office Supplies, Stationery, and Gift Stores	93	0.03	99.78
5613	Employment Services	286	0.03	99.80
4821	Rail Transportation	1	0.02	99.83
5417	Scientific Research and Development Services	347	0.02	99.84
5611	Office Administrative Services	180	0.02	99.86
5622	Waste Treatment and Disposal	41	0.02	99.88
4812	Nonscheduled Air Transportation	7	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.91
4841	General Freight Trucking	357	0.01	99.92
5182	Data Processing, Hosting, and Related Services	379	0.01	99.93
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.01	99.94
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	0.01	99.95
5322	Consumer Goods Rental	46	0.01	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.01	99.96
6117	Educational Support Services	291	0.01	99.97
2123	Nonmetallic Mineral Mining and Quarrying	1	0.00	99.97
4543	Direct Selling Establishments	19	0.00	99.98
3271	Clay Product and Refractory Manufacturing	3	0.00	99.98
2383	Building Finishing Contractors	354	0.00	99.98
8111	Automotive Repair and Maintenance	70	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	0	0.00	99.99

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	39	0.00	99.99
3273	Cement and Concrete Product Manufacturing	18	0.00	99.99
6215	Medical and Diagnostic Laboratories	59	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	66	0.00	100.00
5619	Other Support Services	269	0.00	100.00
1151	Support Activities for Crop Production	13	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	92	0.00	100.00
2131	Support Activities for Mining	2	0.00	100.00
4854	School and Employee Bus Transportation	42	0.00	100.00
5612	Facilities Support Services	118	0.00	100.00
5617	Services to Buildings and Dwellings	307	0.00	100.00
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.00	100.00
3399	Other Miscellaneous Manufacturing	4	0.00	100.00

Source: See Table 2.1.

**Table 2.8.B. AE-CRS—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5413	Architectural, Engineering, and Related Services	1683	68.84	68.84
5416	Management, Scientific, and Technical Consulting Services	8798	19.21	88.05
5415	Computer Systems Design and Related Services	4683	5.06	93.11
2382	Building Equipment Contractors	451	3.40	96.51
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	1.52	98.03
5418	Advertising, Public Relations, and Related Services	551	1.08	99.11
5419	Other Professional, Scientific, and Technical Services	201	0.28	99.39
4885	Freight Transportation Arrangement	106	0.21	99.60
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.08	99.68
3341	Computer and Peripheral Equipment Manufacturing	29	0.07	99.75
5417	Scientific Research and Development Services	322	0.06	99.81
5182	Data Processing, Hosting, and Related Services	379	0.05	99.86
2371	Utility System Construction	46	0.05	99.92
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	216	0.03	99.95
5612	Facilities Support Services	118	0.02	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.01	99.97
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.01	99.98
6211	Offices of Physicians	1232	0.01	99.99
3342	Communications Equipment Manufacturing	7	0.00	99.99
2389	Other Specialty Trade Contractors	130	0.00	100.00
5616	Investigation and Security Services	194	0.00	100.00
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	26	0.00	100.00
4441	Building Material and Supplies Dealers	33	0.00	100.00
5322	Consumer Goods Rental	46	0.00	100.00
1151	Support Activities for Crop Production	13	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	0	0.00	100.00
4233	Lumber and Other Construction Materials Merchant Wholesalers	66	0.00	100.00
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	90	0.00	100.00

Source: See Table 2.1.

**Table 2.8.C. AE-CRS—Number of Listed DBEs and Industry Weight, by NAICS Code (MAA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5413	Architectural, Engineering, and Related Services	1461	67.56	67.56
5416	Management, Scientific, and Technical Consulting Services	8936	22.98	90.55
5415	Computer Systems Design and Related Services	3329	4.50	95.05
5614	Business Support Services	1989	2.22	97.26
2371	Utility System Construction	46	0.96	98.22
3231	Printing and Related Support Activities	171	0.45	98.67
5418	Advertising, Public Relations, and Related Services	551	0.34	99.01
8114	Personal and Household Goods Repair and Maintenance	181	0.19	99.20
2373	Highway, Street, and Bridge Construction	135	0.15	99.34
5419	Other Professional, Scientific, and Technical Services	629	0.12	99.47
4885	Freight Transportation Arrangement	106	0.09	99.56
5616	Investigation and Security Services	291	0.09	99.64
4431	Electronics and Appliance Stores	197	0.07	99.71
5313	Activities Related to Real Estate	102	0.05	99.76
2389	Other Specialty Trade Contractors	525	0.05	99.81
6215	Medical and Diagnostic Laboratories	59	0.05	99.86
5112	Software Publishers	166	0.04	99.90
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	13	0.04	99.94
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.02	99.96
5417	Scientific Research and Development Services	347	0.02	99.98
1151	Support Activities for Crop Production	13	0.01	99.99
5322	Consumer Goods Rental	46	0.00	100.00
3342	Communications Equipment Manufacturing	7	0.00	100.00
7115	Independent Artists, Writers, and Performers	518	0.00	100.00
6117	Educational Support Services	291	0.00	100.00

Source: See Table 2.1.

**Table 2.9.A. Maintenance—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2373	Highway, Street, and Bridge Construction	135	31.13	31.13
2382	Building Equipment Contractors	885	21.83	52.96
2381	Foundation, Structure, and Building Exterior Contractors	171	6.96	59.92
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	4.98	64.90
2362	Nonresidential Building Construction	618	4.74	69.64
2383	Building Finishing Contractors	354	4.50	74.14
5616	Investigation and Security Services	137	3.64	77.79
3399	Other Miscellaneous Manufacturing	134	3.35	81.13
2361	Residential Building Construction	993	3.05	84.18
5617	Services to Buildings and Dwellings	1949	2.39	86.57
5613	Employment Services	706	1.93	88.50
3351	Electric Lighting Equipment Manufacturing	11	1.89	90.39
5416	Management, Scientific, and Technical Consulting Services	8380	1.78	92.17
6212	Offices of Dentists	488	1.14	93.31
2389	Other Specialty Trade Contractors	525	0.78	94.09
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.59	94.69
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	155	0.56	95.25
8129	Other Personal Services	48	0.51	95.76
5413	Architectural, Engineering, and Related Services	1336	0.39	96.15
4841	General Freight Trucking	494	0.38	96.53
3271	Clay Product and Refractory Manufacturing	3	0.37	96.90
4233	Lumber and Other Construction Materials Merchant Wholesalers	122	0.36	97.26
1151	Support Activities for Crop Production	13	0.32	97.58
3342	Communications Equipment Manufacturing	13	0.27	97.85
5619	Other Support Services	269	0.24	98.09
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	169	0.22	98.31
2371	Utility System Construction	68	0.21	98.52
2379	Other Heavy and Civil Engineering Construction	25	0.17	98.69
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.14	98.84
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	0.12	98.96
3273	Cement and Concrete Product Manufacturing	18	0.12	99.09
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.12	99.20
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	0.11	99.31
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.09	99.40
2123	Nonmetallic Mineral Mining and Quarrying	7	0.09	99.49
5622	Waste Treatment and Disposal	4	0.07	99.55

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4431	Electronics and Appliance Stores	97	0.05	99.61
5614	Business Support Services	1989	0.05	99.66
5418	Advertising, Public Relations, and Related Services	26	0.05	99.70
8112	Electronic and Precision Equipment Repair and Maintenance	2	0.04	99.74
8111	Automotive Repair and Maintenance	244	0.03	99.77
4921	Couriers and Express Delivery Services	51	0.02	99.79
5415	Computer Systems Design and Related Services	3210	0.02	99.81
4451	Grocery Stores	324	0.02	99.83
3339	Other General Purpose Machinery Manufacturing	8	0.02	99.85
4842	Specialized Freight Trucking	79	0.02	99.86
4543	Direct Selling Establishments	101	0.02	99.88
4884	Support Activities for Road Transportation	63	0.01	99.89
4853	Taxi and Limousine Service	69	0.01	99.91
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.01	99.92
5322	Consumer Goods Rental	46	0.01	99.93
3323	Architectural and Structural Metals Manufacturing	7	0.01	99.94
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.01	99.95
5241	Insurance Carriers	18	0.01	99.96
6211	Offices of Physicians	1232	0.01	99.96
7211	Traveler Accommodation	159	0.01	99.97
5629	Remediation and Other Waste Management Services	35	0.00	99.97
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	0.00	99.98
3353	Electrical Equipment Manufacturing	6	0.00	99.98
4441	Building Material and Supplies Dealers	33	0.00	99.98
5179	Other Telecommunications	81	0.00	99.99
8114	Personal and Household Goods Repair and Maintenance	181	0.00	99.99
5321	Automotive Equipment Rental and Leasing	11	0.00	99.99
4539	Other Miscellaneous Store Retailers	393	0.00	99.99
5323	General Rental Centers	2	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	1	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	2	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	100.00
5171	Wired Telecommunications Carriers	14	0.00	100.00
3279	Other Nonmetallic Mineral Product Manufacturing	2	0.00	100.00

Source: See Table 2.1.

**Table 2.9.B. Maintenance—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4851	Urban Transit Systems	33	34.67	34.67
8114	Personal and Household Goods Repair and Maintenance	181	19.80	54.46
3365	Railroad Rolling Stock Manufacturing	3	19.63	74.10
6241	Individual and Family Services	13	9.81	83.90
2382	Building Equipment Contractors	885	6.04	89.94
3342	Communications Equipment Manufacturing	48	3.15	93.09
4841	General Freight Trucking	357	2.97	96.06
3339	Other General Purpose Machinery Manufacturing	8	1.20	97.26
4821	Rail Transportation	1	0.71	97.97
8111	Automotive Repair and Maintenance	191	0.70	98.67
2373	Highway, Street, and Bridge Construction	135	0.38	99.05
5616	Investigation and Security Services	137	0.31	99.36
5619	Other Support Services	269	0.15	99.51
4236	Electrical and Electronic Goods Merchant Wholesalers	70	0.15	99.66
5613	Employment Services	13	0.11	99.78
5617	Services to Buildings and Dwellings	307	0.07	99.85
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	11	0.06	99.91
5171	Wired Telecommunications Carriers	14	0.04	99.95
5417	Scientific Research and Development Services	322	0.04	99.99
2362	Nonresidential Building Construction	54	0.01	99.99
2123	Nonmetallic Mineral Mining and Quarrying	0	0.01	100.00

Source: See Table 2.1.

**Table 2.9.C. Maintenance—Number of Listed DBEs and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5617	Services to Buildings and Dwellings	1730	49.15	49.15
2211	Electric Power Generation, Transmission and Distribution	0	7.73	56.89
2362	Nonresidential Building Construction	564	5.37	62.26
5416	Management, Scientific, and Technical Consulting Services	4370	5.27	67.52
4881	Support Activities for Air Transportation	4	5.10	72.62
2373	Highway, Street, and Bridge Construction	135	5.05	77.67
5622	Waste Treatment and Disposal	4	4.17	81.84
2389	Other Specialty Trade Contractors	130	3.26	85.10
5616	Investigation and Security Services	328	2.70	87.80
5611	Office Administrative Services	180	2.55	90.35
2382	Building Equipment Contractors	870	2.23	92.58
4471	Gasoline Stations	138	1.75	94.33
4841	General Freight Trucking	494	1.69	96.02
5413	Architectural, Engineering, and Related Services	1309	1.28	97.30
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	143	0.64	97.94
5415	Computer Systems Design and Related Services	1354	0.53	98.47
2371	Utility System Construction	46	0.49	98.96
6243	Vocational Rehabilitation Services	77	0.32	99.27
8123	Drycleaning and Laundry Services	5	0.24	99.51
3259	Other Chemical Product and Preparation Manufacturing	14	0.22	99.73
5629	Remediation and Other Waste Management Services	26	0.15	99.89
2381	Foundation, Structure, and Building Exterior Contractors	144	0.06	99.94
8111	Automotive Repair and Maintenance	191	0.03	99.97
2383	Building Finishing Contractors	108	0.03	100.00

Source: See Table 2.1.

**Table 2.10.A. IT—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	4618	79.59	79.59
5416	Management, Scientific, and Technical Consulting Services	3640	10.72	90.31
5112	Software Publishers	166	6.85	97.16
5413	Architectural, Engineering, and Related Services	1309	2.02	99.18
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	214	0.68	99.87
5614	Business Support Services	1989	0.11	99.98
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.02	100.00
2382	Building Equipment Contractors	451	0.00	100.00

Source: See Table 2.1.

**Table 2.10.B. IT—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	1087	33.23	33.23
5416	Management, Scientific, and Technical Consulting Services	44	29.71	62.94
3342	Communications Equipment Manufacturing	48	15.58	78.52
5415	Computer Systems Design and Related Services	4564	7.56	86.08
4236	Electrical and Electronic Goods Merchant Wholesalers	83	4.68	90.75
4532	Office Supplies, Stationery, and Gift Stores	93	3.05	93.81
4431	Electronics and Appliance Stores	197	1.83	95.64
4232	Furniture and Home Furnishing Merchant Wholesalers	77	0.85	96.50
4821	Rail Transportation	1	0.74	97.23
3353	Electrical Equipment Manufacturing	6	0.71	97.94
5613	Employment Services	286	0.54	98.48
3341	Computer and Peripheral Equipment Manufacturing	13	0.52	99.00
5112	Software Publishers	166	0.32	99.33
3333	Commercial and Service Industry Machinery Manufacturing	7	0.32	99.65
3323	Architectural and Structural Metals Manufacturing	44	0.26	99.91
4543	Direct Selling Establishments	95	0.09	100.00

Source: See Table 2.1.

**Table 2.11.A. Services—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5613	Employment Services	706	65.01	65.01
5413	Architectural, Engineering, and Related Services	1445	10.88	75.90
5415	Computer Systems Design and Related Services	4683	7.23	83.12
5416	Management, Scientific, and Technical Consulting Services	4740	4.96	88.08
5418	Advertising, Public Relations, and Related Services	582	3.73	91.82
6242	Community Food and Housing, and Emergency and Other Relief Services	2	3.32	95.14
5419	Other Professional, Scientific, and Technical Services	553	1.61	96.75
3231	Printing and Related Support Activities	304	0.68	97.43
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	27	0.42	97.85
4812	Nonscheduled Air Transportation	7	0.40	98.25
5121	Motion Picture and Video Industries	370	0.22	98.48
8129	Other Personal Services	48	0.16	98.64
6243	Vocational Rehabilitation Services	77	0.15	98.79
2371	Utility System Construction	46	0.13	98.92
5411	Legal Services	1078	0.12	99.04
8139	Business, Professional, Labor, Political, and Similar Organizations	12	0.10	99.14
5511	Management of Companies and Enterprises	31	0.10	99.24
3399	Other Miscellaneous Manufacturing	133	0.10	99.34
5622	Waste Treatment and Disposal	23	0.08	99.42
3351	Electric Lighting Equipment Manufacturing	6	0.08	99.50
5122	Sound Recording Industries	93	0.07	99.57
3372	Office Furniture (including Fixtures) Manufacturing	11	0.07	99.64
2213	Water, Sewage and Other Systems	1	0.07	99.71
4431	Electronics and Appliance Stores	97	0.06	99.77
5191	Other Information Services	12	0.05	99.82
7211	Traveler Accommodation	159	0.05	99.86
7223	Special Food Services	228	0.05	99.91
5171	Wired Telecommunications Carriers	14	0.04	99.95
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.01	99.97
2389	Other Specialty Trade Contractors	395	0.01	99.98
7111	Performing Arts Companies	101	0.01	99.98
5179	Other Telecommunications	154	0.00	99.99
5615	Travel Arrangement and Reservation Services	376	0.00	99.99
7115	Independent Artists, Writers, and Performers	518	0.00	100.00
4921	Couriers and Express Delivery Services	51	0.00	100.00
4232	Furniture and Home Furnishing Merchant Wholesalers	72	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	100.00
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	100.00

Source: See Table 2.1.

**Table 2.11.B. Services—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4821	Rail Transportation	1	31.06	31.06
4859	Other Transit and Ground Passenger Transportation	94	17.88	48.94
4851	Urban Transit Systems	33	13.44	62.38
4855	Charter Bus Industry	43	12.43	74.81
4854	School and Employee Bus Transportation	42	5.13	79.94
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	16	2.81	82.75
5413	Architectural, Engineering, and Related Services	1665	2.79	85.54
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	1.83	87.37
5221	Depository Credit Intermediation	25	1.52	88.89
5416	Management, Scientific, and Technical Consulting Services	9239	1.34	90.23
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.99	91.22
4885	Freight Transportation Arrangement	106	0.82	92.04
4853	Taxi and Limousine Service	29	0.81	92.85
2381	Foundation, Structure, and Building Exterior Contractors	300	0.77	93.62
7211	Traveler Accommodation	159	0.76	94.38
5415	Computer Systems Design and Related Services	4564	0.75	95.13
4532	Office Supplies, Stationery, and Gift Stores	645	0.60	95.72
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.55	96.28
8111	Automotive Repair and Maintenance	314	0.50	96.77
6213	Offices of Other Health Practitioners	280	0.30	97.08
5418	Advertising, Public Relations, and Related Services	455	0.30	97.38
5613	Employment Services	706	0.29	97.67
5617	Services to Buildings and Dwellings	1646	0.28	97.95
2212	Natural Gas Distribution	4	0.26	98.21
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	10	0.26	98.47
3365	Railroad Rolling Stock Manufacturing	3	0.21	98.68
4543	Direct Selling Establishments	19	0.15	98.83
5616	Investigation and Security Services	194	0.13	98.96
2373	Highway, Street, and Bridge Construction	135	0.10	99.06
4889	Other Support Activities for Transportation	118	0.09	99.15
3231	Printing and Related Support Activities	282	0.08	99.23
2382	Building Equipment Contractors	870	0.08	99.31
4921	Couriers and Express Delivery Services	51	0.07	99.37
3353	Electrical Equipment Manufacturing	13	0.06	99.44
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	279	0.06	99.49
5417	Scientific Research and Development Services	669	0.05	99.55
5622	Waste Treatment and Disposal	27	0.03	99.58
5311	Lessors of Real Estate	130	0.03	99.62
5322	Consumer Goods Rental	75	0.03	99.64
5419	Other Professional, Scientific, and Technical Services	322	0.03	99.67

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5191	Other Information Services	29	0.03	99.70
2389	Other Specialty Trade Contractors	525	0.02	99.72
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.02	99.74
2362	Nonresidential Building Construction	564	0.02	99.77
3271	Clay Product and Refractory Manufacturing	0	0.02	99.79
5614	Business Support Services	2024	0.02	99.81
3133	Textile and Fabric Finishing and Fabric Coating Mills	94	0.02	99.82
3399	Other Miscellaneous Manufacturing	145	0.02	99.84
8112	Electronic and Precision Equipment Repair and Maintenance	67	0.02	99.86
5111	Newspaper, Periodical, Book, and Directory Publishers	136	0.01	99.87
8114	Personal and Household Goods Repair and Maintenance	73	0.01	99.89
8129	Other Personal Services	48	0.01	99.90
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.01	99.91
4842	Specialized Freight Trucking	72	0.01	99.92
4441	Building Material and Supplies Dealers	138	0.01	99.94
4812	Nonscheduled Air Transportation	7	0.01	99.94
8123	Drycleaning and Laundry Services	5	0.01	99.95
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	143	0.01	99.96
3351	Electric Lighting Equipment Manufacturing	11	0.01	99.96
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	25	0.01	99.97
5414	Specialized Design Services	844	0.00	99.97
5121	Motion Picture and Video Industries	370	0.00	99.98
3359	Other Electrical Equipment and Component Manufacturing	1	0.00	99.98
4241	Paper and Paper Product Merchant Wholesalers	13	0.00	99.99
4431	Electronics and Appliance Stores	53	0.00	99.99
3323	Architectural and Structural Metals Manufacturing	2	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	99.99
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.00	99.99
5239	Other Financial Investment Activities	116	0.00	100.00
5223	Activities Related to Credit Intermediation	11	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	14	0.00	100.00
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	0	0.00	100.00
3341	Computer and Peripheral Equipment Manufacturing	13	0.00	100.00
3219	Other Wood Product Manufacturing	20	0.00	100.00
2383	Building Finishing Contractors	108	0.00	100.00
8139	Business, Professional, Labor, Political, and Similar Organizations	14	0.00	100.00
3315	Foundries	0	0.00	100.00

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4233	Lumber and Other Construction Materials Merchant Wholesalers	66	0.00	100.00
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	17	0.00	100.00
3339	Other General Purpose Machinery Manufacturing	8	0.00	100.00
3369	Other Transportation Equipment Manufacturing	2	0.00	100.00
5171	Wired Telecommunications Carriers	14	0.00	100.00
3326	Spring and Wire Product Manufacturing	0	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	0	0.00	100.00
4246	Chemical and Allied Products Merchant Wholesalers	36	0.00	100.00
3372	Office Furniture (including Fixtures) Manufacturing	0	0.00	100.00

Source: See Table 2.1.

**Table 2.11.C. Services—Number of Listed DBEs and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4851	Urban Transit Systems	13	82.35	82.35
5418	Advertising, Public Relations, and Related Services	551	7.85	90.21
4853	Taxi and Limousine Service	29	2.94	93.15
5416	Management, Scientific, and Technical Consulting Services	8424	2.27	95.41
5415	Computer Systems Design and Related Services	4564	1.75	97.16
2362	Nonresidential Building Construction	54	0.59	97.75
5413	Architectural, Engineering, and Related Services	1416	0.50	98.25
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	14	0.41	98.66
4471	Gasoline Stations	138	0.37	99.03
6213	Offices of Other Health Practitioners	263	0.31	99.35
5614	Business Support Services	1989	0.19	99.54
5417	Scientific Research and Development Services	347	0.13	99.67
8111	Automotive Repair and Maintenance	191	0.07	99.74
5121	Motion Picture and Video Industries	370	0.06	99.80
8139	Business, Professional, Labor, Political, and Similar Organizations	14	0.05	99.85
5171	Wired Telecommunications Carriers	14	0.04	99.89
6113	Colleges, Universities, and Professional Schools	4	0.04	99.93
4539	Other Miscellaneous Store Retailers	393	0.03	99.96
5414	Specialized Design Services	852	0.02	99.99
5179	Other Telecommunications	154	0.01	100.00
7111	Performing Arts Companies	92	0.00	100.00
3231	Printing and Related Support Activities	22	0.00	100.00
3399	Other Miscellaneous Manufacturing	133	0.00	100.00
5419	Other Professional, Scientific, and Technical Services	121	0.00	100.00

Source: See Table 2.1.

**Table 2.12.A. CSE—Number of Listed DBEs and Industry Weight, by NAICS Code (SHA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4241	Paper and Paper Product Merchant Wholesalers	114	43.48	43.48
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	214	32.61	76.09
3231	Printing and Related Support Activities	171	23.91	100.00

Source: See Table 2.1.

**Table 2.12.B. CSE—Number of Listed DBEs and Industry Weight, by NAICS Code (MTA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3362	Motor Vehicle Body and Trailer Manufacturing	2	46.58	46.58
3365	Railroad Rolling Stock Manufacturing	3	33.80	80.38
4411	Automobile Dealers	51	5.72	86.10
8111	Automotive Repair and Maintenance	191	2.05	88.15
4481	Clothing Stores	186	1.91	90.06
5413	Architectural, Engineering, and Related Services	1087	1.63	91.70
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	1.43	93.12
3369	Other Transportation Equipment Manufacturing	2	1.16	94.29
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	90	1.08	95.37
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	56	0.93	96.30
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	8	0.75	97.05
3363	Motor Vehicle Parts Manufacturing	4	0.75	97.80
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	14	0.66	98.46
5416	Management, Scientific, and Technical Consulting Services	44	0.47	98.93
5179	Other Telecommunications	154	0.32	99.26
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20	0.28	99.54
3231	Printing and Related Support Activities	171	0.26	99.81
3342	Communications Equipment Manufacturing	13	0.19	100.00

Source: See Table 2.1.

**Table 2.12.C. CSE—Number of Listed DBEs and Industry Weight, by NAICS Code (MAA)**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3342	Communications Equipment Manufacturing	48	31.12	31.12
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	217	22.77	53.89
4413	Automotive Parts, Accessories, and Tire Stores	60	11.54	65.44
3259	Other Chemical Product and Preparation Manufacturing	14	9.42	74.86
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	5.98	80.84
3329	Other Fabricated Metal Product Manufacturing	2	5.38	86.23
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	5.27	91.50
2362	Nonresidential Building Construction	564	3.29	94.78
4811	Scheduled Air Transportation	1	2.83	97.61
5321	Automotive Equipment Rental and Leasing	11	2.39	100.00

Source: See Table 2.1.

**Table 2.17.A. Detailed DBE Availability—Construction (SHA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Crop Farming (NAICS 1119)	2.63	2.58	0.02	0.00	14.08	19.32	80.68
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.42	0.22	0.00	0.00	17.31	17.95	82.05
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Water, Sewage and Other Systems (NAICS 2213)	2.60	2.60	0.00	0.00	14.19	19.38	80.62
Residential Building Construction (NAICS 2361)	4.37	3.36	0.39	0.21	13.35	21.67	78.33
Nonresidential Building Construction (NAICS 2362)	10.22	4.86	3.04	0.83	13.27	32.21	67.79
Utility System Construction (NAICS 2371)	6.83	2.25	0.42	0.48	10.34	20.32	79.68
Land Subdivision (NAICS 2372)	7.17	1.35	0.00	0.02	7.41	15.94	84.06
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Other Heavy and Civil Engineering Construction (NAICS 2379)	14.21	3.30	0.85	0.08	11.70	30.13	69.87
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	8.38	3.43	2.68	0.34	12.81	27.65	72.35
Building Equipment Contractors (NAICS 2382)	7.60	2.81	2.77	0.19	10.87	24.24	75.76
Building Finishing Contractors (NAICS 2383)	5.75	3.46	2.60	0.04	11.19	23.04	76.96
Other Specialty Trade Contractors (NAICS 2389)	6.38	3.05	2.51	0.16	11.14	23.23	76.77
Other Textile Product Mills (NAICS 3149)	10.72	0.00	9.46	2.44	21.25	43.86	56.14
Other Wood Product Manufacturing (NAICS 3219)	3.42	0.00	7.20	0.68	23.17	34.47	65.53
Printing and Related Support Activities (NAICS 3231)	5.72	0.33	9.56	1.05	21.29	37.96	62.04
Petroleum and Coal Products Manufacturing (NAICS 3241)	5.91	0.56	7.60	1.11	16.65	31.83	68.17

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	6.03	0.19	7.51	0.74	14.96	29.42	70.58
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	6.19	1.32	11.02	2.47	15.81	36.81	63.19
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Foundries (NAICS 3315)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.78	0.94	8.01	0.85	17.12	32.70	67.30
Spring and Wire Product Manufacturing (NAICS 3326)	6.50	0.00	10.75	2.30	13.29	32.83	67.17
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.77	0.00	9.35	2.40	11.55	30.06	69.94
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Industrial Machinery Manufacturing (NAICS 3332)	6.57	0.00	10.87	2.30	12.64	32.39	67.61
Metalworking Machinery Manufacturing (NAICS 3335)	12.53	0.00	12.54	1.95	9.99	37.01	62.99
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.19	0.00	9.75	1.66	14.92	32.52	67.48
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	5.56	0.00	11.39	2.38	19.43	38.75	61.25
Electric Lighting Equipment Manufacturing (NAICS 3351)	5.89	0.00	11.07	3.03	21.52	41.51	58.49
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	9.56	0.00	7.52	2.20	22.67	41.96	58.04
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Miscellaneous Manufacturing (NAICS 3399)	5.57	0.65	7.94	0.81	24.56	39.53	60.47
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.33	38.44	61.56
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.36	0.33	8.09	0.71	17.79	32.28	67.72
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	5.55	0.17	8.74	1.00	19.45	34.91	65.09
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.94	0.00	8.61	0.73	17.20	31.49	68.51
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.46	0.54	8.01	0.77	17.37	32.15	67.85
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.55	0.69	9.24	0.80	24.43	47.71	52.29
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Home Furnishings Stores (NAICS 4422)	7.89	2.86	13.56	0.97	30.97	56.24	43.76
Building Material and Supplies Dealers (NAICS 4441)	8.08	2.65	10.30	0.61	21.88	43.52	56.48
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	8.90	2.55	4.22	1.01	26.06	42.74	57.26
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Direct Selling Establishments (NAICS 4543)	6.50	2.55	16.53	0.15	20.41	46.12	53.88
General Freight Trucking (NAICS 4841)	23.12	9.50	5.92	0.22	10.54	49.29	50.71
Specialized Freight Trucking (NAICS 4842)	29.94	8.64	5.07	0.40	11.07	55.12	44.88
Support Activities for Road Transportation (NAICS 4884)	12.04	3.58	8.10	0.00	12.75	36.46	63.54
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Cable and Other Subscription Programming (NAICS 5152)	13.50	6.55	4.33	0.00	10.64	35.02	64.98
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Depository Credit Intermediation (NAICS 5221)	10.81	0.00	5.41	0.00	24.32	40.54	59.46
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Lessors of Real Estate (NAICS 5311)	14.58	4.84	4.28	0.12	16.00	39.82	60.18
Offices of Real Estate Agents and Brokers (NAICS 5312)	12.07	0.58	5.17	0.02	28.08	45.92	54.08
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.42	6.23	4.27	0.10	11.54	36.56	63.44
Architectural, Engineering, and Related Services (NAICS 5413)	8.58	4.28	11.99	0.40	12.90	38.16	61.84
Computer Systems Design and Related Services (NAICS 5415)	12.70	3.92	16.74	0.51	13.89	47.76	52.24
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.69	1.53	7.41	0.31	29.52	53.45	46.55
Advertising, Public Relations, and Related Services (NAICS 5418)	8.84	4.04	8.29	0.26	21.41	42.84	57.16
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.63	0.59	5.21	0.00	28.20	46.63	53.37
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Employment Services (NAICS 5613)	18.84	6.02	6.00	0.38	18.69	49.92	50.08
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.93	3.81	5.83	0.75	21.15	49.48	50.52
Services to Buildings and Dwellings (NAICS 5617)	15.06	6.48	4.45	0.18	11.89	38.06	61.94
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
Waste Treatment and Disposal (NAICS 5622)	17.50	6.38	4.75	0.30	11.94	40.88	59.12
Remediation and Other Waste Management Services (NAICS 5629)	14.21	5.85	4.51	0.25	14.41	39.23	60.77
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	19.09	5.10	7.79	0.36	16.82	49.17	50.83
Other Personal Services (NAICS 8129)	25.88	5.89	7.19	0.12	17.93	57.00	43.00

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.09	6.26	6.35	0.00	12.62	50.33	49.67

Source: See Table 2.17.

**Table 2.17.B. Detailed DBE Availability—Construction (MTA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	1.22	1.22	0.00	0.00	15.52	17.95	82.05
Residential Building Construction (NAICS 2361)	4.35	3.36	0.38	0.21	13.35	21.65	78.35
Nonresidential Building Construction (NAICS 2362)	11.16	5.25	3.42	0.93	12.71	33.48	66.52
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	8.06	3.44	2.61	0.29	12.72	27.12	72.88
Building Equipment Contractors (NAICS 2382)	7.55	2.81	2.77	0.18	10.85	24.17	75.83
Building Finishing Contractors (NAICS 2383)	5.77	3.68	2.45	0.20	10.87	22.98	77.02
Other Specialty Trade Contractors (NAICS 2389)	6.26	3.03	2.68	0.14	10.76	22.87	77.13
Petroleum and Coal Products Manufacturing (NAICS 3241)	3.63	0.75	7.37	0.73	17.88	30.36	69.64
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Cement and Concrete Product Manufacturing (NAICS 3273)	5.83	1.01	7.59	0.69	17.88	33.00	67.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.94	0.91	7.86	0.70	16.51	31.91	68.09
Hardware Manufacturing (NAICS 3325)	6.75	0.00	8.94	2.37	13.10	31.16	68.84
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	6.37	0.00	8.34	2.43	19.53	36.67	63.33
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	22.33	4.17	11.27	1.67	17.28	56.71	43.29
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.33	0.39	8.21	0.70	17.35	31.99	68.01
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	11.02	0.36	8.44	0.61	18.35	38.78	61.22
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.38	8.10	0.69	18.20	33.11	66.89
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.08	0.32	9.39	2.55	18.61	38.95	61.05
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
Lessors of Real Estate (NAICS 5311)	14.10	5.36	4.21	0.00	11.44	35.10	64.90
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.19	6.48	4.03	0.04	11.67	36.41	63.59
Architectural, Engineering, and Related Services (NAICS 5413)	8.69	4.25	12.13	0.41	12.94	38.42	61.58
Computer Systems Design and Related Services (NAICS 5415)	15.51	4.16	15.28	0.61	13.98	49.55	50.45
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.55	1.56	7.48	0.32	29.50	53.41	46.59
Other Professional, Scientific, and Technical Services (NAICS 5419)	8.55	3.82	7.95	0.26	17.49	38.07	61.93
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Services to Buildings and Dwellings (NAICS 5617)	14.64	6.39	4.37	0.19	11.55	37.13	62.87

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Automotive Repair and Maintenance (NAICS 8111)	25.45	6.55	6.86	0.03	14.00	52.89	47.11
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89

Source: See Table 2.17.

**Table 2.17.C. Detailed DBE Availability—Construction (MAA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Residential Building Construction (NAICS 2361)	4.12	3.55	0.33	0.16	13.62	21.78	78.22
Nonresidential Building Construction (NAICS 2362)	12.09	5.63	3.80	1.03	12.16	34.72	65.28
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.56	5.19	2.65	0.06	10.39	24.85	75.15
Building Equipment Contractors (NAICS 2382)	7.70	2.84	2.77	0.18	11.07	24.56	75.44
Building Finishing Contractors (NAICS 2383)	5.71	3.62	2.47	0.16	10.93	22.89	77.11
Other Specialty Trade Contractors (NAICS 2389)	6.36	3.04	2.54	0.15	11.08	23.18	76.82
Cement and Concrete Product Manufacturing (NAICS 3273)	6.28	0.00	7.46	0.74	14.22	28.71	71.29
Architectural and Structural Metals Manufacturing (NAICS 3323)	8.00	0.02	6.98	0.68	16.91	32.60	67.40
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.13	0.00	10.04	1.54	14.71	32.41	67.59
Electric Lighting Equipment Manufacturing (NAICS 3351)	5.89	0.00	11.07	3.03	21.52	41.51	58.49
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	7.55	0.00	10.03	2.66	15.80	36.04	63.96
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.39	0.41	8.21	0.69	17.36	32.06	67.94
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	5.22	0.00	8.69	0.94	17.02	31.87	68.13
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.37	8.10	0.69	18.20	33.11	66.89
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Home Furnishings Stores (NAICS 4422)	7.47	2.72	13.88	0.86	29.76	54.68	45.32
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
Specialized Freight Trucking (NAICS 4842)	29.98	8.64	5.06	0.40	11.07	55.15	44.85
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Architectural, Engineering, and Related Services (NAICS 5413)	8.65	4.29	12.17	0.42	12.80	38.32	61.68
Specialized Design Services (NAICS 5414)	11.07	2.61	3.20	0.00	46.97	63.85	36.15
Computer Systems Design and Related Services (NAICS 5415)	15.51	4.16	15.28	0.61	13.98	49.55	50.45
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.41	2.33	7.43	0.34	27.12	53.63	46.37
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Services to Buildings and Dwellings (NAICS 5617)	14.65	6.39	4.37	0.19	11.55	37.15	62.85
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Remediation and Other Waste Management Services (NAICS 5629)	16.03	10.81	9.25	1.33	19.00	56.42	43.58
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	13.83	3.03	7.20	0.81	13.82	38.68	61.32
Personal and Household Goods Repair and Maintenance (NAICS 8114)	14.90	3.32	7.01	0.82	12.80	38.85	61.15

Source: See Table 2.17.

**Table 2.18.A. Detailed DBE Availability—AE-CRS (SHA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.26	0.26	0.00	0.00	17.43	17.96	82.04
Support Activities for Mining (NAICS 2131)	2.66	2.66	0.00	0.00	17.14	22.47	77.53
Nonresidential Building Construction (NAICS 2362)	7.36	3.68	1.88	0.52	14.94	28.38	71.62
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.63	5.56	2.59	0.05	10.24	25.06	74.94
Building Equipment Contractors (NAICS 2382)	6.59	2.78	2.78	0.14	10.38	22.67	77.33
Building Finishing Contractors (NAICS 2383)	5.82	3.51	2.57	0.03	11.31	23.24	76.76
Other Specialty Trade Contractors (NAICS 2389)	6.26	3.03	2.69	0.14	10.76	22.87	77.13
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	5.35	0.85	7.64	0.71	17.57	32.12	67.88
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	6.60	0.00	8.70	2.39	15.63	33.33	66.67
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	7.18	0.00	12.10	0.57	17.66	37.52	62.48
Other Miscellaneous Manufacturing (NAICS 3399)	15.66	0.00	5.84	1.97	22.00	45.47	54.53
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.30	0.15	8.17	0.79	17.64	31.05	68.95
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.88	0.00	8.63	0.71	17.12	31.34	68.66
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.38	8.10	0.69	18.18	33.09	66.91

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.97	0.16	9.41	2.38	15.29	36.21	63.79
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.80	52.20
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.15	6.53	3.99	0.03	11.69	36.39	63.61
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.22	3.91	8.66	0.11	14.24	34.13	65.87
Architectural, Engineering, and Related Services (NAICS 5413)	8.70	4.28	12.23	0.42	12.85	38.48	61.52
Computer Systems Design and Related Services (NAICS 5415)	15.79	3.95	15.14	0.61	14.78	50.26	49.74
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.86	1.55	7.08	0.31	29.07	52.87	47.13
Scientific Research and Development Services (NAICS 5417)	10.19	1.72	8.96	0.25	26.97	48.08	51.92
Advertising, Public Relations, and Related Services (NAICS 5418)	12.92	1.56	4.82	0.03	32.80	52.14	47.86

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.63	0.59	5.21	0.00	28.20	46.63	53.37
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Employment Services (NAICS 5613)	17.19	5.86	5.03	0.25	18.39	46.72	53.28
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Services to Buildings and Dwellings (NAICS 5617)	14.64	6.39	4.37	0.19	11.55	37.13	62.87
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Treatment and Disposal (NAICS 5622)	17.82	6.46	4.91	0.19	13.13	42.50	57.50
Remediation and Other Waste Management Services (NAICS 5629)	16.02	10.80	9.24	1.33	18.99	56.38	43.62
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72
Automotive Repair and Maintenance (NAICS 8111)	25.45	6.55	6.86	0.03	14.00	52.89	47.11
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Civic and Social Organizations (NAICS 8134)	22.13	5.15	6.37	0.23	12.08	45.96	54.04

Source and Notes: See Table 2.17.

**Table 2.18.B. Detailed DBE Availability—AE-CRS (MTA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Building Equipment Contractors (NAICS 2382)	7.93	2.82	2.77	0.20	11.03	24.75	75.25
Other Specialty Trade Contractors (NAICS 2389)	6.48	3.06	2.37	0.17	11.43	23.51	76.49
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	1.22	12.04	2.38	14.74	40.34	59.66
Communications Equipment Manufacturing (NAICS 3342)	7.62	0.00	10.70	2.26	12.85	33.44	66.56
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.43	1.43	9.34	2.01	16.66	39.86	60.14
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.30	0.15	8.17	0.79	17.64	31.05	68.95
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	9.99	0.38	11.41	1.89	10.80	34.47	65.53
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.57	0.46	7.88	0.85	18.58	33.33	66.67
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.91	0.00	8.60	0.71	17.22	31.44	68.56
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.37	8.10	0.69	18.20	33.11	66.89
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Architectural, Engineering, and Related Services (NAICS 5413)	8.65	4.25	11.98	0.40	13.18	38.46	61.54
Computer Systems Design and Related Services (NAICS 5415)	15.61	4.05	15.75	0.63	13.98	50.03	49.97
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.09	2.16	7.38	0.33	27.63	53.58	46.42
Scientific Research and Development Services (NAICS 5417)	8.64	3.35	10.10	0.26	18.95	41.29	58.71
Advertising, Public Relations, and Related Services (NAICS 5418)	10.04	3.31	7.26	0.19	24.77	45.58	54.42
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.79	1.99	5.56	0.13	33.74	54.22	45.78
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88

Source and Notes: See Table 2.17.

**Table 2.18.C. Detailed DBE Availability—AE-CRS (MAA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Other Specialty Trade Contractors (NAICS 2389)	6.31	3.03	2.61	0.15	10.92	23.02	76.98
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Communications Equipment Manufacturing (NAICS 3342)	7.62	0.00	10.70	2.26	12.85	33.44	66.56
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.45	0.00	8.97	0.74	15.86	30.01	69.99
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Activities Related to Real Estate (NAICS 5313)	11.03	0.74	4.84	0.00	30.26	46.87	53.13
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09
Architectural, Engineering, and Related Services (NAICS 5413)	8.64	4.25	11.97	0.39	13.22	38.47	61.53
Computer Systems Design and Related Services (NAICS 5415)	15.51	4.16	15.28	0.61	13.98	49.55	50.45
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.05	1.50	6.76	0.29	28.12	51.71	48.29
Scientific Research and Development Services (NAICS 5417)	10.19	1.72	8.96	0.25	26.97	48.08	51.92
Advertising, Public Relations, and Related Services (NAICS 5418)	9.61	3.57	7.63	0.22	23.57	44.60	55.40
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.39	0.63	5.15	0.00	28.60	46.78	53.22
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	17.56	3.27	5.97	0.84	22.75	50.39	49.61

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89

Source and Notes: See Table 2.17.

**Table 2.19.A. Detailed DBE Availability—Maintenance (SHA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.09	0.76	0.00	0.00	15.03	17.89	82.11
Residential Building Construction (NAICS 2361)	4.32	3.41	0.38	0.19	13.42	21.72	78.28
Nonresidential Building Construction (NAICS 2362)	10.40	4.93	3.11	0.85	13.16	32.45	67.55
Utility System Construction (NAICS 2371)	7.10	2.35	0.59	0.45	10.55	21.04	78.96
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Other Heavy and Civil Engineering Construction (NAICS 2379)	14.21	3.30	0.85	0.08	11.70	30.13	69.87
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.07	5.05	2.61	0.12	10.87	25.72	74.28
Building Equipment Contractors (NAICS 2382)	7.92	2.82	2.77	0.20	11.03	24.73	75.27
Building Finishing Contractors (NAICS 2383)	5.82	3.51	2.57	0.03	11.31	23.24	76.76
Other Specialty Trade Contractors (NAICS 2389)	6.42	3.05	2.45	0.16	11.26	23.34	76.66
Pulp, Paper, and Paperboard Mills (NAICS 3221)	12.79	0.00	8.72	2.18	8.72	32.41	67.59
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	6.66	0.00	8.80	2.38	14.62	32.46	67.54
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Cement and Concrete Product Manufacturing (NAICS 3273)	5.15	1.04	7.68	0.70	18.31	32.87	67.13
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.92	0.40	7.73	0.71	15.98	30.74	69.26
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.13	0.00	10.04	1.54	14.71	32.41	67.59

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Communications Equipment Manufacturing (NAICS 3342)	7.90	0.37	8.33	0.67	16.86	34.13	65.87
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.43	1.43	9.34	2.01	16.66	39.86	60.14
Electric Lighting Equipment Manufacturing (NAICS 3351)	8.65	0.00	8.48	2.41	18.32	37.86	62.14
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.87	0.26	7.80	0.70	18.72	33.35	66.65
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.02	0.89	7.85	0.69	18.74	33.19	66.81
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	5.42	0.06	7.99	0.73	15.99	30.20	69.80
Electronics and Appliance Stores (NAICS 4431)	8.83	3.10	10.75	0.68	19.28	42.63	57.37
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
Grocery Stores (NAICS 4451)	5.73	2.89	17.01	0.23	21.60	47.46	52.54
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Direct Selling Establishments (NAICS 4543)	7.13	2.54	14.61	0.24	21.62	46.14	53.86
General Freight Trucking (NAICS 4841)	23.62	9.56	5.83	0.24	10.76	50.01	49.99

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Specialized Freight Trucking (NAICS 4842)	29.98	8.64	5.06	0.40	11.07	55.15	44.85
Taxi and Limousine Service (NAICS 4853)	22.29	8.15	6.45	0.21	11.02	48.12	51.88
Support Activities for Road Transportation (NAICS 4884)	14.35	3.94	7.78	0.00	11.85	37.91	62.09
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Other Telecommunications (NAICS 5179)	15.67	6.30	5.86	0.13	10.67	38.62	61.38
Insurance Carriers (NAICS 5241)	11.69	2.05	4.71	0.00	23.00	41.45	58.55
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
General Rental Centers (NAICS 5323)	12.78	5.40	3.95	0.00	18.03	40.16	59.84
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.33	6.33	4.17	0.08	11.59	36.50	63.50
Architectural, Engineering, and Related Services (NAICS 5413)	7.10	4.33	8.67	0.38	14.79	35.27	64.73
Computer Systems Design and Related Services (NAICS 5415)	15.51	4.16	15.28	0.61	13.98	49.55	50.45
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.52	2.38	7.42	0.34	26.98	53.64	46.36
Advertising, Public Relations, and Related Services (NAICS 5418)	12.87	1.27	6.46	0.00	28.96	49.56	50.44
Employment Services (NAICS 5613)	18.69	6.01	5.91	0.37	18.66	49.63	50.37
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Investigation and Security Services (NAICS 5616)	21.01	6.12	5.49	0.45	12.17	45.23	54.77
Services to Buildings and Dwellings (NAICS 5617)	15.33	6.14	4.55	0.17	13.05	39.24	60.76
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Waste Treatment and Disposal (NAICS 5622)	18.37	7.65	3.65	0.00	8.24	37.91	62.09

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Remediation and Other Waste Management Services (NAICS 5629)	14.70	6.29	4.56	0.00	12.26	37.82	62.18
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Automotive Repair and Maintenance (NAICS 8111)	17.56	3.60	6.95	0.67	12.16	40.94	59.06
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	12.87	2.27	6.70	0.84	13.64	36.33	63.67
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04

Source and Notes: See Table 2.17.

**Table 2.19.B. Detailed DBE Availability—Maintenance (MTA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Nonresidential Building Construction (NAICS 2362)	7.36	3.68	1.88	0.52	14.94	28.38	71.62
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Building Equipment Contractors (NAICS 2382)	7.88	3.21	2.81	0.04	13.62	27.56	72.44
Other General Purpose Machinery Manufacturing (NAICS 3339)	21.32	0.00	7.02	1.91	11.87	42.12	57.88
Communications Equipment Manufacturing (NAICS 3342)	7.42	1.69	9.29	0.98	17.60	36.98	63.02
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.63	0.41	7.79	0.85	18.44	33.12	66.88
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	7.29	0.00	8.70	3.04	13.40	32.43	67.57
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
Urban Transit Systems (NAICS 4851)	42.45	5.97	4.44	0.08	8.79	61.72	38.28
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Scientific Research and Development Services (NAICS 5417)	8.64	3.35	10.10	0.26	18.95	41.29	58.71
Employment Services (NAICS 5613)	20.69	4.06	4.39	3.70	28.67	61.51	38.49
Investigation and Security Services (NAICS 5616)	21.01	6.12	5.49	0.45	12.17	45.23	54.77
Services to Buildings and Dwellings (NAICS 5617)	14.64	6.39	4.37	0.19	11.55	37.13	62.87
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Individual and Family Services (NAICS 6241)	7.97	0.05	3.88	0.04	30.27	42.21	57.79
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89

Source and Notes: See Table 2.17.

**2.19.C. Detailed DBE Availability—Maintenance (MAA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.63	5.56	2.59	0.05	10.24	25.06	74.94
Building Equipment Contractors (NAICS 2382)	7.50	2.81	2.77	0.18	10.82	24.09	75.91
Building Finishing Contractors (NAICS 2383)	7.45	3.57	2.66	0.18	11.03	24.90	75.10
Other Specialty Trade Contractors (NAICS 2389)	6.48	3.06	2.37	0.17	11.43	23.51	76.49
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.39	8.10	0.69	18.19	33.11	66.89
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
General Freight Trucking (NAICS 4841)	23.54	9.19	5.86	0.23	11.39	50.21	49.79
Support Activities for Air Transportation (NAICS 4881)	8.17	2.81	8.30	0.00	14.57	33.85	66.15
Architectural, Engineering, and Related Services (NAICS 5413)	8.51	4.29	11.89	0.40	12.87	37.97	62.03
Computer Systems Design and Related Services (NAICS 5415)	11.00	3.77	17.61	0.45	13.84	46.68	53.32
Management, Scientific, and Technical Consulting Services (NAICS 5416)	18.39	2.04	5.82	0.25	31.44	57.95	42.05
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Investigation and Security Services (NAICS 5616)	19.24	3.88	5.89	0.76	21.40	51.17	48.83
Services to Buildings and Dwellings (NAICS 5617)	19.87	7.06	5.54	0.19	17.46	50.12	49.88
Waste Treatment and Disposal (NAICS 5622)	18.37	7.65	3.65	0.00	8.24	37.91	62.09
Remediation and Other Waste Management Services (NAICS 5629)	14.70	6.29	4.56	0.00	12.26	37.82	62.18
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28
Drycleaning and Laundry Services (NAICS 8123)	28.05	5.24	8.45	0.00	15.20	56.95	43.05

Source and Notes: See Table 2.17.

**Table 2.20.A. Detailed DBE Availability—IT (SHA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Building Equipment Contractors (NAICS 2382)	7.93	2.82	2.77	0.20	11.03	24.75	75.25
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.59	1.64	12.02	1.06	18.16	41.47	58.53
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09
Architectural, Engineering, and Related Services (NAICS 5413)	8.67	4.29	12.21	0.42	12.79	38.36	61.64
Computer Systems Design and Related Services (NAICS 5415)	16.60	3.63	14.30	0.59	16.44	51.56	48.44
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.93	2.55	7.41	0.35	26.46	53.69	46.31
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24

Source and Notes: See Table 2.17.

**Table 2.20.B. Detailed DBE Availability—IT (MTA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.58	1.15	8.28	1.08	18.14	34.23	65.77
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	7.90	0.00	8.30	2.30	15.58	34.08	65.92
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.53	8.90	2.28	11.24	32.93	67.07
Communications Equipment Manufacturing (NAICS 3342)	7.42	1.69	9.29	0.98	17.60	36.98	63.02
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.33	38.44	61.56
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.98	0.90	8.68	0.84	19.86	35.27	64.73
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Direct Selling Establishments (NAICS 4543)	10.51	2.52	4.50	0.72	27.99	46.24	53.76
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Architectural, Engineering, and Related Services (NAICS 5413)	8.73	4.29	12.33	0.42	12.75	38.52	61.48
Computer Systems Design and Related Services (NAICS 5415)	12.15	3.87	17.02	0.49	13.88	47.41	52.59
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.49	1.31	7.06	0.00	26.53	51.39	48.61
Employment Services (NAICS 5613)	17.19	5.86	5.03	0.25	18.39	46.72	53.28

Source and Notes: See Table 2.17.

**Table 2.21.A. Detailed DBE Availability—Services (SHA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	10.96	10.96	89.04
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Other Specialty Trade Contractors (NAICS 2389)	6.25	3.02	2.69	0.14	10.74	22.85	77.15
Printing and Related Support Activities (NAICS 3231)	5.99	0.24	9.31	1.08	22.32	38.94	61.06
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	6.22	0.91	7.98	1.47	15.02	31.60	68.40
Electric Lighting Equipment Manufacturing (NAICS 3351)	9.32	0.00	7.85	2.26	17.54	36.97	63.03
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	9.38	0.00	9.34	2.30	18.81	39.83	60.17
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	7.55	0.00	10.03	2.66	15.80	36.04	63.96
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Electronics and Appliance Stores (NAICS 4431)	8.83	3.10	10.75	0.68	19.28	42.63	57.37
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Motion Picture and Video Industries (NAICS 5121)	13.87	1.78	5.53	0.24	30.78	52.19	47.81
Sound Recording Industries (NAICS 5122)	13.88	2.11	7.45	0.00	30.74	54.18	45.82
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Other Information Services (NAICS 5191)	11.16	0.08	5.30	0.00	24.99	41.53	58.47
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.43	6.22	4.28	0.11	11.53	36.57	63.43
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Architectural, Engineering, and Related Services (NAICS 5413)	8.46	3.71	10.03	0.29	15.61	38.10	61.90
Computer Systems Design and Related Services (NAICS 5415)	14.92	3.77	17.02	0.64	13.96	50.32	49.68
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.05	1.54	6.93	0.22	29.06	53.79	46.21
Advertising, Public Relations, and Related Services (NAICS 5418)	11.88	1.48	6.34	0.03	28.28	48.01	51.99
Other Professional, Scientific, and Technical Services (NAICS 5419)	11.40	0.97	4.98	0.02	30.87	48.22	51.78
Management of Companies and Enterprises (NAICS 5511)	11.14	0.10	5.94	0.00	24.98	42.15	57.85
Employment Services (NAICS 5613)	19.85	6.12	6.59	0.45	18.86	51.87	48.13
Travel Arrangement and Reservation Services (NAICS 5615)	13.92	5.63	5.24	0.00	20.99	45.78	54.22
Waste Treatment and Disposal (NAICS 5622)	18.35	6.74	4.94	0.00	14.11	44.14	55.86
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	7.13	0.28	3.42	0.28	34.03	45.14	54.86
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86
Performing Arts Companies (NAICS 7111)	18.26	2.70	7.49	0.15	18.22	46.82	53.18
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Special Food Services (NAICS 7223)	17.92	2.94	7.33	0.28	22.51	50.98	49.02
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.09	6.26	6.35	0.00	12.62	50.33	49.67

Source and Notes: See Table 2.17.

**Table 2.21.B. Detailed DBE Availability—Services (MTA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.44	5.02	2.77	0.07	10.46	24.75	75.25
Building Equipment Contractors (NAICS 2382)	6.74	2.79	2.77	0.15	10.45	22.91	77.09
Building Finishing Contractors (NAICS 2383)	7.45	3.57	2.66	0.18	11.03	24.90	75.10
Other Specialty Trade Contractors (NAICS 2389)	6.37	3.05	2.53	0.16	11.10	23.20	76.80
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)	7.91	0.43	7.89	2.52	32.46	51.20	48.80
Other Wood Product Manufacturing (NAICS 3219)	7.49	0.31	8.83	2.41	15.62	34.66	65.34
Printing and Related Support Activities (NAICS 3231)	5.39	0.27	9.58	0.90	21.91	38.06	61.94
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	15.63	0.00	8.10	2.18	19.78	45.69	54.31
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Clay Product and Refractory Manufacturing (NAICS 3271)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Foundries (NAICS 3315)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Architectural and Structural Metals Manufacturing (NAICS 3323)	3.67	0.00	7.51	0.73	18.48	30.40	69.60
Spring and Wire Product Manufacturing (NAICS 3326)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.13	0.00	10.04	1.54	14.71	32.41	67.59
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.53	8.90	2.28	11.24	32.93	67.07
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.43	1.43	9.34	2.01	16.66	39.86	60.14

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Electric Lighting Equipment Manufacturing (NAICS 3351)	9.30	0.00	7.86	2.27	17.56	37.00	63.00
Electrical Equipment Manufacturing (NAICS 3353)	5.24	0.92	8.10	0.69	17.89	32.83	67.17
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	6.48	0.00	13.74	3.18	8.64	32.04	67.96
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	9.34	0.00	8.10	2.34	18.30	38.08	61.92
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Miscellaneous Manufacturing (NAICS 3399)	5.55	0.68	7.92	0.78	24.70	39.62	60.38
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.30	0.15	8.17	0.79	17.64	31.05	68.95
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.22	0.72	8.35	0.84	19.34	34.47	65.53
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	7.70	0.00	9.41	2.79	15.41	35.32	64.68
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.60	0.83	8.02	0.68	17.97	33.10	66.90
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	5.77	0.38	7.04	0.68	19.41	33.29	66.71
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	5.97	1.23	10.19	2.51	17.95	37.85	62.15
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Electronics and Appliance Stores (NAICS 4431)	6.28	2.68	16.08	0.29	22.52	47.85	52.15
Building Material and Supplies Dealers (NAICS 4441)	8.23	2.70	9.95	0.63	21.99	43.50	56.50
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	9.32	2.30	3.81	0.80	32.40	48.63	51.37
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.80	52.20
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Specialized Freight Trucking (NAICS 4842)	24.60	8.06	6.39	0.12	12.38	51.55	48.45
Urban Transit Systems (NAICS 4851)	42.76	5.94	4.39	0.08	8.79	61.96	38.04
Taxi and Limousine Service (NAICS 4853)	19.86	8.92	6.31	0.06	10.85	46.00	54.00
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Charter Bus Industry (NAICS 4855)	27.19	7.25	7.69	0.05	11.71	53.89	46.11
Other Transit and Ground Passenger Transportation (NAICS 4859)	31.83	7.15	5.69	0.12	11.21	56.00	44.00
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	11.10	0.85	6.86	0.03	28.62	47.46	52.54
Motion Picture and Video Industries (NAICS 5121)	13.87	1.78	5.53	0.24	30.78	52.19	47.81
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Other Information Services (NAICS 5191)	11.33	1.12	6.68	0.00	29.25	48.38	51.62
Depository Credit Intermediation (NAICS 5221)	11.20	0.02	5.35	0.00	24.39	40.96	59.04
Activities Related to Credit Intermediation (NAICS 5223)	12.15	0.30	5.62	0.00	25.85	43.94	56.06
Other Financial Investment Activities (NAICS 5239)	13.18	0.28	5.44	0.00	24.49	43.39	56.61

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Lessors of Real Estate (NAICS 5311)	14.10	5.36	4.21	0.00	11.44	35.10	64.90
Consumer Goods Rental (NAICS 5322)	11.62	2.07	5.43	0.00	23.25	42.36	57.64
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.00	6.66	3.85	0.00	11.79	36.31	63.69
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.12	3.92	8.67	0.11	14.10	33.91	66.09
Architectural, Engineering, and Related Services (NAICS 5413)	8.62	4.27	11.92	0.41	13.32	38.53	61.47
Specialized Design Services (NAICS 5414)	13.25	2.28	5.24	0.14	39.07	59.97	40.03
Computer Systems Design and Related Services (NAICS 5415)	11.56	3.82	17.33	0.47	13.86	47.03	52.97
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.72	2.39	7.32	0.33	26.98	53.73	46.27
Scientific Research and Development Services (NAICS 5417)	9.95	1.96	9.13	0.25	25.75	47.05	52.95
Advertising, Public Relations, and Related Services (NAICS 5418)	11.57	2.17	7.01	0.08	26.71	47.54	52.46
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.59	2.08	5.67	0.14	32.97	53.44	46.56
Employment Services (NAICS 5613)	19.49	6.09	6.38	0.43	18.80	51.19	48.81
Business Support Services (NAICS 5614)	13.44	0.73	5.83	0.06	26.76	46.82	53.18
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Services to Buildings and Dwellings (NAICS 5617)	15.73	6.63	4.60	0.18	12.43	39.58	60.42
Waste Treatment and Disposal (NAICS 5622)	18.37	7.52	3.84	0.00	9.09	38.82	61.18
Offices of Other Health Practitioners (NAICS 6213)	9.68	0.48	4.01	0.50	37.97	52.64	47.36
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Automotive Repair and Maintenance (NAICS 8111)	25.34	5.67	6.58	0.13	13.03	50.75	49.25
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	13.83	3.03	7.20	0.81	13.82	38.68	61.32

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Personal and Household Goods Repair and Maintenance (NAICS 8114)	14.90	3.32	7.01	0.82	12.80	38.85	61.15
Drycleaning and Laundry Services (NAICS 8123)	28.05	5.24	8.45	0.00	15.20	56.95	43.05
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.17	6.20	6.29	0.00	12.68	50.35	49.65

Source and Notes: See Table 2.17.

**Table 2.21.C. Detailed DBE Availability—Services (MAA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Nonresidential Building Construction (NAICS 2362)	7.36	3.68	1.88	0.52	14.94	28.38	71.62
Printing and Related Support Activities (NAICS 3231)	10.57	0.00	7.06	2.38	26.60	46.61	53.39
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Urban Transit Systems (NAICS 4851)	42.77	5.94	4.39	0.08	8.79	61.96	38.04
Taxi and Limousine Service (NAICS 4853)	19.86	8.92	6.31	0.06	10.85	46.00	54.00
Motion Picture and Video Industries (NAICS 5121)	13.87	1.78	5.53	0.24	30.78	52.19	47.81
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.01	6.68	3.85	0.00	11.77	36.30	63.70
Architectural, Engineering, and Related Services (NAICS 5413)	8.63	4.26	12.01	0.39	13.16	38.46	61.54
Specialized Design Services (NAICS 5414)	13.07	2.18	5.38	0.13	38.51	59.27	40.73
Computer Systems Design and Related Services (NAICS 5415)	11.53	3.82	17.34	0.47	13.86	47.02	52.98
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.49	1.50	7.12	0.06	26.65	51.82	48.18
Scientific Research and Development Services (NAICS 5417)	10.19	1.72	8.96	0.25	26.97	48.08	51.92
Advertising, Public Relations, and Related Services (NAICS 5418)	8.85	4.04	8.28	0.26	21.43	42.86	57.14
Other Professional, Scientific, and Technical Services (NAICS 5419)	8.55	3.82	7.95	0.26	17.49	38.07	61.93
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Colleges, Universities, and Professional Schools (NAICS 6113)	14.80	2.44	7.30	0.00	14.70	39.23	60.77
Offices of Other Health Practitioners (NAICS 6213)	8.21	0.54	3.67	0.47	38.56	51.45	48.55

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Performing Arts Companies (NAICS 7111)	18.12	3.45	7.48	0.25	21.50	50.80	49.20
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.17	6.20	6.29	0.00	12.68	50.35	49.65

Source and Notes: See Table 2.17.

**Table 2.22.A. Detailed DBE Availability—CSE (SHA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.59	1.64	12.02	1.06	18.16	41.47	58.53
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.55	0.69	9.24	0.80	24.43	47.71	52.29

Source and Notes: See Table 2.17.

**Table 2.22.B. Detailed DBE Availability—CSE (MTA)**

Industry Group	African American	Hispanic	Asian	Native American	WBE	DBE	Non-DBE
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	15.63	0.00	8.10	2.18	19.78	45.69	54.31
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	9.57	0.93	10.42	2.31	12.14	35.37	64.63
Communications Equipment Manufacturing (NAICS 3342)	7.90	0.37	8.33	0.67	16.86	34.13	65.87
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	15.72	0.00	8.32	2.08	8.32	34.44	65.56
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.75	0.59	8.97	2.32	11.55	30.18	69.82
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	6.84	0.16	8.59	1.83	13.53	30.95	69.05
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.37	8.10	0.69	18.20	33.11	66.89
Automobile Dealers (NAICS 4411)	9.16	2.90	4.55	0.91	19.59	37.11	62.89
Clothing Stores (NAICS 4481)	10.56	2.65	6.53	0.90	27.06	47.70	52.30
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.01	6.68	3.85	0.00	11.77	36.30	63.70
Architectural, Engineering, and Related Services (NAICS 5413)	8.73	4.29	12.33	0.42	12.75	38.52	61.48
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.49	1.31	7.06	0.00	26.53	51.39	48.61
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28

Source and Notes: See Table 2.17.

**Table 2.22.C. Detailed DBE Availability—CSE (MAA)**

<b>Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>WBE</b>	<b>DBE</b>	<b>Non-DBE</b>
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Other Fabricated Metal Product Manufacturing (NAICS 3329)	5.40	0.00	6.79	2.61	35.88	50.68	49.32
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Communications Equipment Manufacturing (NAICS 3342)	7.42	1.69	9.29	0.98	17.60	36.98	63.02
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.88	0.77	8.21	1.15	17.99	34.01	65.99
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	6.38	2.63	15.74	0.27	20.56	45.58	54.42
Scheduled Air Transportation (NAICS 4811)	9.65	2.82	8.47	0.00	11.29	32.24	67.76
Automotive Equipment Rental and Leasing (NAICS 5321)	11.07	0.33	5.49	0.00	24.95	41.84	58.16

Source and Notes: See Table 2.17.

**Table 2.23.A. Estimated Availability (Award Dollar Weights)—Overall and By Major Procurement Category (SHA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.06	3.16	5.09	0.36	18.68	15.63	34.30	65.70
AE-CRS	9.49	4.02	11.76	0.40	25.68	14.36	40.04	59.96
MAINTENANCE	9.15	3.40	3.13	0.27	15.95	13.28	29.24	70.76
IT	15.32	3.79	13.61	0.53	33.25	16.69	49.94	50.06
SERVICES	16.24	4.14	8.51	0.37	29.26	20.56	49.82	50.18
CSE	8.32	0.95	10.57	0.92	20.76	20.91	41.67	58.33
TOTAL	10.11	3.52	7.75	0.38	21.76	15.16	36.92	63.08

Source and Notes: See Table 2.17.

**Table 2.23.B. Estimated Availability (Award Dollar Weights)—Overall and By Major Procurement Category (MTA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.14	3.23	3.30	0.28	14.96	11.62	26.58	73.42
AE-CRS	11.64	3.62	10.64	0.39	26.30	17.45	43.75	56.25
MAINTENANCE	15.19	3.92	6.29	0.51	25.90	16.47	42.37	57.63
IT	9.63	4.04	12.80	0.45	26.92	13.66	40.58	59.42
SERVICES	15.22	3.56	8.35	0.27	27.40	18.72	46.11	53.89
CSE	8.60	2.45	8.20	0.92	20.17	15.40	35.57	64.43
TOTAL	11.42	3.50	8.65	0.38	23.96	16.28	40.24	59.76

Source and Notes: See Table 2.17.

**Table 2.23.C. Estimated Availability (Award Dollar Weights)—Overall and By Major Procurement Category (MAA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.28	3.84	3.46	0.37	16.95	12.47	29.42	70.58
AE-CRS	11.33	3.49	10.78	0.37	25.98	17.45	43.43	56.57
MAINTENANCE	18.36	6.61	5.77	0.25	30.98	16.69	47.67	52.33
SERVICES	15.34	3.66	10.00	0.30	29.30	18.66	47.96	52.04
CSE	7.89	2.37	9.64	0.85	20.75	17.43	38.18	61.82
TOTAL	13.10	4.49	7.70	0.34	25.63	16.21	41.83	58.17

Source and Notes: See Table 2.17.

**Table 2.24.A. Estimated Availability (Paid Dollar Weights)—Overall and By Major Procurement Category (SHA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.08	3.24	5.40	0.37	19.09	15.51	34.60	65.40
AE-CRS	9.61	4.01	11.74	0.40	25.76	14.46	40.22	59.78
MAINTENANCE	9.14	3.57	3.07	0.30	16.09	13.24	29.33	70.67
IT	14.69	3.57	13.30	0.48	32.04	17.78	49.82	50.18
SERVICES	14.83	2.56	9.13	0.29	26.80	23.36	50.16	49.84
CSE	8.32	0.95	10.57	0.92	20.76	20.91	41.67	58.33
TOTAL	10.07	3.46	7.23	0.38	21.14	15.25	36.40	63.60

Source and Notes: See Table 2.17.

**Table 2.24.B. Estimated Availability (Paid Dollar Weights)—Overall and By Major Procurement Category (MTA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.56	3.34	3.50	0.31	15.71	12.03	27.74	72.26
AE-CRS	12.99	3.43	10.31	0.40	27.13	18.95	46.08	53.92
MAINTENANCE	13.79	3.00	6.29	0.55	23.63	17.13	40.76	59.24
IT	9.56	4.07	12.86	0.45	26.94	13.53	40.47	59.53
SERVICES	15.84	3.64	8.31	0.28	28.07	19.08	47.15	52.85
CSE	8.60	2.45	8.20	0.92	20.17	15.40	35.57	64.43
TOTAL	12.10	3.40	8.22	0.40	24.11	16.86	40.97	59.03

Source and Notes: See Table 2.17.

**Table 2.24.C. Estimated Availability (Paid Dollar Weights)—Overall and By Major Procurement Category (MAA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	9.58	3.88	3.60	0.40	17.46	12.41	29.87	70.13
AE-CRS	10.81	3.62	11.06	0.38	25.88	16.59	42.47	57.53
MAINTENANCE	19.18	6.87	5.97	0.21	32.22	17.15	49.38	50.62
SERVICES	17.96	3.51	9.20	0.30	30.98	18.67	49.65	50.35
CSE	7.89	2.37	9.64	0.85	20.75	17.43	38.18	61.82
TOTAL	13.24	4.71	7.14	0.34	25.43	15.57	41.00	59.00

Source and Notes: See Table 2.17.

**Table 2.25.A. Estimated Availability (Award Dollar Weights)—Federally-Assisted Contracts Only, Overall and By Major Procurement Category (SHA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.17	3.08	5.29	0.36	18.90	16.02	34.92	65.08
AE-CRS	9.40	4.05	11.80	0.40	25.65	14.22	39.87	60.13
MAINTENANCE	7.28	3.10	2.39	0.24	13.00	11.66	24.66	75.34
IT	14.15	4.04	15.40	0.56	34.14	14.11	48.25	51.75
SERVICES	16.26	4.16	8.68	0.38	29.49	20.41	49.90	50.10
CSE	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL	9.89	3.48	7.88	0.38	21.63	15.19	36.82	63.18

Source and Notes: See Table 2.17.

**Table 2.25.B. Estimated Availability (Award Dollar Weights)—Federally-Assisted Contracts Only, Overall and By Major Procurement Category (MTA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.14	3.23	3.30	0.28	14.96	11.62	26.58	73.42
AE-CRS	11.63	3.63	10.64	0.40	26.29	17.42	43.71	56.29
MAINTENANCE	15.19	3.92	6.28	0.51	25.90	16.47	42.37	57.63
IT	9.18	4.03	12.62	0.44	26.28	13.64	39.91	60.09
SERVICES	15.21	3.57	8.34	0.27	27.39	18.65	46.04	53.96
CSE	8.51	2.07	7.49	1.03	19.09	15.80	34.89	65.11
TOTAL	11.42	3.50	8.59	0.38	23.88	16.26	40.13	59.87

Source and Notes: See Table 2.17.

**Table 2.25.C. Estimated Availability (Award Dollar Weights)—Federally-Assisted Contracts Only, Overall and By Major Procurement Category (MAA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.16	3.75	2.00	0.34	14.25	11.33	25.58	74.42
AE-CRS	11.02	3.46	10.44	0.36	25.28	17.59	42.87	57.13
CSE	9.56	3.47	6.50	0.98	20.51	14.89	35.40	64.60
TOTAL	10.52	3.51	8.95	0.36	23.33	16.48	39.82	60.18

Source and Notes: See Table 2.17.

**Table 2.26.A. Estimated Availability (Paid Dollar Weights)— Federally-Assisted Contracts Only, Overall and By Major Procurement Category (SHA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	10.19	3.13	5.67	0.37	19.36	16.01	35.38	64.62
AE-CRS	9.50	4.03	11.76	0.41	25.69	14.32	40.02	59.98
MAINTENANCE	7.08	3.26	2.31	0.26	12.91	11.87	24.78	75.22
IT	14.62	4.00	15.13	0.57	34.32	14.40	48.72	51.28
SERVICES	15.06	2.55	9.38	0.30	27.29	23.39	50.68	49.32
CSE	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL	9.96	3.41	7.49	0.38	21.24	15.44	36.68	63.32

Source and Notes: See Table 2.17.

**Table 2.26.B. Estimated Availability (Paid Dollar Weights)— Federally-Assisted Contracts Only, Overall and By Major Procurement Category (MTA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.56	3.34	3.50	0.31	15.71	12.03	27.74	72.26
AE-CRS	12.96	3.44	10.34	0.40	27.14	18.85	46.00	54.00
MAINTENANCE	13.80	3.00	6.28	0.55	23.63	17.13	40.76	59.24
IT	9.10	4.06	12.68	0.44	26.29	13.50	39.79	60.21
SERVICES	15.84	3.65	8.30	0.28	28.06	19.04	47.11	52.89
CSE	8.51	2.07	7.49	1.03	19.09	15.80	34.89	65.11
TOTAL	12.09	3.40	8.13	0.40	24.01	16.81	40.82	59.18

Source and Notes: See Table 2.17.

**Table 2.26.C. Estimated Availability (Paid Dollar Weights)— Federally-Assisted Contracts Only, Overall and By Major Procurement Category (MAA)**

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	DBE	Non-DBE
CONSTRUCTION	8.54	3.62	2.16	0.34	14.66	10.85	25.51	74.49
AE-CRS	10.82	3.50	10.58	0.36	25.26	17.25	42.51	57.49
CSE	9.56	3.47	6.50	0.98	20.51	14.89	35.40	64.60
TOTAL	10.17	3.53	8.18	0.36	22.25	15.44	37.69	62.31

Source and Notes: See Table 2.17.

**Table 5.1.A. DBE Utilization at SHA (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.06	3.21	2.63	4.97	58.81	0.00	3.98
Hispanic	2.67	0.27	3.47	0.00	0.21	0.00	2.26
Asian	0.44	13.32	0.19	7.86	3.47	0.00	2.61
Native American	2.50	0.00	0.00	0.00	0.00	0.00	1.88
Minority	8.68	16.80	6.29	12.83	62.49	0.00	10.73
Nonminority Female	19.45	10.15	22.80	3.15	18.52	0.00	17.90
DBE	28.13	26.95	29.10	15.98	81.01	0.00	28.63
Non-DBE	71.87	73.05	70.90	84.02	18.99	100.00	71.37
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,798,100,819	584,695,286	218,437,685	56,994,821	60,166,414	4,599,560	3,722,994,585

Source: See Table 5.1.

**Table 5.1.B. DBE Utilization at MTA (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	5.55	3.27	4.83	0.00	2.24	0.00	2.37
Hispanic	2.42	3.91	0.59	0.00	0.74	0.00	1.22
Asian	3.23	7.43	0.00	33.23	0.56	0.77	2.49
Native American	0.09	0.00	0.00	0.00	0.01	0.00	0.01
Minority	11.29	14.61	5.42	33.23	3.55	0.77	6.09
Nonminority Female	3.73	6.88	0.16	0.00	2.41	0.00	2.51
DBE	15.02	21.48	5.58	33.23	5.95	0.77	8.60
Non-DBE	84.98	78.52	94.42	66.77	94.05	99.23	91.40
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	130,703,368	178,271,741	69,909,940	21,241,881	514,970,126	266,255,412	1,181,352,468

Source: See Table 5.1.

**Table 5.1.C. DBE Utilization at MAA (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	8.47	3.83	3.97	n/a	15.86	0.00	7.94
Hispanic	2.89	3.40	0.00	n/a	3.63	0.00	2.31
Asian	0.24	2.36	0.00	n/a	1.51	0.00	0.91
Native American	0.00	0.00	0.00	n/a	0.00	0.00	0.00
Minority	11.60	9.58	3.97	n/a	21.00	0.00	11.15
Nonminority Female	4.73	5.35	2.39	n/a	0.17	0.00	2.90
DBE	16.33	14.93	6.36	n/a	21.17	0.00	14.05
Non-DBE	83.67	85.07	93.64	n/a	78.83	100.00	85.95
Total (%)	100.00	100.00	100.00	n/a	100.00	100.00	100.00
Total (\$)	146,627,925	116,216,425	155,678,879	n/a	150,481,244	22,281,691	591,286,164

Source: See Table 5.1.

**Table 5.2.A. DBE Utilization at SHA (Dollars Paid)**

<b>DBE Type</b>	<b>Procurement Category</b>						
	<b>Construction</b>	<b>AE-CRS</b>	<b>Maintenance</b>	<b>IT</b>	<b>Services</b>	<b>CSE</b>	<b>Overall</b>
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	2.59	2.38	1.42	5.53	7.45	0.00	2.55
Hispanic	2.87	0.36	1.24	0.00	1.01	0.00	2.44
Asian	0.53	14.99	0.10	23.89	13.33	0.00	2.45
Native American	4.02	0.00	0.03	0.00	0.00	0.00	3.25
Minority	10.00	17.73	2.79	29.42	21.80	0.00	10.70
Nonminority Female	18.22	10.45	13.47	1.47	18.62	0.00	16.83
DBE	28.22	28.18	16.26	30.89	40.42	0.00	27.53
Non-DBE	71.78	71.82	83.74	69.11	59.58	100.00	72.47
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	2,019,677,364	273,273,883	153,065,926	32,529,365	12,259,463	4,599,560	2,495,405,561

Source: See Table 5.1.

**Table 5.2.B. DBE Utilization at MTA (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	6.81	2.49	5.57	0.00	1.84	0.00	2.16
Hispanic	2.57	4.97	0.65	0.00	0.52	0.00	1.00
Asian	4.08	4.15	0.00	37.24	0.32	0.77	1.99
Native American	0.11	0.00	0.00	0.00	0.00	0.00	0.01
Minority	13.57	11.61	6.22	37.24	2.68	0.77	5.17
Nonminority Female	5.72	3.30	0.15	0.00	1.84	0.00	1.71
DBE	19.29	14.91	6.37	37.24	4.52	0.77	6.88
Non-DBE	80.71	85.09	93.63	62.76	95.48	99.23	93.12
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	103,535,141	80,595,442	64,747,088	18,953,640	359,860,436	266,255,412	893,947,159

Source: See Table 5.1.

**Table 5.2.C. DBE Utilization at MAA (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	7.78	3.59	3.13	n/a	15.33	0.00	7.18
Hispanic	3.46	2.64	0.00	n/a	4.07	0.00	2.44
Asian	0.23	1.95	0.00	n/a	0.45	0.00	0.48
Native American	0.00	0.00	0.00	n/a	0.00	0.00	0.00
Minority	11.47	8.17	3.13	n/a	19.84	0.00	10.10
Nonminority Female	4.59	5.45	2.60	n/a	0.16	0.00	3.06
DBE	16.06	13.63	5.73	n/a	20.00	0.00	13.16
Non-DBE	83.94	86.37	94.27	n/a	80.00	100.00	86.84
Total (%)	100.00	100.00	100.00	n/a	100.00	100.00	100.00
Total (\$)	137,940,405	64,617,918	98,807,029	n/a	87,313,888	22,281,691	410,960,931

Source: See Table 5.1.

**Table 5.3.A. DBE Utilization at SHA on Federally-Assisted Contracts (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	3.10	3.24	0.91	11.94	69.57	n/a	4.14
Hispanic	1.96	0.28	1.09	0.00	0.00	n/a	1.59
Asian	0.42	13.43	0.16	4.97	4.11	n/a	2.78
Native American	2.77	0.00	0.00	0.00	0.00	n/a	2.12
Minority	8.26	16.96	2.15	16.91	73.68	n/a	10.62
Nonminority Female	20.71	9.94	28.10	7.96	9.91	n/a	18.85
DBE	28.97	26.89	30.26	24.87	83.59	n/a	29.48
Non-DBE	71.03	73.11	69.74	75.13	16.41	n/a	70.52
Total (%)	100.00	100.00	100.00	100.00	100.00	n/a	100.00
Total (\$)	2,496,792,072	573,453,575	126,834,343	22,420,445	50,862,705	0	3,270,363,140

Source: See Table 5.1.

**Table 5.3.B. DBE Utilization at MTA on Federally-Assisted Contracts (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	5.55	3.35	4.83	0.00	2.24	0.00	2.40
Hispanic	2.42	4.04	0.59	0.00	0.74	0.00	1.23
Asian	3.23	7.40	0.00	33.95	0.52	0.79	2.47
Native American	0.09	0.00	0.00	0.00	0.01	0.00	0.01
Minority	11.29	14.79	5.43	33.95	3.51	0.79	6.11
Nonminority Female	3.73	7.08	0.16	0.00	2.41	0.00	2.54
DBE	15.02	21.87	5.58	33.95	5.92	0.79	8.65
Non-DBE	84.98	78.13	94.42	66.05	94.08	99.21	91.35
Total (%)	100.00	100.00	100.00	100.00	100.00	n/a	100.00
Total (\$)	130,703,368	172,719,483	69,855,878	20,788,208	514,486,907	257,616,760	1,166,170,604

Source: See Table 5.1.

**Table 5.3.C. DBE Utilization at MAA on Federally-Assisted Contracts (Dollars Awarded)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	7.55	4.50	n/a	n/a	n/a	0.00	5.38
Hispanic	4.64	3.41	n/a	n/a	n/a	0.00	3.67
Asian	0.01	2.03	n/a	n/a	n/a	0.00	1.13
Native American	0.00	0.00	n/a	n/a	n/a	0.00	0.00
Minority	12.20	9.93	n/a	n/a	n/a	0.00	10.18
Nonminority Female	5.71	5.01	n/a	n/a	n/a	0.00	4.96
DBE	17.92	14.94	n/a	n/a	n/a	0.00	15.15
Non-DBE	82.08	85.06	n/a	n/a	n/a	100.00	84.85
Total (%)	100.00	100.00	n/a	n/a	n/a	n/a	100.00
Total (\$)	54,020,779	78,307,424	n/a	n/a	n/a	8,841,892	141,170,095

Source: See Table 5.1.

**Table 5.4.A. DBE Utilization at SHA on Federally-Assisted Contracts (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	2.58	2.41	1.00	10.00	11.32	n/a	2.59
Hispanic	1.89	0.38	0.97	0.00	0.00	n/a	1.64
Asian	0.50	15.32	0.05	2.94	20.25	n/a	2.44
Native American	4.66	0.00	0.06	0.00	0.00	n/a	3.83
Minority	9.62	18.10	2.07	12.94	31.57	n/a	10.50
Nonminority Female	19.89	10.10	10.22	2.79	16.73	n/a	18.12
DBE	29.51	28.20	12.29	15.73	48.30	n/a	28.63
Non-DBE	70.49	71.80	87.71	84.27	51.70	n/a	71.37
Total (%)	100.00	100.00	100.00	100.00	100.00	n/a	100.00
Total (\$)	1,727,568,704	264,580,982	83,072,998	16,667,231	8,070,208	0	2,099,960,123

Source: See Table 5.1.

**Table 5.4.B. DBE Utilization at MTA on Federally-Assisted Contracts (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	6.81	2.56	5.58	0.00	1.84	0.00	2.18
Hispanic	2.57	5.19	0.65	0.00	0.52	0.00	1.02
Asian	4.08	3.73	0.00	38.15	0.28	0.79	1.96
Native American	0.11	0.00	0.00	0.00	0.00	0.00	0.01
Minority	13.57	11.48	6.23	38.15	2.65	0.79	5.17
Nonminority Female	5.72	3.42	0.15	0.00	1.85	0.00	1.74
DBE	19.29	14.90	6.37	38.15	4.49	0.79	6.91
Non-DBE	80.71	85.10	93.63	61.85	95.51	99.21	93.09
Total (%)	100.00	100.00	100.00	100.00	100.00	n/a	100.00
Total (\$)	103,535,141	77,068,340	64,693,026	18,499,967	359,472,713	257,616,760	880,885,947

Source: See Table 5.1.

**Table 5.4.C. DBE Utilization at MAA on Federally-Assisted Contracts (Dollars Paid)**

DBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	5.31	4.60	n/a	n/a	n/a	0.00	4.56
Hispanic	5.35	3.24	n/a	n/a	n/a	0.00	4.07
Asian	0.01	0.93	n/a	n/a	n/a	0.00	0.36
Native American	0.00	0.00	n/a	n/a	n/a	0.00	0.00
Minority	10.67	8.77	n/a	n/a	n/a	0.00	8.99
Nonminority Female	5.30	5.05	n/a	n/a	n/a	0.00	4.72
DBE	15.97	13.83	n/a	n/a	n/a	0.00	13.71
Non-DBE	84.03	86.17	n/a	n/a	n/a	100.00	86.29
Total (%)	100.00	100.00	n/a	n/a	n/a	100.00	100.00
Total (\$)	51,732,495	36,309,909	n/a	n/a	n/a	8,841,892	96,884,296

Source: See Table 5.1.

**Table 5.21.A. Current Availability and Expected Availability for the SHA**

<b>Contracting Category/ DBE Type</b>	<b>Award Dollar Weights</b>		<b>Paid Dollar Weights</b>	
	<b>Current Availability</b>	<b>Expected Availability</b>	<b>Current Availability</b>	<b>Expected Availability</b>
<b>CONSTRUCTION</b>				
African American	10.06	14.22	10.08	14.25
Hispanic	3.16	6.17	3.24	6.33
Asian/Pacific Islander	5.09	7.44	5.40	7.89
Native American	0.36	0.56	0.37	0.58
Minority	18.68	33.85	19.09	34.60
Nonminority female	15.63	24.03	15.51	23.85
DBE total	34.30	54.91	34.60	55.39
<b>AE-CRS</b>				
African American	9.49	13.42	9.61	13.59
Hispanic	4.02	7.85	4.01	7.83
Asian/Pacific Islander	11.76	17.19	11.74	17.16
Native American	0.40	0.62	0.40	0.62
Minority	25.68	46.54	25.76	46.68
Nonminority female	14.36	22.08	14.46	22.23
DBE total	40.04	64.09	40.22	64.38
<b>MAINTENANCE</b>				
African American	9.15	12.94	9.14	12.92
Hispanic	3.40	6.64	3.57	6.97
Asian/Pacific Islander	3.13	4.57	3.07	4.49
Native American	0.27	0.42	0.30	0.47
Minority	15.95	28.91	16.09	29.16
Nonminority female	13.28	20.42	13.24	20.36
DBE total	29.24	46.81	29.33	46.95
<b>IT</b>				
African American	15.32	34.51	14.69	33.09
Hispanic	3.79	6.08	3.57	5.73
Asian/Pacific Islander	13.61	17.23	13.30	16.84
Native American	0.53	0.68	0.48	0.61
Minority	33.25	50.76	32.04	48.91
Nonminority female	16.69	20.57	17.78	21.92
DBE total	49.94	66.97	49.82	66.81
<b>SERVICES</b>				
African American	16.24	36.58	14.83	33.41
Hispanic	4.14	6.65	2.56	4.11
Asian/Pacific Islander	8.51	10.78	9.13	11.56
Native American	0.37	0.47	0.29	0.37
Minority	29.26	44.66	26.80	40.91
Nonminority female	20.56	25.34	23.36	28.79
DBE total	49.82	66.81	50.16	67.27

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
CSE				
African American	8.32	18.74	8.32	18.74
Hispanic	0.95	1.52	0.95	1.52
Asian/Pacific Islander	10.57	13.38	10.57	13.38
Native American	0.92	1.17	0.92	1.17
Minority	20.76	31.69	20.76	31.69
Nonminority female	20.91	25.77	20.91	25.77
DBE total	41.67	55.88	41.67	55.88
OVERALL				
African American	10.11	18.65	10.07	18.58
Hispanic	3.52	5.42	3.46	5.33
Asian/Pacific Islander	7.75	9.11	7.23	8.50
Native American	0.38	0.47	0.38	0.47
Minority	21.76	33.77	21.14	32.81
Nonminority female	15.16	19.52	15.25	19.64
DBE total	36.92	50.85	36.40	50.13

Source: See Tables 2.23, 2.24, 3.12.

**Table 5.21.B. Current Availability and Expected Availability for the MTA**

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
<b>CONSTRUCTION</b>				
African American	8.14	11.51	8.56	12.10
Hispanic	3.23	6.31	3.34	6.52
Asian/Pacific Islander	3.30	4.82	3.50	5.12
Native American	0.28	0.44	0.31	0.48
Minority	14.96	27.11	15.71	28.47
Nonminority female	11.62	17.87	12.03	18.50
DBE total	26.58	42.55	27.74	44.41
<b>AE-CRS</b>				
African American	11.64	16.46	12.99	18.37
Hispanic	3.62	7.07	3.43	6.70
Asian/Pacific Islander	10.64	15.55	10.31	15.07
Native American	0.39	0.61	0.40	0.62
Minority	26.30	47.66	27.13	49.17
Nonminority female	17.45	26.83	18.95	29.14
DBE total	43.75	70.03	46.08	73.76
<b>MAINTENANCE</b>				
African American	15.19	21.48	13.79	19.50
Hispanic	3.92	7.66	3.00	5.86
Asian/Pacific Islander	6.29	9.19	6.29	9.19
Native American	0.51	0.79	0.55	0.86
Minority	25.90	46.94	23.63	42.82
Nonminority female	16.47	25.32	17.13	26.34
DBE total	42.37	67.82	40.76	65.25
<b>IT</b>				
African American	9.63	21.69	9.56	21.54
Hispanic	4.04	6.48	4.07	6.53
Asian/Pacific Islander	12.80	16.21	12.86	16.28
Native American	0.45	0.57	0.45	0.57
Minority	26.92	41.09	26.94	41.12
Nonminority female	13.66	16.84	13.53	16.68
DBE total	40.58	54.42	40.47	54.27
<b>SERVICES</b>				
African American	15.22	34.29	15.84	35.68
Hispanic	3.56	5.71	3.64	5.84
Asian/Pacific Islander	8.35	10.57	8.31	10.52
Native American	0.27	0.34	0.28	0.36
Minority	27.40	41.83	28.07	42.85
Nonminority female	18.72	23.07	19.08	23.52
DBE total	46.11	61.83	47.15	63.23

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
CSE				
African American	8.60	19.37	8.60	19.37
Hispanic	2.45	3.93	2.45	3.93
Asian/Pacific Islander	8.20	10.38	8.20	10.38
Native American	0.92	1.17	0.92	1.17
Minority	20.17	30.79	20.17	30.79
Nonminority female	15.40	18.98	15.40	18.98
DBE total	35.57	47.70	35.57	47.70
OVERALL				
African American	11.42	21.07	12.10	22.32
Hispanic	3.50	5.39	3.40	5.24
Asian/Pacific Islander	8.65	10.16	8.22	9.66
Native American	0.38	0.47	0.40	0.50
Minority	23.96	37.19	24.11	37.42
Nonminority female	16.28	20.97	16.86	21.71
DBE total	40.24	55.42	40.97	56.42

Source: See Tables 2.23, 2.24, 3.12.

**Table 5.21.C. Current Availability and Expected Availability for the MAA**

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
<b>CONSTRUCTION</b>				
African American	9.28	13.12	9.58	13.54
Hispanic	3.84	7.50	3.88	7.58
Asian/Pacific Islander	3.46	5.06	3.60	5.26
Native American	0.37	0.58	0.40	0.62
Minority	16.95	30.72	17.46	31.64
Nonminority female	12.47	19.17	12.41	19.08
DBE total	29.42	47.09	29.87	47.81
<b>AE-CRS</b>				
African American	11.33	16.02	10.81	15.28
Hispanic	3.49	6.82	3.62	7.07
Asian/Pacific Islander	10.78	15.76	11.06	16.16
Native American	0.37	0.58	0.38	0.59
Minority	25.98	47.08	25.88	46.90
Nonminority female	17.45	26.83	16.59	25.51
DBE total	43.43	69.52	42.47	67.98
<b>MAINTENANCE</b>				
African American	18.36	25.96	19.18	27.12
Hispanic	6.61	12.91	6.87	13.42
Asian/Pacific Islander	5.77	8.43	5.97	8.73
Native American	0.25	0.39	0.21	0.33
Minority	30.98	56.14	32.22	58.39
Nonminority female	16.69	25.66	17.15	26.37
DBE total	47.67	76.31	49.38	79.05
<b>SERVICES</b>				
African American	15.34	34.56	17.96	40.46
Hispanic	3.66	5.87	3.51	5.63
Asian/Pacific Islander	10.00	12.66	9.20	11.65
Native American	0.30	0.38	0.30	0.38
Minority	29.30	44.73	30.98	47.29
Nonminority female	18.66	23.00	18.67	23.01
DBE total	47.96	64.32	49.65	66.58

Contracting Category/ DBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability	Expected Availability	Current Availability	Expected Availability
CSE				
African American	7.89	17.77	7.89	17.77
Hispanic	2.37	3.80	2.37	3.80
Asian/Pacific Islander	9.64	12.21	9.64	12.21
Native American	0.85	1.08	0.85	1.08
Minority	20.75	31.67	20.75	31.67
Nonminority female	17.43	21.48	17.43	21.48
DBE total	38.18	51.20	38.18	51.20
OVERALL				
African American	13.10	24.17	13.24	24.43
Hispanic	4.49	6.92	4.71	7.26
Asian/Pacific Islander	7.70	9.05	7.14	8.39
Native American	0.34	0.42	0.34	0.42
Minority	25.63	39.78	25.43	39.47
Nonminority female	16.21	20.88	15.57	20.05
DBE total	41.83	57.61	41.00	56.47

Source: See Tables 2.23, 2.24, 3.12.



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# **Disadvantaged Business Enterprise Disparity Study: Volume II**

Prepared for the Maryland Department of  
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## Appendix IV. Utilization, Availability, and Disparity Tables by Detailed Industry Category

This appendix presents DBE utilization, availability, and disparity statistics analogous to those presented in Chapter V, Tables 5.5 through 5.20, according to detailed NAICS Industry Groups.<sup>167</sup>

For all three modal administrations combined, Tables A.1 and A.2 present results for construction contracts using dollars awarded and dollars paid, respectively, as the metric of utilization. These two tables cover all funding sources, both federal and state. Tables A.3 and A.4 are for federally-assisted construction contracts. Tables A.5 through A.24 follow the same format for the other five major procurement categories of AE-CRS, Maintenance, IT, Services, and CSE.

In this Appendix, those tables beginning with “B” detail SHA findings, tables beginning with “C” detail MTA findings, and tables beginning with “D” detail MAA findings. For ease of comparison, we have used the same numbers to refer to the same types of tables across the modal results, *e.g.* table 1 is always for construction contracting, all funds, award dollars, and table 2 is always for construction contracting, all funds, paid dollars, respectively across SHA, MTA and MAA. Not all tables are present for all modal administrations, due to a lack of contract activity in certain procurement categories.<sup>168</sup>

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<sup>167</sup> NAICS codes in each table are presented in descending order according to their dollar-based weight. Comparable statistics were calculated at the NAICS Industry level as well (five-digit and six-digit NAICS). In the interest of space, these results are not reported here. Four-digit NAICS codes are most comparable to four-digit Standard Industrial Classification (SIC) codes, which were used prior to the advent of the NAICS system.

<sup>168</sup> Specifically, Tables B.23 and B.24 are absent for SHA, since there were no federally-assisted CSE contracts during the study period. Tables D.11 and D.12 are absent for MAA, since there were no federally-assisted maintenance contracts during the study period. Tables D.15 and D.16 are absent for MAA, since there were no federally-assisted service contracts during the study period. Tables D.17 through D.20 are absent for MAA, since there were no IT contracts during the study period.

**Table A.1. Industry Group Utilization, Availability, and Disparity Results for MDOT Construction Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.03	8.85	0.34 ****
Hispanic	2.35	3.72	63.21
Asian	0.05	1.06	5.16 **
Native American	0.00	0.39	1.21 *
Minority	2.44	14.02	17.43 ****
Nonminority female	8.01	9.88	81.10
DBE total	10.46	23.91	43.75 **
Nonresidential Building Construction (NAICS 2362)			
African American	8.56	10.38	82.39
Hispanic	0.03	4.93	0.66 ****
Asian	0.04	3.11	1.31 ****
Native American	0.00	0.84	0.00 ***
Minority	8.63	19.26	44.79 **
Nonminority female	1.25	13.17	9.51 ****
DBE total	9.88	32.43	30.47 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	17.19	8.32	
Hispanic	19.29	3.48	
Asian	2.47	2.68	92.26
Native American	35.17	0.33	
Minority	74.11	14.81	
Nonminority female	5.68	12.74	44.58 *
DBE total	79.79	27.54	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.13	8.58	1.46 ****
Hispanic	0.01	4.28	0.17 ****
Asian	3.76	12.00	31.37 ****
Native American	0.00	0.40	0.00 ****
Minority	3.90	25.26	15.42 ****
Nonminority female	5.72	12.90	44.36 ****
DBE total	9.62	38.16	25.21 ****
Building Equipment Contractors (NAICS 2382)			
African American	7.23	7.60	95.19
Hispanic	2.33	2.82	82.88
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00
Minority	9.57	13.37	71.56
Nonminority female	11.66	10.90	
DBE total	21.22	24.27	87.46
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.25	6.03	4.18 **
Hispanic	0.08	0.19	43.37
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.74	0.00 *
Minority	0.33	14.47	2.31 ****
Nonminority female	2.26	14.96	15.09 *
DBE total	2.59	29.43	8.81 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.92	26.77	3.44 *
DBE total	0.92	46.76	1.97 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	11.68	6.37	
Hispanic	1.30	3.05	42.66
Asian	0.31	2.53	12.38
Native American	0.00	0.16	0.00
Minority	13.29	12.10	
Nonminority female	13.12	11.10	
DBE total	26.41	23.20	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	1.27	5.44	23.26
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	1.27	14.74	8.58 **
Nonminority female	60.82	17.15	
DBE total	62.09	31.89	
Utility System Construction (NAICS 2371)			
African American	0.00	6.79	0.00 ****
Hispanic	8.94	2.23	
Asian	6.11	0.40	
Native American	0.00	0.49	0.00
Minority	15.04	9.91	
Nonminority female	29.24	10.32	
DBE total	44.28	20.22	
Specialized Freight Trucking (NAICS 4842)			
African American	27.72	29.94	92.57
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.07	0.00
Native American	0.00	0.40	0.00
Minority	27.72	44.05	62.92
Nonminority female	72.01	11.07	
DBE total	99.73	55.12	
Building Finishing Contractors (NAICS 2383)			
African American	0.78	5.75	13.62 ****
Hispanic	4.39	3.48	
Asian	0.00	2.59	0.00 ****
Native American	0.20	0.06	
Minority	5.37	11.87	45.27 *
Nonminority female	56.65	11.17	
DBE total	62.02	23.03	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.30	0.00 ****
Hispanic	5.57	3.41	
Asian	0.00	0.37	0.00
Native American	5.22	0.19	
Minority	10.80	8.28	
Nonminority female	6.26	13.43	46.64
DBE total	17.06	21.70	78.60

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	68.15	23.16	
Hispanic	2.98	9.51	31.33 **
Asian	0.00	5.91	0.00 ****
Native American	0.00	0.22	0.00
Minority	71.13	38.80	
Nonminority female	10.27	10.54	97.44
DBE total	81.40	49.34	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	5.91	14.81	39.90 ****
Hispanic	1.32	1.58	83.18
Asian	0.15	7.41	1.99 ****
Native American	0.00	0.31	0.00 **
Minority	7.37	24.11	30.58 ****
Nonminority female	77.82	29.36	
DBE total	85.19	53.46	
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.87	0.00 ****
Hispanic	0.00	0.90	0.00 ****
Asian	16.15	7.96	
Native American	0.00	0.83	0.00
Minority	16.15	15.57	
Nonminority female	20.20	17.05	
DBE total	36.35	32.62	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.34	15.04	2.27 ****
Hispanic	0.00	6.47	0.00 ****
Asian	0.00	4.45	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.34	26.15	1.31 ****
Nonminority female	35.11	11.87	
DBE total	35.45	38.02	93.24
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.81	0.00
Minority	0.00	14.97	0.00 ****
Nonminority female	4.12	24.56	16.77 **
DBE total	4.12	39.53	10.42 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.36	0.00 ****
Hispanic	0.00	0.34	0.00
Asian	0.63	8.10	7.75 ***
Native American	0.00	0.71	0.00
Minority	0.63	14.51	4.33 ****
Nonminority female	16.96	17.74	95.62
DBE total	17.59	32.25	54.54
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00 ****
Native American	0.00	1.11	0.00
Minority	0.00	15.15	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	31.82	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	85.29	18.26	
DBE total	85.29	24.86	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.41	0.00 ****
Hispanic	0.00	6.24	0.00 ****
Asian	0.00	4.26	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	25.01	0.00 ****
Nonminority female	0.00	11.54	0.00 ****
DBE total	0.00	36.56	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.16	12.26	1.31
DBE total	0.16	57.03	0.28 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.24	5.52	4.40 **
Hispanic	0.00	0.51	0.00
Asian	0.00	8.03	0.00 ****
Native American	0.00	0.75	0.00 *
Minority	0.24	14.81	1.64 ****
Nonminority female	10.32	17.53	58.87
DBE total	10.56	32.34	32.67 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.73	0.00
Hispanic	0.00	0.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.29	0.00
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	17.95	0.00 ****
Other Support Services (NAICS 5619)			
African American	43.16	12.16	
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	43.16	18.68	
Nonminority female	0.00	33.75	0.00 ****
DBE total	43.16	52.43	82.31
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	23.38	0.00 ****
Hispanic	0.00	5.91	0.00 **
Asian	0.00	6.92	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	36.39	0.00 ****
Nonminority female	0.00	13.67	0.00 ****
DBE total	0.00	50.06	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	17.04	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	17.04	14.68	
Nonminority female	24.96	18.44	
DBE total	42.00	33.12	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.31	0.00 ****
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.67	0.00
Minority	0.00	27.11	0.00 ****
Nonminority female	0.51	17.10	3.00
DBE total	0.51	44.22	1.16 ***
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	79.73	17.89	
Hispanic	0.00	3.74	0.00 ****
Asian	0.00	5.85	0.00 ****
Native American	0.00	0.77	0.00
Minority	79.73	28.24	
Nonminority female	1.78	21.36	8.34 **
DBE total	81.51	49.61	
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	50.07	7.84	
Hispanic	3.98	1.39	
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	54.05	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	54.05	29.12	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	13.08	0.00 ****
Hispanic	0.00	3.95	0.00 ****
Asian	0.00	16.54	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	34.10	0.00 ****
Nonminority female	0.70	13.91	5.05 ****
DBE total	0.70	48.00	1.46 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.73	20.41	
DBE total	99.73	46.12	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.18	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.81	0.00 ****
Native American	0.00	1.63	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	14.88	0.00 ****
DBE total	0.00	32.49	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00
Nonminority female	0.00	15.81	0.00
DBE total	0.00	36.81	0.00
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.50	0.00 ****
Hispanic	0.00	6.38	0.00 ****
Asian	0.00	4.75	0.00 **
Native American	0.00	0.30	0.00
Minority	0.00	28.94	0.00 ****
Nonminority female	0.00	11.94	0.00 ****
DBE total	0.00	40.88	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	22.91	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	22.91	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	22.91	30.13	76.03
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	15.66	0.00 ***
Hispanic	0.00	9.81	0.00
Asian	0.00	8.29	0.00
Native American	0.00	1.12	0.00
Minority	0.00	34.88	0.00 ****
Nonminority female	0.00	18.07	0.00 ****
DBE total	0.00	52.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	2.34	5.68	41.15
Hispanic	0.00	0.17	0.00
Asian	0.00	8.73	0.00 ****
Native American	0.00	0.99	0.00
Minority	2.34	15.57	15.00
Nonminority female	0.00	19.43	0.00 ****
DBE total	2.34	35.00	6.67 **
Gasoline Stations (NAICS 4471)			
African American	65.86	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	65.86	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	65.86	46.57	
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.24	0.00 ****
Hispanic	0.00	2.65	0.00
Asian	0.00	9.61	0.00 ****
Native American	0.00	0.65	0.00
Minority	0.00	21.15	0.00 ****
Nonminority female	20.17	21.72	92.85
DBE total	20.17	42.87	47.04 **

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	93.77	21.41	
DBE total	93.77	42.84	
<b>Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)</b>			
African American	0.28	4.95	5.57
Hispanic	0.00	0.00	
Asian	0.00	8.61	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.28	14.31	1.93 ***
Nonminority female	0.00	17.19	0.00 ****
DBE total	0.28	31.50	0.88 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	71.32	17.92	
Hispanic	0.00	2.97	0.00
Asian	0.00	10.70	0.00
Native American	0.00	1.86	0.00
Minority	71.32	33.46	
Nonminority female	28.68	14.99	
DBE total	100.00	48.45	
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.29	0.00
Hispanic	0.00	5.16	0.00
Asian	0.00	4.24	0.00
Native American	0.00	0.05	0.00
Minority	0.00	23.72	0.00
Nonminority female	0.00	13.23	0.00
DBE total	0.00	36.95	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Home Furnishings Stores (NAICS 4422)			
African American	0.00	7.49	0.00
Hispanic	0.00	2.72	0.00
Asian	0.00	13.86	0.00 ****
Native American	0.00	0.87	0.00
Minority	0.00	24.94	0.00 ****
Nonminority female	63.64	29.83	
DBE total	63.64	54.78	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.77	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.35	0.00 ****
Native American	0.00	2.40	0.00
Minority	0.00	18.51	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	30.06	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	18.84	0.00 ****
Hispanic	0.00	6.02	0.00 ***
Asian	0.00	6.00	0.00 ***
Native American	0.00	0.38	0.00
Minority	0.00	31.24	0.00 ****
Nonminority female	0.00	18.69	0.00 ****
DBE total	0.00	49.92	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	2.65	12.52	21.16
Hispanic	0.00	0.68	0.00
Asian	0.00	5.28	0.00 **
Native American	0.00	0.01	0.00
Minority	2.65	18.48	14.33
Nonminority female	96.59	27.92	
DBE total	99.24	46.40	
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	12.04	0.00
Hispanic	0.00	3.58	0.00
Asian	0.00	8.10	0.00
Native American	0.00	0.00	
Minority	0.00	23.72	0.00 ****
Nonminority female	51.65	12.75	
DBE total	51.65	36.46	
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00 ****
Nonminority female	0.00	23.17	0.00 ****
DBE total	0.00	34.47	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Specialized Design Services (NAICS 5414)			
African American	0.00	11.07	0.00
Hispanic	0.00	2.61	0.00
Asian	0.00	3.20	0.00
Native American	0.00	0.00	
Minority	0.00	16.88	0.00 ****
Nonminority female	100.00	46.97	
DBE total	100.00	63.85	
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.88	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.79	0.00 ****
Native American	0.00	0.80	0.00
Minority	0.00	15.55	0.00 ****
Nonminority female	0.00	22.69	0.00 ****
DBE total	0.00	38.24	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.72	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	9.56	0.00 ****
Native American	0.00	1.05	0.00
Minority	0.00	16.67	0.00 ****
Nonminority female	53.26	21.29	
DBE total	53.26	37.96	
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.39	0.00 ****
Native American	0.00	2.38	0.00
Minority	0.00	19.32	0.00 ****
Nonminority female	0.00	19.43	0.00 ****
DBE total	0.00	38.75	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metalworking Machinery Manufacturing (NAICS 3335)</b>			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
<b>Cable and Other Subscription Programming (NAICS 5152)</b>			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
<b>Natural Gas Distribution (NAICS 2212)</b>			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
<b>Plastics Product Manufacturing (NAICS 3261)</b>			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	25.88	0.00 ****
Hispanic	0.00	5.89	0.00
Asian	0.00	7.19	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.07	0.00 ****
Nonminority female	0.00	17.93	0.00 ****
DBE total	0.00	57.00	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00
Nonminority female	0.00	19.53	0.00
DBE total	0.00	36.67	0.00

Source and Notes: See Table 5.5.

**Table A.2. Industry Group Utilization, Availability, and Disparity Results for MDOT Construction Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.04	8.85	0.40 ****
Hispanic	2.60	3.72	69.73
Asian	0.11	1.06	10.19
Native American	0.01	0.39	1.78 *
Minority	2.75	14.02	19.59 ****
Nonminority female	8.63	9.88	87.38
DBE total	11.38	23.91	47.61 ***
Nonresidential Building Construction (NAICS 2362)			
African American	6.85	10.29	66.57
Hispanic	0.04	4.89	0.77 ****
Asian	0.05	3.07	1.54 ****
Native American	0.00	0.83	0.00 ****
Minority	6.93	19.07	36.35 ***
Nonminority female	1.31	13.23	9.91 ****
DBE total	8.24	32.30	25.52 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	5.61	8.38	66.89
Hispanic	18.34	3.39	
Asian	2.59	2.68	96.67
Native American	47.21	0.34	
Minority	73.75	14.79	
Nonminority female	4.27	12.85	33.27 ***
DBE total	78.02	27.64	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.39	8.63	4.57 ****
Hispanic	0.01	4.28	0.17 ****
Asian	3.83	12.11	31.66 ****
Native American	0.00	0.41	0.00 ****
Minority	4.24	25.43	16.65 ****
Nonminority female	4.04	12.88	31.38 ****
DBE total	8.28	38.31	21.60 ****
Building Equipment Contractors (NAICS 2382)			
African American	10.50	7.62	
Hispanic	2.80	2.82	99.19
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00
Minority	13.29	13.39	99.26
Nonminority female	13.48	10.92	
DBE total	26.77	24.31	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.83	6.06	13.68
Hispanic	0.12	0.16	75.21
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.95	14.46	6.58 ****
Nonminority female	3.33	14.85	22.39 *
DBE total	4.28	29.31	14.59 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	9.35	6.39	
Hispanic	1.61	3.05	52.72
Asian	0.28	2.50	11.38
Native American	0.00	0.16	0.00
Minority	11.24	12.09	92.97
Nonminority female	4.20	11.16	37.63
DBE total	15.44	23.25	66.41
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.82	26.77	3.06
DBE total	0.82	46.76	1.75 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.68	0.00 ****
Hispanic	7.34	2.19	
Asian	5.06	0.32	
Native American	0.00	0.50	0.00
Minority	12.40	9.69	
Nonminority female	27.77	10.23	
DBE total	40.18	19.92	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	1.30	5.44	23.85
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	1.30	14.74	8.80 **
Nonminority female	44.87	17.15	
DBE total	46.16	31.89	
Building Finishing Contractors (NAICS 2383)			
African American	1.11	5.73	19.42 ***
Hispanic	6.28	3.47	
Asian	0.00	2.59	0.00 ****
Native American	0.29	0.07	
Minority	7.69	11.87	64.79
Nonminority female	48.43	11.12	
DBE total	56.11	22.98	
General Freight Trucking (NAICS 4841)			
African American	73.61	23.22	
Hispanic	3.49	9.54	36.55 **
Asian	0.00	5.90	0.00 ****
Native American	0.00	0.22	0.00
Minority	77.10	38.89	
Nonminority female	6.05	10.52	57.48
DBE total	83.15	49.40	
Specialized Freight Trucking (NAICS 4842)			
African American	44.13	29.88	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.08	0.00 **
Native American	0.00	0.40	0.00
Minority	44.13	44.00	
Nonminority female	55.08	11.06	
DBE total	99.22	55.07	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	6.91	14.76	46.82 **
Hispanic	1.60	1.59	
Asian	0.19	7.43	2.53 ****
Native American	0.00	0.31	0.00
Minority	8.70	24.10	36.11 ****
Nonminority female	77.69	29.35	
DBE total	86.39	53.45	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.34	0.00 ****
Hispanic	4.63	3.38	
Asian	0.00	0.38	0.00
Native American	6.80	0.20	
Minority	11.42	8.31	
Nonminority female	3.83	13.39	28.61
DBE total	15.25	21.69	70.32
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.59	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.83	0.00 *
Minority	0.00	15.00	0.00 ****
Nonminority female	4.67	24.52	19.05 **
DBE total	4.67	39.52	11.82 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	1.05	0.00 *
Asian	26.12	7.99	
Native American	0.00	0.84	0.00
Minority	26.12	15.80	
Nonminority female	16.24	17.27	94.00
DBE total	42.36	33.07	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.46	8.09	5.74 ****
Native American	0.00	0.71	0.00 ***
Minority	0.46	14.52	3.20 ****
Nonminority female	17.14	17.78	96.36
DBE total	17.60	32.30	54.49
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.63	15.32	4.10 ****
Hispanic	0.00	6.54	0.00 ****
Asian	0.00	4.51	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.63	26.55	2.37 ****
Nonminority female	40.66	12.11	
DBE total	41.29	38.66	
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00
Native American	0.00	1.11	0.00
Minority	0.00	15.16	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	31.82	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.14	5.33	2.55 ***
Hispanic	0.00	0.52	0.00
Asian	0.00	7.98	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.14	14.57	0.94 ****
Nonminority female	5.75	17.22	33.39
DBE total	5.89	31.79	18.52 ****
<b>Support Activities for Crop Production (NAICS 1151)</b>			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	81.59	18.26	
DBE total	81.59	24.86	
<b>Lawn and Garden Equipment and Supplies Stores (NAICS 4442)</b>			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.24	0.00 ****
Asian	0.00	4.27	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	25.02	0.00 ****
Nonminority female	0.00	11.54	0.00 ****
DBE total	0.00	36.56	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	3.84	12.26	31.32
DBE total	3.84	57.03	6.73
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.85	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	1.45	0.00
Nonminority female	0.00	16.49	0.00 ****
DBE total	0.00	17.94	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00 ****
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	23.30	0.00 ****
Hispanic	0.00	5.88	0.00 ****
Asian	0.00	6.93	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	36.29	0.00 ****
Nonminority female	0.00	13.65	0.00 ****
DBE total	0.00	49.94	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	58.02	12.16	
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	58.02	18.68	
Nonminority female	0.00	33.75	0.00 ****
DBE total	58.02	52.43	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.33	0.00 ****
Hispanic	0.00	3.53	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.67	0.00
Minority	0.00	27.14	0.00 ****
Nonminority female	0.51	17.10	2.99
DBE total	0.51	44.24	1.16 *
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	32.10	18.44	
DBE total	32.10	33.12	96.93

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	11.63	20.17	57.65
Hispanic	0.00	5.56	0.00 ****
Asian	0.00	5.55	0.00 ****
Native American	0.00	0.52	0.00
Minority	11.63	31.79	36.57
Nonminority female	2.06	14.50	14.20
DBE total	13.69	46.30	29.56 **
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	59.26	7.84	
Hispanic	7.89	1.39	
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	67.15	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	67.15	29.12	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.91	0.00 ****
Hispanic	0.00	3.94	0.00 ****
Asian	0.00	16.63	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	33.99	0.00 ****
Nonminority female	0.75	13.90	5.41 ****
DBE total	0.75	47.89	1.57 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
<b>Clay Product and Refractory Manufacturing (NAICS 3271)</b>			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
<b>Direct Selling Establishments (NAICS 4543)</b>			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.72	20.41	
DBE total	99.72	46.12	
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
<b>Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)</b>			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00 ****
Nonminority female	0.00	15.81	0.00 ****
DBE total	0.00	36.81	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Gasoline Stations (NAICS 4471)			
African American	67.36	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	67.36	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	67.36	46.57	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.44	0.00 ****
Hispanic	0.00	6.36	0.00 ****
Asian	0.00	4.74	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	28.86	0.00 ****
Nonminority female	0.00	11.79	0.00 ****
DBE total	0.00	40.65	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	2.34	5.68	41.15
Hispanic	0.00	0.17	0.00
Asian	0.00	8.73	0.00 ****
Native American	0.00	0.99	0.00
Minority	2.34	15.57	15.00
Nonminority female	0.00	19.43	0.00 ****
DBE total	2.34	35.00	6.67 **

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	15.28	0.00 ****
Hispanic	0.00	9.27	0.00 ****
Asian	0.00	8.00	0.00 ****
Native American	0.00	1.20	0.00
Minority	0.00	33.74	0.00 ****
Nonminority female	0.00	19.06	0.00 ****
DBE total	0.00	52.80	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.19	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.76	0.00 ****
Native American	0.00	1.65	0.00
Minority	0.00	17.60	0.00 ****
Nonminority female	0.00	14.91	0.00 ****
DBE total	0.00	32.51	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	18.90	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	18.90	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	18.90	30.13	62.74
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Material and Supplies Dealers (NAICS 4441)</b>			
African American	0.00	8.24	0.00 ****
Hispanic	0.00	2.65	0.00
Asian	0.00	9.59	0.00 ****
Native American	0.00	0.65	0.00
Minority	0.00	21.13	0.00 ****
Nonminority female	21.53	21.70	99.19
DBE total	21.53	42.83	50.26 *
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Employment Services (NAICS 5613)</b>			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	5.71	0.00 ****
Native American	0.00	0.34	0.00
Minority	0.00	30.38	0.00 ****
Nonminority female	0.00	18.60	0.00 ****
DBE total	0.00	48.98	0.00 ****
<b>Consumer Goods Rental (NAICS 5322)</b>			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lessors of Real Estate (NAICS 5311)</b>			
African American	0.00	14.30	0.00 ****
Hispanic	0.00	5.14	0.00
Asian	5.53	4.24	
Native American	0.00	0.05	0.00
Minority	5.53	23.73	23.32
Nonminority female	0.00	13.39	0.00 ****
DBE total	5.53	37.11	14.91 ****
<b>Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)</b>			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
<b>Home Furnishings Stores (NAICS 4422)</b>			
African American	0.00	7.49	0.00
Hispanic	0.00	2.72	0.00
Asian	0.00	13.86	0.00 ****
Native American	0.00	0.87	0.00
Minority	0.00	24.94	0.00 ****
Nonminority female	63.64	29.83	
DBE total	63.64	54.78	
<b>Office Furniture (including Fixtures) Manufacturing (NAICS 3372)</b>			
African American	68.00	17.41	
Hispanic	0.00	2.83	0.00
Asian	0.00	10.64	0.00
Native American	0.00	1.88	0.00
Minority	68.00	32.76	
Nonminority female	32.00	14.73	
DBE total	100.00	47.49	
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	6.77	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.35	0.00 ****
Native American	0.00	2.40	0.00
Minority	0.00	18.51	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	30.06	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	11.62	0.00 ****
Hispanic	0.00	3.52	0.00
Asian	0.00	8.15	0.00 ****
Native American	0.00	0.00	
Minority	0.00	23.29	0.00 ****
Nonminority female	62.61	12.91	
DBE total	62.61	36.20	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	85.69	21.41	
DBE total	85.69	42.84	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	2.79	12.51	22.32
Hispanic	0.00	0.68	0.00
Asian	0.00	5.28	0.00
Native American	0.00	0.01	0.00
Minority	2.79	18.49	15.11
Nonminority female	93.62	27.90	
DBE total	96.41	46.39	
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00
Nonminority female	0.00	23.17	0.00
DBE total	0.00	34.47	0.00
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	1.46	5.12	28.43
Hispanic	0.00	0.00	
Asian	0.00	8.66	0.00 ****
Native American	0.00	0.87	0.00
Minority	1.46	14.65	9.94
Nonminority female	0.00	17.08	0.00 ****
DBE total	1.46	31.74	4.59 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	29.51	28.09	
DBE total	29.51	45.24	65.23

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Design Services (NAICS 5414)			
African American	0.00	11.07	0.00
Hispanic	0.00	2.61	0.00
Asian	0.00	3.20	0.00
Native American	0.00	0.00	
Minority	0.00	16.88	0.00 ****
Nonminority female	100.00	46.97	
DBE total	100.00	63.85	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.69	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	9.57	0.00 ****
Native American	0.00	1.04	0.00
Minority	0.00	16.62	0.00 ****
Nonminority female	56.14	21.34	
DBE total	56.14	37.96	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.88	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.79	0.00 ****
Native American	0.00	0.80	0.00
Minority	0.00	15.55	0.00 ****
Nonminority female	0.00	22.69	0.00 ****
DBE total	0.00	38.24	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.54	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	11.36	0.00 ****
Native American	0.00	2.36	0.00
Minority	0.00	19.26	0.00 ****
Nonminority female	0.00	19.45	0.00 ****
DBE total	0.00	38.71	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	2.71	0.00
Hispanic	0.00	2.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.42	0.00
Nonminority female	0.00	19.18	0.00
DBE total	0.00	24.60	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metalworking Machinery Manufacturing (NAICS 3335)</b>			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
<b>Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)</b>			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
<b>Paint, Coating, and Adhesive Manufacturing (NAICS 3255)</b>			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****
<b>Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)</b>			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Personal Services (NAICS 8129)			
African American	0.00	25.88	0.00 ****
Hispanic	0.00	5.89	0.00
Asian	0.00	7.19	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.07	0.00 ****
Nonminority female	0.00	17.93	0.00 ****
DBE total	0.00	57.00	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Waste Collection (NAICS 5621)			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.89	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.30	0.00 ****
Nonminority female	0.00	14.79	0.00 ****
DBE total	0.00	29.09	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

Source and Notes: See Table 5.5.

**Table A.3. Industry Group Utilization, Availability, and Disparity Results for MDOT Construction Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.01	8.85	0.15 ****
Hispanic	1.57	3.72	42.25
Asian	0.06	1.06	5.42 *
Native American	0.01	0.39	1.36 *
Minority	1.65	14.02	11.76 ****
Nonminority female	8.69	9.88	87.99
DBE total	10.34	23.91	43.27 **
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Nonresidential Building Construction (NAICS 2362)			
African American	9.71	10.38	93.54
Hispanic	0.04	4.93	0.84 ****
Asian	0.00	3.11	0.00 ****
Native American	0.00	0.84	0.00 ***
Minority	9.75	19.26	50.64 *
Nonminority female	1.51	13.17	11.46 ****
DBE total	11.26	32.43	34.73 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	18.85	8.54	
Hispanic	16.40	3.33	
Asian	2.47	2.67	92.78
Native American	40.48	0.36	
Minority	78.20	14.89	
Nonminority female	5.09	13.00	39.11 **
DBE total	83.29	27.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.13	8.60	1.51 ****
Hispanic	0.01	4.28	0.19 ****
Asian	3.98	12.05	33.03 ****
Native American	0.00	0.41	0.00 ****
Minority	4.12	25.34	16.25 ****
Nonminority female	5.36	12.85	41.73 ****
DBE total	9.48	38.20	24.83 ****
Building Equipment Contractors (NAICS 2382)			
African American	6.83	7.69	88.85
Hispanic	1.83	2.82	64.94
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 *
Minority	8.66	13.46	64.31
Nonminority female	11.66	10.92	
DBE total	20.32	24.38	83.35
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.05	6.07	0.78 ****
Hispanic	0.10	0.19	51.40
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.74	0.00 *
Minority	0.14	14.49	0.98 ****
Nonminority female	0.84	14.95	5.62 ****
DBE total	0.98	29.44	3.34 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.92	26.77	3.43 *
DBE total	0.92	46.76	1.97 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	9.72	6.37	
Hispanic	0.21	3.04	6.78 **
Asian	0.38	2.53	14.90
Native American	0.00	0.16	0.00
Minority	10.30	12.10	85.17
Nonminority female	15.16	11.10	
DBE total	25.46	23.19	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.56	5.44	10.28
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.56	14.74	3.79 ****
Nonminority female	69.29	17.15	
DBE total	69.85	31.89	
Utility System Construction (NAICS 2371)			
African American	0.00	6.79	0.00 ****
Hispanic	10.63	2.23	
Asian	7.26	0.40	
Native American	0.00	0.49	0.00
Minority	17.89	9.91	
Nonminority female	28.99	10.32	
DBE total	46.88	20.23	
Specialized Freight Trucking (NAICS 4842)			
African American	26.87	29.98	89.64
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	26.87	44.08	60.96
Nonminority female	73.13	11.07	
DBE total	100.00	55.15	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.74	0.00 ****
Hispanic	0.23	3.47	6.64 ****
Asian	0.00	2.57	0.00 ****
Native American	0.26	0.04	
Minority	0.49	11.82	4.18 ****
Nonminority female	54.81	11.23	
DBE total	55.31	23.05	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.29	0.00 ****
Hispanic	5.54	3.41	
Asian	0.00	0.37	0.00
Native American	3.66	0.20	
Minority	9.19	8.26	
Nonminority female	7.86	13.42	58.52
DBE total	17.05	21.69	78.61

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	74.32	22.99	
Hispanic	3.89	9.48	41.06 *
Asian	0.00	5.94	0.00 ****
Native American	0.00	0.21	0.00
Minority	78.21	38.62	
Nonminority female	9.99	10.49	95.25
DBE total	88.20	49.11	
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.83	14.74	5.64 ****
Hispanic	0.00	1.53	0.00 ****
Asian	0.20	7.39	2.76 ****
Native American	0.00	0.30	0.00 **
Minority	1.04	23.96	4.32 ****
Nonminority female	80.01	29.50	
DBE total	81.05	53.46	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	14.98	0.00 ****
Nonminority female	2.86	24.55	11.65 ***
DBE total	2.86	39.53	7.23 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.76	0.00 ****
Hispanic	0.00	0.85	0.00
Asian	6.97	8.00	87.05
Native American	0.00	0.87	0.00
Minority	6.97	15.48	45.01
Nonminority female	26.45	17.08	
DBE total	33.42	32.56	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.46	14.73	3.10 ****
Hispanic	0.00	6.40	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.46	25.70	1.78 ****
Nonminority female	34.91	11.62	
DBE total	35.37	37.32	94.78
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	6.06	0.00 ****
Hispanic	0.00	0.55	0.00
Asian	0.00	7.61	0.00 ****
Native American	0.00	1.14	0.00
Minority	0.00	15.36	0.00 ****
Nonminority female	0.00	16.57	0.00 ****
DBE total	0.00	31.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	93.45	18.26	
DBE total	93.45	24.86	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.45	0.00 ****
Hispanic	0.00	0.32	0.00
Asian	1.14	8.05	14.21 **
Native American	0.00	0.71	0.00
Minority	1.14	14.53	7.87 ****
Nonminority female	22.89	17.91	
DBE total	24.04	32.44	74.10
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.16	12.26	1.31
DBE total	0.16	57.03	0.28 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.43	0.00 ****
Hispanic	0.00	6.22	0.00 ****
Asian	0.00	4.28	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	25.04	0.00 ****
Nonminority female	0.00	11.53	0.00 ****
DBE total	0.00	36.57	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.39	5.43	7.15
Hispanic	0.00	0.51	0.00
Asian	0.00	8.01	0.00 ****
Native American	0.00	0.74	0.00 *
Minority	0.39	14.69	2.64 ****
Nonminority female	4.03	17.39	23.20 **
DBE total	4.42	32.08	13.79 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	24.86	0.00 ****
Hispanic	0.00	6.37	0.00 ****
Asian	0.00	6.88	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.00	38.17	0.00 ****
Nonminority female	0.00	13.91	0.00 ****
DBE total	0.00	52.08	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.31	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.61	0.00
Nonminority female	0.00	17.34	0.00 ****
DBE total	0.00	17.96	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.32	0.00 ****
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.67	0.00
Minority	0.00	27.12	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.24	0.00 ****
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	95.04	17.63	
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	5.87	0.00 ****
Native American	0.00	0.79	0.00
Minority	95.04	27.86	
Nonminority female	0.00	22.06	0.00 ****
DBE total	95.04	49.92	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	31.02	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	31.02	14.68	
Nonminority female	45.42	18.44	
DBE total	76.44	33.12	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	13.08	0.00 ****
Hispanic	0.00	3.95	0.00 ****
Asian	0.00	16.54	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	34.10	0.00 ****
Nonminority female	0.70	13.91	5.05 ****
DBE total	0.70	48.00	1.46 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.73	20.41	
DBE total	99.73	46.12	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	22.91	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	22.91	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	22.91	30.13	76.03
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	24.44	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	24.44	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	24.44	29.12	83.92
Gasoline Stations (NAICS 4471)			
African American	65.86	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	65.86	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	65.86	46.57	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00
Nonminority female	0.00	15.81	0.00
DBE total	0.00	36.81	0.00
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.21	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.68	0.00 ****
Native American	0.00	1.69	0.00
Minority	0.00	17.57	0.00 ****
Nonminority female	0.00	15.10	0.00 ****
DBE total	0.00	32.67	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	93.77	21.41	
DBE total	93.77	42.84	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.92	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.23	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.45	0.00 ****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.29	0.00
Hispanic	0.00	5.16	0.00
Asian	0.00	4.24	0.00
Native American	0.00	0.05	0.00
Minority	0.00	23.72	0.00
Nonminority female	0.00	13.23	0.00
DBE total	0.00	36.95	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.12	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	10.42	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	21.84	0.00 ****
Nonminority female	39.63	22.10	
DBE total	39.63	43.94	90.20
Employment Services (NAICS 5613)			
African American	0.00	18.89	0.00 ****
Hispanic	0.00	6.03	0.00 ***
Asian	0.00	6.02	0.00 ***
Native American	0.00	0.38	0.00
Minority	0.00	31.32	0.00 ****
Nonminority female	0.00	18.70	0.00 ****
DBE total	0.00	50.01	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00 ****
DBE total	100.00	56.71	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	2.65	12.52	21.16
Hispanic	0.00	0.68	0.00
Asian	0.00	5.28	0.00 **
Native American	0.00	0.01	0.00
Minority	2.65	18.48	14.33
Nonminority female	96.59	27.92	
DBE total	99.24	46.40	
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	12.04	0.00
Hispanic	0.00	3.58	0.00
Asian	0.00	8.10	0.00
Native American	0.00	0.00	
Minority	0.00	23.72	0.00 ****
Nonminority female	51.65	12.75	
DBE total	51.65	36.46	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Home Furnishings Stores (NAICS 4422)			
African American	0.00	6.72	0.00
Hispanic	0.00	2.45	0.00
Asian	0.00	14.45	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	24.30	0.00 ****
Nonminority female	0.00	27.63	0.00 ****
DBE total	0.00	51.94	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	13.61	0.00 **
Hispanic	0.00	5.30	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.57	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	0.00	17.07	0.00 ***
DBE total	0.00	40.99	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 **
Native American	0.00	0.00	
Minority	0.00	29.68	0.00 ****
Nonminority female	0.00	8.24	0.00 ****
DBE total	0.00	37.91	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.41	0.00 ****
Native American	0.00	2.39	0.00
Minority	0.00	19.36	0.00 ****
Nonminority female	0.00	19.42	0.00 ****
DBE total	0.00	38.78	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00 ****
Nonminority female	0.00	23.17	0.00 ****
DBE total	0.00	34.47	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
Metalworking Machinery Manufacturing (NAICS 3335)			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Cable and Other Subscription Programming (NAICS 5152)</b>			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
<b>Plastics Product Manufacturing (NAICS 3261)</b>			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00
<b>Paper and Paper Product Merchant Wholesalers (NAICS 4241)</b>			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
<b>Other Chemical Product and Preparation Manufacturing (NAICS 3259)</b>			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00
Nonminority female	0.00	19.53	0.00
DBE total	0.00	36.67	0.00
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American		0.00	
Hispanic		0.00	
Asian		0.00	
Native American		0.00	
Minority		0.00	
Nonminority female		0.00	
DBE total		0.00	
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American		0.00	
Hispanic		0.00	
Asian		0.00	
Native American		0.00	
Minority		0.00	
Nonminority female		0.00	
DBE total		0.00	

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American		0.00	
Hispanic		0.00	
Asian		0.00	
Native American		0.00	
Minority		0.00	
Nonminority female		0.00	
DBE total		0.00	

Source and Notes: See Table 5.5.

**Table A.4. Industry Group Utilization, Availability, and Disparity Results for MDOT Construction Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.17 ****
Hispanic	1.48	3.72	39.86
Asian	0.12	1.06	11.73
Native American	0.01	0.39	2.11 *
Minority	1.63	14.02	11.64 ****
Nonminority female	9.76	9.88	98.74
DBE total	11.39	23.91	47.64 ***
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Nonresidential Building Construction (NAICS 2362)			
African American	7.74	10.17	76.09
Hispanic	0.05	4.84	1.04 ****
Asian	0.00	3.02	0.00 ****
Native American	0.00	0.82	0.00 ****
Minority	7.79	18.85	41.32 **
Nonminority female	1.64	13.30	12.36 ****
DBE total	9.43	32.14	29.34 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	5.43	8.65	62.72
Hispanic	14.26	3.19	
Asian	2.56	2.67	95.81
Native American	55.71	0.38	
Minority	77.95	14.89	
Nonminority female	3.69	13.18	27.98 ***
DBE total	81.64	28.07	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.42	8.66	4.88 ****
Hispanic	0.01	4.28	0.19 ****
Asian	4.11	12.17	33.74 ****
Native American	0.00	0.41	0.00 ****
Minority	4.54	25.53	17.78 ****
Nonminority female	3.78	12.81	29.51 ****
DBE total	8.32	38.34	21.70 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.59	6.11	9.67 *
Hispanic	0.16	0.16	99.62
Asian	0.00	7.50	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.75	14.50	5.16 ****
Nonminority female	1.16	14.83	7.84 ****
DBE total	1.91	29.33	6.51 ****
Building Equipment Contractors (NAICS 2382)			
African American	10.99	7.78	
Hispanic	2.37	2.82	83.98
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 **
Minority	13.36	13.56	98.49
Nonminority female	14.77	10.96	
DBE total	28.13	24.53	
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.82	26.77	3.05
DBE total	0.82	46.76	1.75 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	7.59	6.39	
Hispanic	0.35	3.05	11.58
Asian	0.34	2.49	13.78
Native American	0.00	0.16	0.00
Minority	8.29	12.09	68.57
Nonminority female	4.49	11.17	40.23
DBE total	12.78	23.26	54.96

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.65	0.00 ****
Hispanic	8.93	2.18	
Asian	6.15	0.31	
Native American	0.00	0.50	0.00
Minority	15.08	9.65	
Nonminority female	27.29	10.22	
DBE total	42.37	19.87	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.12	5.44	2.19 ***
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.12	14.74	0.81 ****
Nonminority female	54.67	17.15	
DBE total	54.79	31.89	
Specialized Freight Trucking (NAICS 4842)			
African American	44.33	29.97	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	44.33	44.07	
Nonminority female	55.57	11.07	
DBE total	99.89	55.14	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.73	0.00 ****
Hispanic	0.36	3.46	10.54 ***
Asian	0.00	2.56	0.00 ****
Native American	0.42	0.04	
Minority	0.78	11.80	6.63 ****
Nonminority female	43.43	11.21	
DBE total	44.21	23.00	
General Freight Trucking (NAICS 4841)			
African American	84.21	23.04	
Hispanic	4.47	9.51	47.05
Asian	0.00	5.93	0.00 ****
Native American	0.00	0.21	0.00
Minority	88.68	38.70	
Nonminority female	4.15	10.46	39.64 **
DBE total	92.83	49.16	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Residential Building Construction (NAICS 2361)			
African American	0.00	4.33	0.00 ****
Hispanic	4.03	3.38	
Asian	0.00	0.38	0.00
Native American	5.61	0.20	
Minority	9.64	8.29	
Nonminority female	4.72	13.38	35.32
DBE total	14.37	21.66	66.31
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.66	14.65	4.47 ****
Hispanic	0.00	1.52	0.00 ****
Asian	0.29	7.42	3.86 ****
Native American	0.00	0.31	0.00
Minority	0.94	23.90	3.94 ****
Nonminority female	82.14	29.54	
DBE total	83.09	53.44	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.83	0.00 *
Minority	0.00	15.02	0.00 ****
Nonminority female	4.64	24.50	18.95 **
DBE total	4.64	39.52	11.75 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.92	0.00
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00
Native American	0.00	1.11	0.00
Minority	0.00	15.18	0.00 ****
Nonminority female	0.00	16.65	0.00 ****
DBE total	0.00	31.83	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.71	0.00 ****
Hispanic	0.00	1.04	0.00 *
Asian	14.18	8.10	
Native American	0.00	0.93	0.00 *
Minority	14.18	15.78	89.90
Nonminority female	26.51	17.49	
DBE total	40.70	33.26	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.18	5.24	3.38 ***
Hispanic	0.00	0.49	0.00
Asian	0.00	7.96	0.00 ****
Native American	0.00	0.73	0.00 ***
Minority	0.18	14.42	1.23 ****
Nonminority female	1.78	17.06	10.41 ***
DBE total	1.95	31.48	6.21 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	1.00	14.78	6.74 ***
Hispanic	0.00	6.41	0.00 ****
Asian	0.00	4.40	0.00 ****
Native American	0.00	0.18	0.00
Minority	1.00	25.78	3.87 ****
Nonminority female	50.50	11.67	
DBE total	51.49	37.44	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.49	0.00 ****
Hispanic	0.00	0.32	0.00
Asian	0.83	8.03	10.34 ****
Native American	0.00	0.70	0.00 ***
Minority	0.83	14.55	5.71 ****
Nonminority female	23.15	17.96	
DBE total	23.98	32.51	73.74

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	92.43	18.26	
DBE total	92.43	24.86	
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.43	0.00 ****
Hispanic	0.00	6.22	0.00 ****
Asian	0.00	4.28	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	25.04	0.00 ****
Nonminority female	0.00	11.53	0.00 ****
DBE total	0.00	36.57	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	3.84	12.26	31.32
DBE total	3.84	57.03	6.73

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	24.77	0.00 ****
Hispanic	0.00	6.34	0.00 ****
Asian	0.00	6.88	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	38.07	0.00 ****
Nonminority female	0.00	13.89	0.00 ****
DBE total	0.00	51.97	0.00 ****
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00 ****
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
<b>Nonmetallic Mineral Mining and Quarrying (NAICS 2123)</b>			
African American	0.00	0.34	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.66	0.00
Nonminority female	0.00	17.30	0.00 ****
DBE total	0.00	17.95	0.00 ****
<b>Personal and Household Goods Repair and Maintenance (NAICS 8114)</b>			
African American	0.00	15.33	0.00 ****
Hispanic	0.00	3.54	0.00 *
Asian	0.00	7.61	0.00 *
Native American	0.00	0.67	0.00
Minority	0.00	27.15	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.27	0.00 ****
<b>Land Subdivision (NAICS 2372)</b>			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	14.29	20.38	70.10
Hispanic	0.00	5.77	0.00 ****
Asian	0.00	5.51	0.00 ****
Native American	0.00	0.48	0.00
Minority	14.29	32.15	44.44
Nonminority female	0.00	13.77	0.00 ****
DBE total	14.29	45.91	31.12 **
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.91	0.00 ****
Hispanic	0.00	3.94	0.00 ****
Asian	0.00	16.63	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	33.99	0.00 ****
Nonminority female	0.75	13.90	5.41 ****
DBE total	0.75	47.89	1.57 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.72	20.41	
DBE total	99.72	46.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Gasoline Stations (NAICS 4471)			
African American	67.36	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	67.36	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	67.36	46.57	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	76.34	18.44	
DBE total	76.34	33.12	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	18.90	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	18.90	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	18.90	30.13	62.74
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Commercial &amp; Industrial Machinery &amp; Equipment (exc. Automotive &amp; Electronic) Repair &amp; Maintenance (NAICS 8113)</b>			
African American	40.35	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	40.35	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	40.35	29.12	
<b>Other Support Activities for Transportation (NAICS 4889)</b>			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.24	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.52	0.00 ****
Native American	0.00	1.76	0.00
Minority	0.00	17.51	0.00 ****
Nonminority female	0.00	15.28	0.00 ****
DBE total	0.00	32.79	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.30	0.00 ****
Hispanic	0.00	5.14	0.00
Asian	5.53	4.24	
Native American	0.00	0.05	0.00
Minority	5.53	23.73	23.32
Nonminority female	0.00	13.39	0.00 ****
DBE total	5.53	37.11	14.91 ****
Employment Services (NAICS 5613)			
African American	0.00	18.34	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	5.70	0.00 ****
Native American	0.00	0.34	0.00
Minority	0.00	30.35	0.00 ****
Nonminority female	0.00	18.60	0.00 ****
DBE total	0.00	48.94	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00 ****
Nonminority female	0.00	15.81	0.00 ****
DBE total	0.00	36.81	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Material and Supplies Dealers (NAICS 4441)</b>			
African American	0.00	8.12	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	10.44	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	21.85	0.00 ****
Nonminority female	44.67	22.10	
DBE total	44.67	43.95	
<b>Support Activities for Road Transportation (NAICS 4884)</b>			
African American	0.00	11.62	0.00 ****
Hispanic	0.00	3.52	0.00
Asian	0.00	8.15	0.00 ****
Native American	0.00	0.00	
Minority	0.00	23.29	0.00 ****
Nonminority female	62.61	12.91	
DBE total	62.61	36.20	
<b>Office Furniture (including Fixtures) Manufacturing (NAICS 3372)</b>			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00 ****
DBE total	100.00	56.71	
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	85.69	21.41	
DBE total	85.69	42.84	
<b>Consumer Goods Rental (NAICS 5322)</b>			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	2.79	12.51	22.32
Hispanic	0.00	0.68	0.00
Asian	0.00	5.28	0.00
Native American	0.00	0.01	0.00
Minority	2.79	18.49	15.11
Nonminority female	93.62	27.90	
DBE total	96.41	46.39	
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Home Furnishings Stores (NAICS 4422)			
African American	0.00	6.72	0.00
Hispanic	0.00	2.45	0.00
Asian	0.00	14.45	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	24.30	0.00 ****
Nonminority female	0.00	27.63	0.00 ****
DBE total	0.00	51.94	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	29.51	28.09	
DBE total	29.51	45.24	65.23

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	13.11	0.00 ****
Hispanic	0.00	4.85	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	23.18	0.00 ****
Nonminority female	0.00	19.24	0.00 ****
DBE total	0.00	42.42	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.33	0.00 ****
Hispanic	0.00	7.61	0.00 ****
Asian	0.00	3.68	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	29.63	0.00 ****
Nonminority female	0.00	8.29	0.00 ****
DBE total	0.00	37.92	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.55	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	11.37	0.00 ****
Native American	0.00	2.37	0.00
Minority	0.00	19.29	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	38.73	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00
Nonminority female	0.00	23.17	0.00
DBE total	0.00	34.47	0.00
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	2.71	0.00
Hispanic	0.00	2.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.42	0.00
Nonminority female	0.00	19.18	0.00
DBE total	0.00	24.60	0.00
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metalworking Machinery Manufacturing (NAICS 3335)</b>			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
<b>Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)</b>			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	
<b>Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)</b>			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
<b>Paint, Coating, and Adhesive Manufacturing (NAICS 3255)</b>			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.91	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.44	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
Waste Collection (NAICS 5621)			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.89	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.30	0.00 ****
Nonminority female	0.00	14.79	0.00 ****
DBE total	0.00	29.09	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****

Source and Notes: See Table 5.5.

**Table A.5. Industry Group Utilization, Availability, and Disparity Results for MDOT AE-CRS Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.48	8.68	17.01 ****
Hispanic	0.86	4.27	20.14 ****
Asian	12.16	12.16	99.94
Native American	0.00	0.41	0.00 ****
Minority	14.49	25.53	56.77 ****
Nonminority female	6.67	12.95	51.54 ***
DBE total	21.17	38.48	55.01 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	11.30	15.30	73.87
Hispanic	0.04	1.73	2.37 ****
Asian	4.08	7.09	57.51
Native American	0.00	0.31	0.00 **
Minority	15.42	24.44	63.11 **
Nonminority female	22.61	28.37	79.71
DBE total	38.04	52.81	72.03 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.64	0.00 ****
Hispanic	0.00	4.05	0.00 ****
Asian	11.07	15.46	71.61
Native American	0.00	0.62	0.00 **
Minority	11.07	35.76	30.95 ****
Nonminority female	4.04	14.21	28.44 *
DBE total	15.11	49.97	30.23 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.82	0.00 ****
Hispanic	92.47	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	92.47	13.61	
Nonminority female	0.27	10.98	2.45 ****
DBE total	92.74	24.59	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	8.65	11.74	73.68
Hispanic	0.00	2.28	0.00 ****
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.10	0.00
Minority	8.65	19.94	43.36
Nonminority female	38.72	29.49	
DBE total	47.37	49.44	95.81
Business Support Services (NAICS 5614)			
African American	91.77	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	91.77	19.99	
Nonminority female	6.27	26.77	23.41
DBE total	98.04	46.76	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.37	0.00 ****
Hispanic	0.00	1.40	0.00
Asian	0.00	9.39	0.00 ****
Native American	0.00	1.98	0.00
Minority	0.00	23.15	0.00 ****
Nonminority female	0.00	16.67	0.00 ****
DBE total	0.00	39.83	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ***
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	1.15	7.21	15.92
Hispanic	0.00	3.91	0.00
Asian	0.00	8.66	0.00 ****
Native American	0.00	0.11	0.00
Minority	1.15	19.89	5.77 **
Nonminority female	0.00	14.23	0.00 ****
DBE total	1.15	34.11	3.36 ****
Utility System Construction (NAICS 2371)			
African American	93.37	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	93.37	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	93.37	19.55	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	4.80	12.67	37.89
Hispanic	0.00	1.16	0.00
Asian	0.00	5.34	0.00 **
Native American	0.00	0.05	0.00
Minority	4.80	19.22	24.97
Nonminority female	5.08	30.47	16.68 **
DBE total	9.88	49.69	19.88 ***
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	83.89	22.02	
DBE total	83.89	37.93	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	77.94	15.00	
DBE total	77.94	41.47	
Other Specialty Trade Contractors (NAICS 2389)			
African American	53.49	6.27	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.67	0.00 ****
Native American	0.00	0.15	0.00
Minority	53.49	12.11	
Nonminority female	3.35	10.79	31.03
DBE total	56.84	22.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	99.77	16.02	
Hispanic	0.00	10.80	0.00 **
Asian	0.00	9.24	0.00
Native American	0.00	1.33	0.00
Minority	99.77	37.39	
Nonminority female	0.00	18.99	0.00 ****
DBE total	99.77	56.38	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 *
Minority	0.00	14.90	0.00 ****
Nonminority female	8.07	18.18	44.40
DBE total	8.07	33.09	24.40 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	9.08	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	9.08	14.02	64.71
Nonminority female	29.56	9.88	
DBE total	38.63	23.91	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	3.23	6.63	48.82
Hispanic	88.05	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.28	14.82	
Nonminority female	7.87	10.24	76.85
DBE total	99.15	25.06	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	9.49	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	9.47	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.67	0.00 ****
Nonminority female	0.00	23.38	0.00 ****
DBE total	0.00	45.04	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	55.64	7.77	
Native American	0.00	0.30	0.00
Minority	55.64	30.00	
Nonminority female	0.00	19.44	0.00 ****
DBE total	55.64	49.44	
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
Investigation and Security Services (NAICS 5616)			
African American	2.31	17.56	13.16
Hispanic	0.00	3.27	0.00 ****
Asian	0.00	5.97	0.00 ****
Native American	0.00	0.84	0.00
Minority	2.31	27.64	8.36 ***
Nonminority female	0.00	22.76	0.00 ****
DBE total	2.31	50.39	4.58 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Administrative Services (NAICS 5611)			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	6.46	0.00 ****
Asian	0.00	4.91	0.00 **
Native American	0.00	0.19	0.00
Minority	0.00	29.37	0.00 ****
Nonminority female	0.00	13.13	0.00 ****
DBE total	0.00	42.50	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	49.78	10.58	
DBE total	49.78	49.96	99.65
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.88	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.17	0.00 ****
Nonminority female	74.01	16.18	
DBE total	74.01	30.36	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.03	0.00
Hispanic	0.00	0.74	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.00	
Minority	0.00	16.61	0.00
Nonminority female	100.00	30.26	
DBE total	100.00	46.87	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.15	0.00 ****
Hispanic	0.00	6.53	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	24.69	0.00 ****
Nonminority female	0.00	11.69	0.00 ****
DBE total	0.00	36.39	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.80	0.00 ****
DBE total	0.00	34.47	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.61	0.00 ****
Hispanic	0.00	0.42	0.00
Asian	0.00	7.83	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.70	0.00 ****
Nonminority female	0.00	18.49	0.00 ****
DBE total	0.00	33.19	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00
Nonminority female	0.00	26.46	0.00
DBE total	0.00	56.94	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.00	12.26	0.00
DBE total	0.00	57.03	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.26	0.00
Hispanic	0.00	0.26	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.52	0.00
Nonminority female	0.00	17.43	0.00 ****
DBE total	0.00	17.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	100.00	11.31	
DBE total	100.00	23.24	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.35	0.00 ****
Hispanic	0.00	0.85	0.00 *
Asian	0.00	7.64	0.00 ****
Native American	0.00	0.71	0.00 *
Minority	0.00	14.55	0.00 ****
Nonminority female	0.00	17.57	0.00 ****
DBE total	0.00	32.12	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ***
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	79.89	17.64	
DBE total	79.89	31.05	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.97	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.41	0.00
Native American	0.00	2.38	0.00
Minority	0.00	20.92	0.00
Nonminority female	0.00	15.29	0.00
DBE total	0.00	36.21	0.00
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Mining (NAICS 2131)			
African American	0.00	2.66	0.00
Hispanic	0.00	2.66	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.32	0.00
Nonminority female	0.00	17.14	0.00
DBE total	0.00	22.47	0.00
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00 ****
Nonminority female	0.00	23.17	0.00 ****
DBE total	0.00	34.47	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	15.66	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	5.84	0.00 ****
Native American	0.00	1.97	0.00
Minority	0.00	23.47	0.00 ****
Nonminority female	0.00	22.00	0.00 ****
DBE total	0.00	45.47	0.00 ****

Source and Notes: See Table 5.5.

**Table A.6. Industry Group Utilization, Availability, and Disparity Results for MDOT AE-CRS Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.77	8.69	8.86 ****
Hispanic	0.90	4.27	21.00 ****
Asian	13.06	12.18	
Native American	0.00	0.41	0.00 ****
Minority	14.72	25.56	57.61 ***
Nonminority female	6.68	12.93	51.67 **
DBE total	21.40	38.48	55.61 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	7.55	15.08	50.07 *
Hispanic	0.07	1.68	4.04 ***
Asian	4.57	6.96	65.71
Native American	0.00	0.33	0.00
Minority	12.19	24.04	50.69 ***
Nonminority female	16.10	28.28	56.94 ***
DBE total	28.29	52.33	54.07 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.50	0.00 ****
Hispanic	0.00	4.09	0.00 ****
Asian	7.13	15.55	45.89
Native American	0.00	0.62	0.00 *
Minority	7.13	35.75	19.96 ****
Nonminority female	3.47	14.04	24.71 **
DBE total	10.60	49.78	21.29 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.76	0.00 ****
Hispanic	87.80	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 **
Minority	87.80	13.54	
Nonminority female	0.43	10.95	3.96 ****
DBE total	88.23	24.49	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.38	0.00 *
Hispanic	0.00	1.41	0.00
Asian	0.00	9.39	0.00 *
Native American	0.00	1.99	0.00
Minority	0.00	23.16	0.00 ****
Nonminority female	0.00	16.67	0.00 ****
DBE total	0.00	39.83	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	20.54	11.13	
Hispanic	0.00	2.65	0.00 ****
Asian	0.00	6.34	0.00 ****
Native American	0.00	0.13	0.00
Minority	20.54	20.25	
Nonminority female	53.33	27.80	
DBE total	73.87	48.06	
Business Support Services (NAICS 5614)			
African American	96.55	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	96.55	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	96.55	46.76	
Utility System Construction (NAICS 2371)			
African American	90.29	6.54	
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	90.29	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	90.29	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.71	0.00 ****
Hispanic	0.00	1.75	0.00
Asian	0.00	5.48	0.00
Native American	0.00	0.11	0.00
Minority	0.00	20.05	0.00 ****
Nonminority female	0.58	32.84	1.76 ****
DBE total	0.58	52.89	1.09 ****
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	6.05	7.12	84.90
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	6.05	19.81	30.53
Nonminority female	0.00	14.10	0.00
DBE total	6.05	33.91	17.84
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	7.81	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	7.81	14.02	55.69
Nonminority female	28.81	9.88	
DBE total	36.62	23.91	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 ***
Minority	0.00	14.90	0.00 ****
Nonminority female	8.07	18.18	44.40
DBE total	8.07	33.09	24.40 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	50.03	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	50.03	12.11	
Nonminority female	0.00	10.77	0.00 ****
DBE total	50.03	22.88	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	3.26	6.63	49.13
Hispanic	87.78	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.03	14.82	
Nonminority female	8.11	10.24	79.25
DBE total	99.15	25.06	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	50.70	22.02	
DBE total	50.70	37.93	
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	36.40	7.77	
Native American	0.00	0.30	0.00
Minority	36.40	30.00	
Nonminority female	0.00	19.44	0.00 ****
DBE total	36.40	49.44	73.62

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	0.00	15.00	0.00
DBE total	0.00	41.47	0.00
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	56.12	10.58	
DBE total	56.12	49.96	
Investigation and Security Services (NAICS 5616)			
African American	2.36	17.56	13.46
Hispanic	0.00	3.27	0.00 ****
Asian	0.00	5.97	0.00 ****
Native American	0.00	0.84	0.00
Minority	2.36	27.64	8.55 ****
Nonminority female	0.00	22.75	0.00 ****
DBE total	2.36	50.39	4.69 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	6.46	0.00 ****
Asian	0.00	4.91	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	29.37	0.00 ****
Nonminority female	0.00	13.13	0.00 ****
DBE total	0.00	42.50	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Computer and Peripheral Equipment Manufacturing (NAICS 3341)</b>			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
<b>Nonscheduled Air Transportation (NAICS 4812)</b>			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	98.64	16.01	
Hispanic	0.00	10.75	0.00 ****
Asian	0.00	9.19	0.00 ****
Native American	0.00	1.32	0.00
Minority	98.64	37.26	
Nonminority female	0.00	18.91	0.00 ****
DBE total	98.64	56.17	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.56	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.88	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.17	0.00 ****
Nonminority female	73.47	16.19	
DBE total	73.47	30.36	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.81	0.00 ****
DBE total	0.00	34.48	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.15	0.00 ****
Hispanic	0.00	6.53	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	24.69	0.00 ****
Nonminority female	0.00	11.69	0.00 ****
DBE total	0.00	36.39	0.00 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.61	0.00 ****
Hispanic	0.00	0.42	0.00
Asian	0.00	7.83	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.70	0.00 ****
Nonminority female	0.00	18.49	0.00 ****
DBE total	0.00	33.19	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00 ****
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	0.00	56.94	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.00	12.26	0.00 ****
DBE total	0.00	57.03	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.26	0.00
Hispanic	0.00	0.26	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.52	0.00
Nonminority female	0.00	17.43	0.00 ****
DBE total	0.00	17.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.35	0.00 ****
Hispanic	0.00	0.85	0.00 ***
Asian	0.00	7.64	0.00 ****
Native American	0.00	0.71	0.00 ***
Minority	0.00	14.55	0.00 ****
Nonminority female	0.00	17.57	0.00 ****
DBE total	0.00	32.12	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.03	0.00
Hispanic	0.00	0.74	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.00	
Minority	0.00	16.61	0.00
Nonminority female	100.00	30.26	
DBE total	100.00	46.87	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00 ***
Minority	0.00	13.41	0.00 ****
Nonminority female	79.89	17.64	
DBE total	79.89	31.05	
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.97	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.41	0.00
Native American	0.00	2.38	0.00
Minority	0.00	20.92	0.00
Nonminority female	0.00	15.29	0.00
DBE total	0.00	36.21	0.00
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Mining (NAICS 2131)			
African American	0.00	2.66	0.00
Hispanic	0.00	2.66	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.32	0.00
Nonminority female	0.00	17.14	0.00
DBE total	0.00	22.47	0.00
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	15.66	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	5.84	0.00 ****
Native American	0.00	1.97	0.00 *
Minority	0.00	23.47	0.00 ****
Nonminority female	0.00	22.00	0.00 ****
DBE total	0.00	45.47	0.00 ****

Source and Notes: See Table 5.5.

**Table A.7. Industry Group Utilization, Availability, and Disparity Results for MDOT AE-CRS Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.52	8.68	17.46 ****
Hispanic	0.71	4.27	16.59 ****
Asian	12.43	12.17	
Native American	0.00	0.41	0.00 ****
Minority	14.66	25.54	57.40 ****
Nonminority female	6.76	12.94	52.30 ***
DBE total	21.42	38.48	55.68 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	13.00	15.52	83.75
Hispanic	0.05	1.83	2.63 ****
Asian	3.63	7.22	50.23
Native American	0.00	0.30	0.00 **
Minority	16.67	24.87	67.04 *
Nonminority female	23.58	28.24	83.48
DBE total	40.25	53.11	75.78 ***
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.45	0.00 ****
Hispanic	0.00	4.05	0.00 ****
Asian	17.83	15.76	
Native American	0.00	0.62	0.00 **
Minority	17.83	35.89	49.69 **
Nonminority female	3.61	13.98	25.82 *
DBE total	21.44	49.86	43.00 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.82	0.00 ****
Hispanic	94.58	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	94.58	13.61	
Nonminority female	0.27	10.98	2.50 ****
DBE total	94.85	24.59	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	8.69	11.73	74.05
Hispanic	0.00	2.28	0.00 ****
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.10	0.00
Minority	8.69	19.94	43.57
Nonminority female	38.43	29.48	
DBE total	47.12	49.43	95.32
Business Support Services (NAICS 5614)			
African American	97.82	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	97.82	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	97.82	46.76	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.37	0.00 ****
Hispanic	0.00	1.40	0.00
Asian	0.00	9.39	0.00 ****
Native American	0.00	1.98	0.00
Minority	0.00	23.15	0.00 ****
Nonminority female	0.00	16.67	0.00 ****
DBE total	0.00	39.83	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ***
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.21	0.00 ****
Hispanic	0.00	3.91	0.00
Asian	0.00	8.66	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.89	0.00 ****
Nonminority female	0.00	14.23	0.00 ****
DBE total	0.00	34.12	0.00 ****
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Utility System Construction (NAICS 2371)			
African American	90.13	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	90.13	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	90.13	19.55	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	9.81	12.63	77.72
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00 **
Native American	0.00	0.00	
Minority	9.81	18.43	53.25
Nonminority female	9.81	28.20	34.79
DBE total	19.63	46.63	42.09

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.03	
Hispanic	0.00	10.81	0.00 **
Asian	0.00	9.25	0.00
Native American	0.00	1.33	0.00
Minority	100.00	37.42	
Nonminority female	0.00	19.00	0.00 ****
DBE total	100.00	56.42	
Other Specialty Trade Contractors (NAICS 2389)			
African American	60.76	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	60.76	12.11	
Nonminority female	3.80	10.78	35.29
DBE total	64.56	22.89	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	91.80	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.80	14.82	
Nonminority female	8.20	10.24	80.12
DBE total	100.00	25.06	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	9.41	0.00 ****
Hispanic	0.00	2.53	0.00
Asian	0.00	9.53	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.73	0.00 ****
Nonminority female	0.00	22.96	0.00 ****
DBE total	0.00	44.69	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	55.64	7.77	
Native American	0.00	0.30	0.00
Minority	55.64	30.00	
Nonminority female	0.00	19.44	0.00 ****
DBE total	55.64	49.44	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	20.59	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	20.59	14.02	
Nonminority female	66.52	9.88	
DBE total	87.11	23.91	
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	61.90	10.58	
DBE total	61.90	49.96	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.80	0.00 ****
DBE total	0.00	34.47	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00 ****
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00
Nonminority female	0.00	26.46	0.00
DBE total	0.00	56.94	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	100.00	11.31	
DBE total	100.00	23.24	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.46	0.00
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	18.58	0.00 ****
DBE total	0.00	33.33	0.00 ****
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.62	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ***
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
<b>Medical and Diagnostic Laboratories (NAICS 6215)</b>			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 **
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

Source and Notes: See Table 5.5.

**Table A.8. Industry Group Utilization, Availability, and Disparity Results for MDOT AE-CRS Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.82	8.69	9.39 ****
Hispanic	0.78	4.28	18.27 ****
Asian	13.66	12.21	
Native American	0.00	0.41	0.00 ****
Minority	15.25	25.59	59.61 ***
Nonminority female	6.91	12.90	53.56 **
DBE total	22.16	38.49	57.58 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	9.23	15.45	59.75
Hispanic	0.08	1.82	4.59 ***
Asian	3.85	7.13	54.03
Native American	0.00	0.31	0.00
Minority	13.17	24.72	53.28 ***
Nonminority female	14.96	28.08	53.27 ***
DBE total	28.13	52.80	53.27 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.43	0.00 ****
Hispanic	0.00	4.07	0.00 ****
Asian	9.97	15.69	63.51
Native American	0.00	0.62	0.00 *
Minority	9.97	35.82	27.83 ****
Nonminority female	3.36	13.98	24.05 **
DBE total	13.33	49.80	26.77 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.80	0.00 ****
Hispanic	92.97	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 **
Minority	92.97	13.58	
Nonminority female	0.46	10.97	4.19 ****
DBE total	93.42	24.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.38	0.00 *
Hispanic	0.00	1.41	0.00
Asian	0.00	9.39	0.00 *
Native American	0.00	1.99	0.00
Minority	0.00	23.16	0.00 ****
Nonminority female	0.00	16.67	0.00 ****
DBE total	0.00	39.83	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	20.79	11.11	
Hispanic	0.00	2.66	0.00 ****
Asian	0.00	6.35	0.00 ****
Native American	0.00	0.13	0.00
Minority	20.79	20.26	
Nonminority female	52.76	27.76	
DBE total	73.55	48.02	
Business Support Services (NAICS 5614)			
African American	96.28	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	96.28	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	96.28	46.76	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Utility System Construction (NAICS 2371)			
African American	77.61	6.54	
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	77.61	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	77.61	19.55	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	58.68	6.25	
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	58.68	12.11	
Nonminority female	0.00	10.75	0.00 ****
DBE total	58.68	22.86	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	91.54	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.54	14.82	
Nonminority female	8.46	10.24	82.65
DBE total	100.00	25.06	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	18.43	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	18.43	14.02	
Nonminority female	67.47	9.88	
DBE total	85.90	23.91	
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	36.40	7.77	
Native American	0.00	0.30	0.00
Minority	36.40	30.00	
Nonminority female	0.00	19.44	0.00 ****
DBE total	36.40	49.44	73.62
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	65.86	10.58	
DBE total	65.86	49.96	
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	0.00	28.20	0.00 ****
DBE total	0.00	46.63	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.03	
Hispanic	0.00	10.81	0.00 ****
Asian	0.00	9.25	0.00 ****
Native American	0.00	1.33	0.00
Minority	100.00	37.42	
Nonminority female	0.00	19.00	0.00 ****
DBE total	100.00	56.42	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.81	0.00 ****
DBE total	0.00	34.48	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00 ****
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Educational Support Services (NAICS 6117)</b>			
African American	0.00	19.59	0.00 ****
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	0.00	56.94	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.46	0.00
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	18.58	0.00 ****
DBE total	0.00	33.33	0.00 ****
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.62	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
<b>Waste Treatment and Disposal (NAICS 5622)</b>			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 ****
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****

Source and Notes: See Table 5.5.

**Table A.9. Industry Group Utilization, Availability, and Disparity Results for MDOT Maintenance Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.25	19.58	1.28 ****
Hispanic	0.04	7.00	0.59 ****
Asian	0.00	5.48	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.29	32.25	0.91 ****
Nonminority female	0.64	17.17	3.73 ****
DBE total	0.93	49.42	1.89 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.21 ****
Hispanic	0.01	3.72	0.31 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.03	14.02	0.22 ****
Nonminority female	18.57	9.88	
DBE total	18.60	23.91	77.80
Building Equipment Contractors (NAICS 2382)			
African American	7.45	7.89	94.51
Hispanic	0.00	2.85	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 *
Minority	7.45	13.70	54.42
Nonminority female	47.40	11.21	
DBE total	54.86	24.91	
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	1.58	11.16	14.15 ****
Hispanic	0.35	5.25	6.62 ***
Asian	0.00	3.42	0.00 ****
Native American	0.00	0.93	0.00 ***
Minority	1.93	20.76	9.28 ****
Nonminority female	0.03	12.71	0.21 ****
DBE total	1.95	33.47	5.84 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.60	7.06	65.11
Hispanic	44.24	5.05	
Asian	2.69	2.61	
Native American	0.00	0.12	0.00 ***
Minority	51.53	14.84	
Nonminority female	8.27	10.87	76.14
DBE total	59.80	25.71	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.01 ****
DBE total	0.00	44.11	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	9.24	20.41	45.27
Hispanic	0.00	5.36	0.00 ****
Asian	0.00	5.62	0.00 ****
Native American	0.00	0.55	0.00
Minority	9.24	31.94	28.92 *
Nonminority female	0.00	15.31	0.00 ****
DBE total	9.24	47.25	19.55 ***
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	17.79	0.00 ****
Hispanic	1.11	2.15	51.50
Asian	0.00	6.33	0.00 ****
Native American	0.00	0.28	0.00 **
Minority	1.11	26.55	4.17 ****
Nonminority female	2.09	30.01	6.97 ****
DBE total	3.20	56.56	5.65 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.03	7.84	0.44
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.03	17.62	0.19 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.03	29.12	0.12 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.83	0.00 ****
Hispanic	1.81	3.51	51.60
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	1.81	11.94	15.17 ****
Nonminority female	36.75	11.31	
DBE total	38.56	23.25	
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	8.17	0.00
Hispanic	0.00	2.81	0.00
Asian	0.00	8.30	0.00
Native American	0.00	0.00	
Minority	0.00	19.28	0.00
Nonminority female	0.00	14.57	0.00
DBE total	0.00	33.85	0.00
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	29.52	24.69	
DBE total	29.52	39.56	74.63
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.20	6.46	3.02 ****
Hispanic	3.06	3.06	
Asian	0.00	2.39	0.00 ****
Native American	0.00	0.16	0.00
Minority	3.26	12.08	26.98 *
Nonminority female	1.18	11.39	10.39 ****
DBE total	4.44	23.47	18.93 ****
Residential Building Construction (NAICS 2361)			
African American	1.03	4.32	23.76
Hispanic	1.58	3.41	46.47
Asian	0.00	0.38	0.00
Native American	0.00	0.19	0.00
Minority	2.61	8.29	31.45
Nonminority female	0.00	13.42	0.00 ****
DBE total	2.61	21.72	12.01 ***
Waste Treatment and Disposal (NAICS 5622)			
African American	7.84	18.37	42.70
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 **
Native American	0.00	0.00	
Minority	7.84	29.68	26.43
Nonminority female	0.00	8.24	0.00 ****
DBE total	7.84	37.91	20.69
General Freight Trucking (NAICS 4841)			
African American	55.88	23.59	
Hispanic	1.18	9.42	12.47 ****
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.24	0.00
Minority	57.06	39.09	
Nonminority female	1.93	10.99	17.58 ****
DBE total	58.99	50.09	
Employment Services (NAICS 5613)			
African American	76.94	18.73	
Hispanic	0.00	5.97	0.00 ***
Asian	0.00	5.88	0.00 ***
Native American	0.00	0.43	0.00
Minority	76.94	31.00	
Nonminority female	18.82	18.84	99.86
DBE total	95.76	49.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	8.65	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.48	0.00 ****
Native American	0.00	2.41	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	19.58	18.32	
DBE total	19.58	37.86	51.72 *
<b>Office Administrative Services (NAICS 5611)</b>			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00 ****
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	13.04	8.09	
Hispanic	0.40	4.30	9.33 ****
Asian	0.00	10.93	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	13.44	23.71	56.68 ****
Nonminority female	5.41	13.45	40.24 ****
DBE total	18.85	37.16	50.73 ****
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.52	0.00 ***
Hispanic	0.00	1.41	0.00
Asian	0.00	9.09	0.00 ***
Native American	0.00	0.91	0.00
Minority	0.00	18.93	0.00 ****
Nonminority female	0.00	17.44	0.00 ****
DBE total	0.00	36.37	0.00 ****
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Dentists (NAICS 6212)			
African American	0.00	15.05	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	7.56	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.25	0.00
Nonminority female	0.00	18.06	0.00
DBE total	0.00	43.32	0.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.38	0.00 ****
Hispanic	0.00	0.65	0.00 *
Asian	0.00	7.98	0.00 ****
Native American	0.00	0.73	0.00 *
Minority	0.00	14.74	0.00 ****
Nonminority female	18.83	18.40	
DBE total	18.83	33.14	56.81
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Utility System Construction (NAICS 2371)			
African American	0.00	6.75	0.00 ****
Hispanic	0.00	2.22	0.00 ****
Asian	0.00	0.37	0.00
Native American	0.00	0.49	0.00
Minority	0.00	9.83	0.00 ****
Nonminority female	62.44	10.29	
DBE total	62.44	20.11	
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	20.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.15	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	29.71	0.00 ****
Nonminority female	0.00	11.99	0.00 ****
DBE total	0.00	41.71	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	95.17	11.22	
Hispanic	0.00	3.79	0.00 ****
Asian	0.00	17.50	0.00 ****
Native American	0.00	0.45	0.00
Minority	95.17	32.97	
Nonminority female	0.00	13.85	0.00 ****
DBE total	95.17	46.82	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.87	0.00 ****
Hispanic	0.00	0.26	0.00
Asian	1.08	7.80	13.81 **
Native American	0.00	0.70	0.00
Minority	1.08	14.63	7.36 ****
Nonminority female	95.10	18.72	
DBE total	96.18	33.35	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	99.74	18.26	
DBE total	99.74	24.86	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	8.35	0.00 ****
Hispanic	0.00	1.15	0.00
Asian	0.00	7.38	0.00 ****
Native American	0.00	1.30	0.00
Minority	0.00	18.18	0.00 ****
Nonminority female	0.00	11.14	0.00 ****
DBE total	0.00	29.32	0.00 ****
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	83.73	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.73	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.73	31.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.42	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	7.99	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.21	0.00
Nonminority female	0.00	15.99	0.00
DBE total	0.00	30.20	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	53.05	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	53.05	14.68	
Nonminority female	38.83	18.44	
DBE total	91.89	33.12	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	100.00	30.13	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.15	0.00 ****
Hispanic	0.00	1.04	0.00 *
Asian	0.00	7.68	0.00 ****
Native American	0.00	0.70	0.00 *
Minority	0.00	14.57	0.00 ****
Nonminority female	0.00	18.31	0.00 ****
DBE total	0.00	32.87	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.70	0.00 ***
Hispanic	0.00	6.29	0.00
Asian	0.00	4.56	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	95.89	12.26	
DBE total	95.89	37.82	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00 ****
Nonminority female	0.00	17.15	0.00 ****
DBE total	0.00	31.89	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.33	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	4.17	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	24.91	0.00 ****
Nonminority female	1.94	11.59	16.70
DBE total	1.94	36.50	5.30 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.10	0.00
Hispanic	0.00	0.79	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.90	0.00
Nonminority female	0.00	14.99	0.00 ****
DBE total	0.00	17.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	26.77	
DBE total	100.00	46.76	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00 ****
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	2.27	0.00
Asian	0.00	6.70	0.00
Native American	0.00	0.84	0.00
Minority	0.00	22.69	0.00 ****
Nonminority female	0.00	13.64	0.00 ****
DBE total	0.00	36.33	0.00 ****
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	29.98	0.00 ****
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	0.00	44.08	0.00 ****
Nonminority female	0.00	11.07	0.00 ****
DBE total	0.00	55.15	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.13	0.00 ****
Hispanic	0.00	2.54	0.00
Asian	0.00	14.61	0.00 ****
Native American	0.00	0.24	0.00
Minority	0.00	24.52	0.00 ****
Nonminority female	84.05	21.62	
DBE total	84.05	46.14	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.38	0.00
Hispanic	0.00	3.94	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.00	0.00
Minority	0.00	26.10	0.00 ****
Nonminority female	0.00	11.83	0.00
DBE total	0.00	37.93	0.00 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	22.29	0.00 ****
Hispanic	0.00	8.15	0.00
Asian	0.00	6.45	0.00
Native American	0.00	0.21	0.00
Minority	0.00	37.10	0.00 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.00	48.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Wired Telecommunications Carriers (NAICS 5171)</b>			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	
<b>Consumer Goods Rental (NAICS 5322)</b>			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	0.00	8.64	0.00 ****
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	0.00	18.95	0.00 ****
DBE total	0.00	41.29	0.00 ****
<b>Architectural and Structural Metals Manufacturing (NAICS 3323)</b>			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	15.98	0.00 ****
DBE total	0.00	30.74	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Insurance Carriers (NAICS 5241)			
African American	0.00	11.69	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	4.71	0.00
Native American	0.00	0.00	
Minority	0.00	18.46	0.00
Nonminority female	0.00	23.00	0.00
DBE total	0.00	41.45	0.00
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	15.67	0.00 ****
Hispanic	0.00	6.30	0.00
Asian	0.00	5.86	0.00
Native American	0.00	0.13	0.00
Minority	0.00	27.95	0.00 ****
Nonminority female	0.00	10.67	0.00 ****
DBE total	0.00	38.62	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	0.00
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
General Rental Centers (NAICS 5323)			
African American	0.00	12.78	0.00
Hispanic	0.00	5.40	0.00
Asian	0.00	3.95	0.00
Native American	0.00	0.00	
Minority	0.00	22.13	0.00
Nonminority female	0.00	18.03	0.00
DBE total	0.00	40.16	0.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	12.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00
Native American	0.00	2.18	0.00
Minority	0.00	23.69	0.00
Nonminority female	0.00	8.72	0.00
DBE total	0.00	32.41	0.00
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table A.10. Industry Group Utilization, Availability, and Disparity Results for MDOT Maintenance Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.30	19.80	1.50 ****
Hispanic	0.05	6.91	0.79 ****
Asian	0.00	5.55	0.00 ****
Native American	0.00	0.20	0.00
Minority	0.35	32.45	1.08 ****
Nonminority female	0.47	17.81	2.62 ****
DBE total	0.82	50.26	1.63 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.27 ****
Hispanic	0.01	3.72	0.39 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.04	14.02	0.28 ****
Nonminority female	16.74	9.88	
DBE total	16.77	23.91	70.17
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Building Equipment Contractors (NAICS 2382)			
African American	19.58	7.82	
Hispanic	0.00	2.90	0.00 ****
Asian	0.00	2.78	0.00 ****
Native American	0.00	0.16	0.00
Minority	19.58	13.66	
Nonminority female	17.27	11.52	
DBE total	36.85	25.19	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Personal and Household Goods Repair and Maintenance (NAICS 8114)</b>			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.01 ****
DBE total	0.00	44.11	0.00 ****
<b>Nonresidential Building Construction (NAICS 2362)</b>			
African American	2.72	10.60	25.64 ***
Hispanic	0.59	5.02	11.83 **
Asian	0.00	3.19	0.00 ****
Native American	0.00	0.87	0.00 ****
Minority	3.31	19.68	16.82 ****
Nonminority female	0.05	13.04	0.35 ****
DBE total	3.36	32.72	10.26 ****
<b>Commercial &amp; Industrial Machinery &amp; Equipment (exc. Automotive &amp; Electronic) Repair &amp; Maintenance (NAICS 8113)</b>			
African American	0.03	7.84	0.44
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.03	17.62	0.19 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.03	29.12	0.12 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.83	0.00 ****
Hispanic	1.17	3.51	33.48
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	1.17	11.94	9.84 ****
Nonminority female	33.91	11.31	
DBE total	35.09	23.25	
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	13.72	21.14	64.92
Hispanic	0.00	5.86	0.00 ****
Asian	0.00	5.54	0.00 ****
Native American	0.00	0.48	0.00
Minority	13.72	33.02	41.56
Nonminority female	0.00	13.64	0.00 ****
DBE total	13.72	46.66	29.41 **
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	5.42	7.36	73.73
Hispanic	15.09	4.72	
Asian	1.82	2.62	69.24
Native American	0.00	0.17	0.00 **
Minority	22.33	14.86	
Nonminority female	10.17	11.28	90.13
DBE total	32.50	26.15	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	17.74	0.00 ****
Hispanic	1.52	2.11	71.79
Asian	0.00	6.30	0.00 ****
Native American	0.00	0.28	0.00
Minority	1.52	26.44	5.74 ****
Nonminority female	3.64	30.23	12.04 ****
DBE total	5.16	56.67	9.10 ****
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****
Residential Building Construction (NAICS 2361)			
African American	1.12	4.32	25.99
Hispanic	2.58	3.41	75.84
Asian	0.00	0.38	0.00
Native American	0.00	0.19	0.00
Minority	3.71	8.30	44.66
Nonminority female	0.00	13.43	0.00 ****
DBE total	3.71	21.73	17.06 ***
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.66	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.88	0.00 ****
Nonminority female	44.53	24.67	
DBE total	44.53	39.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	9.09	18.37	49.48
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 ****
Native American	0.00	0.00	
Minority	9.09	29.68	30.63
Nonminority female	0.00	8.24	0.00 ****
DBE total	9.09	37.91	23.98
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	8.17	0.00
Hispanic	0.00	2.81	0.00
Asian	0.00	8.30	0.00
Native American	0.00	0.00	
Minority	0.00	19.28	0.00
Nonminority female	0.00	14.57	0.00
DBE total	0.00	33.85	0.00
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.72	6.43	11.24 **
Hispanic	0.66	3.06	21.66
Asian	0.00	2.43	0.00 ****
Native American	0.00	0.16	0.00
Minority	1.39	12.09	11.46 ****
Nonminority female	1.23	11.30	10.90 ****
DBE total	2.62	23.38	11.19 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	1.29	0.00
Asian	0.00	9.00	0.00 ****
Native American	1.47	0.88	
Minority	1.47	18.74	7.82
Nonminority female	0.00	17.38	0.00 ****
DBE total	1.47	36.12	4.06 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Administrative Services (NAICS 5611)			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00
Offices of Dentists (NAICS 6212)			
African American	0.00	15.05	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	7.56	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.25	0.00
Nonminority female	0.00	18.06	0.00
DBE total	0.00	43.32	0.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.38	0.00 ****
Hispanic	0.00	0.66	0.00 ***
Asian	0.00	7.98	0.00 ****
Native American	0.00	0.73	0.00 ***
Minority	0.00	14.74	0.00 ****
Nonminority female	18.06	18.40	98.14
DBE total	18.06	33.14	54.49
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.80	8.24	58.28
Hispanic	0.56	4.30	13.08 ****
Asian	0.00	11.33	0.00 ****
Native American	0.00	0.38	0.00 ****
Minority	5.36	24.25	22.12 ****
Nonminority female	4.39	13.12	33.43 ****
DBE total	9.75	37.37	26.09 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.16	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.00	0.00 ****
Native American	0.00	2.30	0.00 ****
Minority	0.00	19.46	0.00 ****
Nonminority female	4.76	17.73	26.86
DBE total	4.76	37.19	12.81 ****
General Freight Trucking (NAICS 4841)			
African American	59.00	23.57	
Hispanic	9.61	9.32	
Asian	0.00	5.85	0.00 ****
Native American	0.00	0.24	0.00
Minority	68.61	38.97	
Nonminority female	0.43	11.17	3.86 ****
DBE total	69.04	50.14	
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Employment Services (NAICS 5613)			
African American	60.79	17.93	
Hispanic	0.00	5.75	0.00 ****
Asian	0.00	5.23	0.00 ****
Native American	0.00	0.58	0.00
Minority	60.79	29.50	
Nonminority female	18.48	19.35	95.48
DBE total	79.26	48.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	20.79	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.13	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	29.82	0.00 ****
Nonminority female	0.00	11.97	0.00 ****
DBE total	0.00	41.79	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Utility System Construction (NAICS 2371)			
African American	0.00	7.04	0.00 ****
Hispanic	0.00	2.33	0.00 ***
Asian	0.00	0.55	0.00
Native American	0.00	0.46	0.00
Minority	0.00	10.38	0.00 ****
Nonminority female	42.56	10.50	
DBE total	42.56	20.88	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	8.28	0.00 ****
Hispanic	0.00	1.13	0.00
Asian	0.00	7.39	0.00 ****
Native American	0.00	1.31	0.00 ****
Minority	0.00	18.11	0.00 ****
Nonminority female	0.00	11.13	0.00 ****
DBE total	0.00	29.24	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.62	0.00 ****
Hispanic	0.00	0.26	0.00
Asian	0.65	7.89	8.29 ****
Native American	0.00	0.71	0.00 ***
Minority	0.65	14.49	4.52 ****
Nonminority female	83.07	18.42	
DBE total	83.72	32.91	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.29	0.00
Hispanic	0.00	0.09	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	14.16	0.00 ****
Nonminority female	0.00	16.62	0.00 ****
DBE total	0.00	30.79	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	83.91	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.91	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.91	31.55	
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	99.51	18.26	
DBE total	99.51	24.86	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	86.52	11.61	
Hispanic	0.00	3.83	0.00 ****
Asian	0.00	17.30	0.00 ****
Native American	0.00	0.47	0.00
Minority	86.52	33.21	
Nonminority female	0.00	13.86	0.00 ****
DBE total	86.52	47.07	
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.16	0.00 ****
Hispanic	0.00	1.03	0.00 ***
Asian	0.00	7.68	0.00 ****
Native American	0.00	0.70	0.00 ***
Minority	0.00	14.57	0.00 ****
Nonminority female	0.00	18.28	0.00 ****
DBE total	0.00	32.84	0.00 ****
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00 ****
Nonminority female	0.00	17.15	0.00 ****
DBE total	0.00	31.89	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.21	0.00 ****
Hispanic	0.00	5.84	0.00 ****
Asian	0.00	4.51	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	24.82	0.00 ****
Nonminority female	85.69	14.41	
DBE total	85.69	39.23	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	1.89	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.60	0.00
Nonminority female	0.00	15.30	0.00 ****
DBE total	0.00	17.89	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.33	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	4.17	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	24.91	0.00 ****
Nonminority female	1.94	11.59	16.70
DBE total	1.94	36.50	5.30 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	86.22	18.44	
DBE total	86.22	33.12	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	2.27	0.00
Asian	0.00	6.70	0.00
Native American	0.00	0.84	0.00
Minority	0.00	22.69	0.00 ****
Nonminority female	0.00	13.64	0.00 ****
DBE total	0.00	36.33	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	51.00	29.98	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	51.00	44.08	
Nonminority female	0.00	11.07	0.00 ****
DBE total	51.00	55.15	92.47
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	100.00	30.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Couriers and Express Delivery Services (NAICS 4921)</b>			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
<b>Direct Selling Establishments (NAICS 4543)</b>			
African American	0.00	7.13	0.00 ****
Hispanic	0.00	2.54	0.00
Asian	0.00	14.61	0.00 ****
Native American	0.00	0.24	0.00
Minority	0.00	24.52	0.00 ****
Nonminority female	84.05	21.62	
DBE total	84.05	46.14	
<b>Taxi and Limousine Service (NAICS 4853)</b>			
African American	0.00	22.29	0.00 ****
Hispanic	0.00	8.15	0.00
Asian	0.00	6.45	0.00
Native American	0.00	0.21	0.00
Minority	0.00	37.10	0.00 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.00	48.12	0.00 ****
<b>Wired Telecommunications Carriers (NAICS 5171)</b>			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	8.64	0.00
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	0.00	18.95	0.00 ****
DBE total	0.00	41.29	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.34	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	7.78	0.00 ****
Native American	0.00	0.00	
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	11.85	0.00 ****
DBE total	0.00	37.90	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	76.49	26.77	
DBE total	76.49	46.76	
Insurance Carriers (NAICS 5241)			
African American	0.00	11.69	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	4.71	0.00
Native American	0.00	0.00	
Minority	0.00	18.46	0.00
Nonminority female	0.00	23.00	0.00
DBE total	0.00	41.45	0.00
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	15.98	0.00 ****
DBE total	0.00	30.74	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 *
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 *
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	15.67	0.00
Hispanic	0.00	6.30	0.00
Asian	0.00	5.86	0.00
Native American	0.00	0.13	0.00
Minority	0.00	27.95	0.00 ****
Nonminority female	0.00	10.67	0.00
DBE total	0.00	38.62	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
General Rental Centers (NAICS 5323)			
African American	0.00	12.78	0.00
Hispanic	0.00	5.40	0.00
Asian	0.00	3.95	0.00
Native American	0.00	0.00	
Minority	0.00	22.13	0.00
Nonminority female	0.00	18.03	0.00
DBE total	0.00	40.16	0.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	12.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00
Native American	0.00	2.18	0.00
Minority	0.00	23.69	0.00
Nonminority female	0.00	8.72	0.00
DBE total	0.00	32.41	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	5.97	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.19	0.00
Native American	0.00	2.21	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	19.48	0.00 ****
DBE total	0.00	35.85	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table A.11. Industry Group Utilization, Availability, and Disparity Results for MDOT Maintenance Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	7.15	7.92	90.31
Hispanic	0.00	2.86	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00
Minority	7.15	13.74	52.08
Nonminority female	49.38	11.26	
DBE total	56.54	25.00	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.02	3.72	0.64 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.02	14.02	0.17 ****
Nonminority female	13.22	9.88	
DBE total	13.24	23.91	55.39
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Commercial &amp; Industrial Machinery &amp; Equipment (exc. Automotive &amp; Electronic) Repair &amp; Maintenance (NAICS 8113)</b>			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	35.35	11.31	
DBE total	35.35	23.24	
<b>Individual and Family Services (NAICS 6241)</b>			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	18.55	24.69	75.13
DBE total	18.55	39.56	46.89
Nonresidential Building Construction (NAICS 2362)			
African American	4.01	7.88	50.88
Hispanic	0.00	3.89	0.00 ****
Asian	0.00	2.09	0.00 ****
Native American	0.00	0.57	0.00 ***
Minority	4.01	14.43	27.78 ***
Nonminority female	0.12	14.64	0.84 ****
DBE total	4.13	29.07	14.21 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00 ****
Hispanic	0.00	3.36	0.00 *
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.00	8.30	0.00 ****
Nonminority female	0.00	13.36	0.00 ****
DBE total	0.00	21.65	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.99	6.63	14.87 ****
Hispanic	36.29	5.56	
Asian	5.85	2.59	
Native American	0.00	0.05	0.00
Minority	43.12	14.82	
Nonminority female	27.03	10.24	
DBE total	70.15	25.06	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	8.39	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00 ****
Native American	0.00	2.47	0.00
Minority	0.00	19.58	0.00 ****
Nonminority female	27.09	18.62	
DBE total	27.09	38.20	70.93
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.52	0.00 ***
Hispanic	0.00	1.42	0.00
Asian	0.00	9.09	0.00 ***
Native American	0.00	0.92	0.00
Minority	0.00	18.95	0.00 ****
Nonminority female	0.00	17.45	0.00 ****
DBE total	0.00	36.40	0.00 ****
<b>General Freight Trucking (NAICS 4841)</b>			
African American	14.57	23.65	61.61 *
Hispanic	2.59	9.66	26.84 ***
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	17.16	39.38	43.58 ****
Nonminority female	0.00	10.58	0.00 ****
DBE total	17.16	49.96	34.36 ****
<b>Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)</b>			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.09	0.00 ****
Hispanic	0.00	0.87	0.00 *
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.77	0.00 *
Minority	0.00	14.60	0.00 ****
Nonminority female	34.00	18.56	
DBE total	34.00	33.17	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	20.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.15	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	29.71	0.00 ****
Nonminority female	0.00	11.99	0.00 ****
DBE total	0.00	41.71	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	100.00	18.26	
DBE total	100.00	24.86	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	83.73	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.73	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.73	31.55	
Utility System Construction (NAICS 2371)			
African American	0.00	7.16	0.00 ****
Hispanic	0.00	2.37	0.00 ****
Asian	0.00	0.62	0.00 ***
Native American	0.00	0.44	0.00
Minority	0.00	10.60	0.00 ****
Nonminority female	0.00	10.59	0.00 ****
DBE total	0.00	21.18	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	66.04	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	66.04	14.68	
Nonminority female	31.10	18.44	
DBE total	97.15	33.12	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	26.10	6.86	
Hispanic	0.00	4.34	0.00 ****
Asian	0.00	8.56	0.00 ****
Native American	0.00	0.25	0.00 ****
Minority	26.10	20.01	
Nonminority female	34.63	14.02	
DBE total	60.73	34.04	
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.29	0.00
Hispanic	0.00	0.09	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.72	0.00
Minority	0.00	14.16	0.00
Nonminority female	0.00	16.63	0.00
DBE total	0.00	30.79	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.43	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.43	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	12.44	11.30	
DBE total	12.44	23.38	53.22
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	14.45	0.00 ****
Hispanic	47.96	1.51	
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00 **
Minority	47.96	23.76	
Nonminority female	8.80	29.63	29.70 ****
DBE total	56.76	53.39	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	31.14	11.55	
DBE total	31.14	37.13	83.87
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	100.00	30.13	
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00 ****
Asian	0.00	5.49	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	20.69	0.00 ****
Hispanic	0.00	4.06	0.00 ***
Asian	0.00	4.39	0.00 ***
Native American	0.00	3.70	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	28.67	0.00 ****
DBE total	0.00	61.51	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00 **
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.97	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	20.63	7.77	
Native American	0.00	0.69	0.00
Minority	20.63	14.71	
Nonminority female	37.50	18.79	
DBE total	58.12	33.50	
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00 ****
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.66	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.52	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	25.31	0.00 ****
Nonminority female	100.00	11.40	
DBE total	100.00	36.71	

Source and Notes: See Table 5.5.

**Table A.12. Industry Group Utilization, Availability, and Disparity Results for MDOT Maintenance Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.03	3.72	0.79 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.03	14.02	0.21 ****
Nonminority female	3.93	9.88	39.77 **
DBE total	3.96	23.91	16.56 ****
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Building Equipment Contractors (NAICS 2382)			
African American	21.04	7.91	
Hispanic	0.00	2.93	0.00 ****
Asian	0.00	2.78	0.00 ****
Native American	0.00	0.16	0.00
Minority	21.04	13.77	
Nonminority female	9.01	11.71	76.95
DBE total	30.05	25.49	
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	32.78	11.31	
DBE total	32.78	23.24	
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.66	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.88	0.00 ****
Nonminority female	30.80	24.67	
DBE total	30.80	39.55	77.87
Nonresidential Building Construction (NAICS 2362)			
African American	4.42	7.78	56.76
Hispanic	0.00	3.85	0.00 ****
Asian	0.00	2.05	0.00 ****
Native American	0.00	0.56	0.00 ****
Minority	4.42	14.24	31.01 ***
Nonminority female	0.13	14.70	0.91 ****
DBE total	4.55	28.94	15.72 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	9.01	0.00 ****
Native American	1.49	0.89	
Minority	1.49	18.76	7.93
Nonminority female	0.00	17.38	0.00 ****
DBE total	1.49	36.15	4.12 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.34	0.00 ****
Hispanic	0.00	3.36	0.00 ****
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.00	8.30	0.00 ****
Nonminority female	0.00	13.36	0.00 ****
DBE total	0.00	21.66	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.19	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.97	0.00 ****
Native American	0.00	2.29	0.00 ****
Minority	0.00	19.45	0.00 ****
Nonminority female	3.77	17.69	21.29
DBE total	3.77	37.14	10.14 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	2.22	6.63	33.49
Hispanic	36.44	5.56	
Asian	2.45	2.59	94.47
Native American	0.00	0.05	0.00
Minority	41.10	14.82	
Nonminority female	32.85	10.24	
DBE total	73.95	25.06	
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.08	0.00 ****
Hispanic	0.00	0.88	0.00 ***
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.77	0.00 ***
Minority	0.00	14.60	0.00 ****
Nonminority female	32.84	18.57	
DBE total	32.84	33.17	99.02
General Freight Trucking (NAICS 4841)			
African American	47.73	23.65	
Hispanic	17.58	9.66	
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	65.31	39.38	
Nonminority female	0.50	10.58	4.73 ****
DBE total	65.81	49.96	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	20.79	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.13	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	29.82	0.00 ****
Nonminority female	0.00	11.97	0.00 ****
DBE total	0.00	41.79	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.29	0.00 ****
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.64	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	4.86	10.85	44.80
DBE total	4.86	22.95	21.17 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	83.91	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.91	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.91	31.55	
Utility System Construction (NAICS 2371)			
African American	0.00	7.42	0.00 ****
Hispanic	0.00	2.47	0.00 ***
Asian	0.00	0.79	0.00
Native American	0.00	0.41	0.00
Minority	0.00	11.09	0.00 ****
Nonminority female	8.36	10.78	77.54
DBE total	8.36	21.88	38.22 ***

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.13	0.00
Hispanic	0.00	0.13	0.00
Asian	0.00	8.12	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	14.10	0.00 ****
Nonminority female	0.00	17.40	0.00 ****
DBE total	0.00	31.50	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	100.00	18.26	
DBE total	100.00	24.86	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	14.45	0.00 ****
Hispanic	35.26	1.51	
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	35.26	23.77	
Nonminority female	8.20	29.63	27.69 ****
DBE total	43.47	53.40	81.41
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	32.54	6.87	
Hispanic	0.00	4.34	0.00 ****
Asian	0.00	8.56	0.00 ****
Native American	0.00	0.26	0.00 ****
Minority	32.54	20.03	
Nonminority female	18.50	14.07	
DBE total	51.04	34.11	
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00 ****
Asian	0.00	5.49	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	20.41	0.00 ****
Hispanic	0.00	4.79	0.00 ****
Asian	0.00	5.17	0.00 ****
Native American	0.00	2.56	0.00 *
Minority	0.00	32.92	0.00 ****
Nonminority female	0.00	25.22	0.00 ****
DBE total	0.00	58.14	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	14.80	11.55	
DBE total	14.80	37.13	39.87
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	100.00	18.44	
DBE total	100.00	33.12	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.71	0.00 ****
Hispanic	0.00	0.36	0.00
Asian	4.49	8.02	56.07
Native American	0.00	0.69	0.00 ***
Minority	4.49	14.78	30.42 **
Nonminority female	17.16	17.99	95.43
DBE total	21.66	32.76	66.11

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	1.87	0.00
Hispanic	0.00	1.87	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.74	0.00 ****
Nonminority female	0.00	14.21	0.00 ****
DBE total	0.00	17.95	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	100.00	30.13	
Specialized Freight Trucking (NAICS 4842)			
African American	100.00	29.98	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	100.00	44.08	
Nonminority female	0.00	11.07	0.00 ****
DBE total	100.00	55.15	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	0.98	0.00
Asian	0.00	3.93	0.00 ****
Native American	0.00	3.03	0.00 ****
Minority	0.00	16.79	0.00 ****
Nonminority female	0.00	38.00	0.00 ****
DBE total	0.00	54.79	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 *
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 *
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.66	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.52	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	25.31	0.00 ****
Nonminority female	100.00	11.40	
DBE total	100.00	36.71	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.38	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	7.77	0.00 ****
Native American	0.00	0.00	
Minority	0.00	26.10	0.00 ****
Nonminority female	0.00	11.83	0.00 ****
DBE total	0.00	37.93	0.00 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	6.28	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.46	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.00	14.49	0.00 ****
Nonminority female	0.00	14.22	0.00 ****
DBE total	0.00	28.71	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	5.97	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.19	0.00
Native American	0.00	2.21	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	19.48	0.00 ****
DBE total	0.00	35.85	0.00 ****

Source and Notes: See Table 5.5.

**Table A.13. Industry Group Utilization, Availability, and Disparity Results for MDOT IT Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	6.02	16.44	36.64
Hispanic	0.00	3.64	0.00 ****
Asian	6.31	14.39	43.81
Native American	0.00	0.59	0.00 **
Minority	12.33	35.06	35.17 ****
Nonminority female	3.80	16.35	23.23 **
DBE total	16.13	51.41	31.37 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.71	0.00 ****
Hispanic	0.00	1.92	0.00 ****
Asian	3.26	7.23	45.15
Native American	0.00	0.17	0.00 **
Minority	3.26	26.02	12.55 ****
Nonminority female	0.00	26.50	0.00 ****
DBE total	3.26	52.52	6.22 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.72	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	99.53	12.32	
Native American	0.00	0.42	0.00 ****
Minority	99.53	25.75	
Nonminority female	0.00	12.75	0.00 ****
DBE total	99.53	38.50	
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ***
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ***
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00 ****
Hispanic	0.00	1.15	0.00 ****
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00 ****
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00 ****
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00 ****
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 ****
Nonminority female	100.00	14.10	
DBE total	100.00	33.91	

Source and Notes: See Table 5.5.

**Table A.14. Industry Group Utilization, Availability, and Disparity Results for MDOT IT Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	6.36	16.88	37.67
Hispanic	0.00	3.26	0.00 ****
Asian	24.71	13.88	
Native American	0.00	0.56	0.00 *
Minority	31.06	34.58	89.84
Nonminority female	1.65	18.01	9.15 ****
DBE total	32.71	52.58	62.21
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.72	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	99.49	12.31	
Native American	0.00	0.42	0.00 ****
Minority	99.49	25.74	
Nonminority female	0.00	12.75	0.00 ****
DBE total	99.49	38.50	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.69	0.00 ****
Hispanic	0.00	1.88	0.00 ****
Asian	3.98	7.22	55.17
Native American	0.00	0.16	0.00
Minority	3.98	25.95	15.35 ****
Nonminority female	0.00	26.50	0.00 ****
DBE total	3.98	52.45	7.60 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ****
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ****
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ****
Asian	0.00	5.03	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00 ****
Hispanic	0.00	1.15	0.00 *
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00 *
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00 ****
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00 ****
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	100.00	14.10	
DBE total	100.00	33.91	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 **
Minority	0.00	13.72	0.00 ****
Nonminority female	100.00	11.03	
DBE total	100.00	24.75	

Source and Notes: See Table 5.5.

**Table A.15. Industry Group Utilization, Availability, and Disparity Results for MDOT IT Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Computer Systems Design and Related Services (NAICS 5415)			
African American	12.10	18.15	66.66
Hispanic	0.00	3.11	0.00 ****
Asian	0.00	13.05	0.00 ****
Native American	0.00	0.58	0.00 **
Minority	12.10	34.90	34.68 ****
Nonminority female	8.07	19.04	42.38
DBE total	20.17	53.94	37.40 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ***
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ***
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)</b>			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
<b>Electrical Equipment Manufacturing (NAICS 3353)</b>			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
<b>Employment Services (NAICS 5613)</b>			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
<b>Computer and Peripheral Equipment Manufacturing (NAICS 3341)</b>			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00 ****
Hispanic	0.00	1.15	0.00 ****
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00 ****
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00 ****
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00 ****
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

Source and Notes: See Table 5.5.

**Table A.16. Industry Group Utilization, Availability, and Disparity Results for MDOT IT Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	9.79	19.70	49.71
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	11.97	0.00 ****
Native American	0.00	0.60	0.00 *
Minority	9.79	35.09	27.91 ****
Nonminority female	2.74	20.73	13.20 ****
DBE total	12.53	55.82	22.45 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ****
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ****
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00 ****
DBE total	0.00	50.52	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ****
Asian	0.00	5.03	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00 ****
Hispanic	0.00	1.15	0.00 *
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00 *
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

Source and Notes: See Table 5.5.

**Table A.17. Industry Group Utilization, Availability, and Disparity Results for MDOT Services Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	12.27	42.76	28.69 ***
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.08	0.00
Minority	12.27	53.17	23.08 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	12.27	61.96	19.80 ****
Rail Transportation (NAICS 4821)			
African American	0.09	8.30	1.10
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.09	19.43	0.48
Nonminority female	0.02	12.12	0.17 **
DBE total	0.11	31.55	0.36 **
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.01	31.83	0.04 *
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.01	44.78	0.03 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.01	56.00	0.02 ****
Charter Bus Industry (NAICS 4855)			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
Employment Services (NAICS 5613)			
African American	86.63	19.83	
Hispanic	0.00	6.12	0.00 ***
Asian	0.00	6.58	0.00 ****
Native American	0.00	0.45	0.00
Minority	86.63	32.98	
Nonminority female	13.28	18.86	70.41
DBE total	99.91	51.84	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.14	8.57	36.59 ****
Hispanic	3.88	4.10	94.59
Asian	5.25	11.35	46.21 ****
Native American	0.00	0.37	0.00 ****
Minority	12.26	24.40	50.25 ****
Nonminority female	36.18	14.00	
DBE total	48.44	38.40	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.29	9.55	3.05 ****
Hispanic	0.00	3.48	0.00 ****
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.21	0.00
Minority	0.29	21.12	1.38 ****
Nonminority female	4.90	22.94	21.36 **
DBE total	5.19	44.06	11.78 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.00	0.00 ****
Hispanic	0.00	6.66	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	0.00
Minority	0.00	24.52	0.00 ****
Nonminority female	0.04	11.79	0.37 ****
DBE total	0.04	36.31	0.12 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	1.51	16.51	9.13 ****
Hispanic	0.00	1.97	0.00 ****
Asian	2.70	7.18	37.66 **
Native American	0.00	0.24	0.00 **
Minority	4.21	25.90	16.26 ****
Nonminority female	5.41	27.36	19.78 ****
DBE total	9.62	53.26	18.07 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.90	0.00 ****
Hispanic	0.00	3.80	0.00 ****
Asian	38.60	17.21	
Native American	0.00	0.54	0.00
Minority	38.60	34.45	
Nonminority female	22.18	13.90	
DBE total	60.78	48.35	
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****
Taxi and Limousine Service (NAICS 4853)			
African American	6.39	19.86	32.16
Hispanic	93.61	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00 ****
DBE total	100.00	46.00	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	98.11	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	98.11	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	98.11	29.90	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.44	0.00 ****
Hispanic	0.00	5.02	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.00	14.29	0.00 ****
Nonminority female	0.00	10.46	0.00 ****
DBE total	0.00	24.75	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00 ****
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	2.94	11.27	26.11
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	2.94	17.15	17.16
Nonminority female	0.00	28.09	0.00 ****
DBE total	2.94	45.24	6.50 *
Automotive Repair and Maintenance (NAICS 8111)			
African American	87.11	24.61	
Hispanic	0.00	5.48	0.00 **
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.18	0.00
Minority	87.11	36.88	
Nonminority female	0.00	12.95	0.00 ****
DBE total	87.11	49.83	
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.34	0.00
Hispanic	23.16	0.49	
Asian	76.84	3.93	
Native American	0.00	0.50	0.00
Minority	100.00	14.26	
Nonminority female	0.00	38.10	0.00 ****
DBE total	100.00	52.37	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	7.13	0.00
Hispanic	0.00	0.28	0.00
Asian	0.00	3.42	0.00
Native American	0.00	0.28	0.00
Minority	0.00	11.11	0.00
Nonminority female	100.00	34.03	
DBE total	100.00	45.14	
Services to Buildings and Dwellings (NAICS 5617)			
African American	14.25	15.73	90.60
Hispanic	0.00	6.63	0.00 ****
Asian	0.00	4.60	0.00 ****
Native American	0.00	0.18	0.00
Minority	14.25	27.14	52.51
Nonminority female	0.00	12.43	0.00 ****
DBE total	14.25	39.58	36.01
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00
Nonminority female	0.00	18.30	0.00
DBE total	0.00	38.08	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	11.54	0.00 ****
Hispanic	0.00	1.10	0.00
Asian	0.00	5.06	0.00 **
Native American	0.00	0.03	0.00
Minority	0.00	17.73	0.00 ****
Nonminority female	0.12	31.12	0.37 ****
DBE total	0.12	48.85	0.24 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26
Nonresidential Building Construction (NAICS 2362)			
African American	11.60	7.91	
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	2.10	0.00 ****
Native American	0.00	0.58	0.00 ***
Minority	11.60	14.49	80.03
Nonminority female	0.00	14.62	0.00 ****
DBE total	11.60	29.12	39.84 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.69	0.00 ****
Hispanic	0.00	0.26	0.00
Asian	0.00	9.45	0.00 ****
Native American	0.00	0.99	0.00
Minority	0.00	16.39	0.00 ****
Nonminority female	11.15	22.12	50.39
DBE total	11.15	38.50	28.95 *
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00 ****
DBE total	100.00	47.80	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	91.10	10.05	
Hispanic	0.00	1.86	0.00
Asian	0.00	9.06	0.00 ****
Native American	0.00	0.25	0.00
Minority	91.10	21.23	
Nonminority female	0.00	26.26	0.00 ****
DBE total	91.10	47.48	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.74	0.00 ****
Hispanic	13.69	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	13.69	12.46	
Nonminority female	3.51	10.45	33.61 **
DBE total	17.20	22.91	75.07
Business Support Services (NAICS 5614)			
African American	15.96	13.38	
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.06	0.00
Minority	15.96	20.01	79.76
Nonminority female	0.00	26.77	0.00 ****
DBE total	15.96	46.78	34.12
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00 ****
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80 *

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 ****
Nonminority female	0.00	14.10	0.00 ****
DBE total	0.00	33.91	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.23	0.00 ****
Hispanic	0.00	0.91	0.00
Asian	0.00	7.99	0.00 ****
Native American	0.00	1.47	0.00
Minority	0.00	16.60	0.00 ****
Nonminority female	18.78	15.02	
DBE total	18.78	31.61	59.40
Motion Picture and Video Industries (NAICS 5121)			
African American	19.31	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	19.31	21.41	90.19
Nonminority female	20.48	30.78	66.53
DBE total	39.79	52.19	76.23

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.36	0.00 ****
Hispanic	0.00	7.35	0.00 ****
Asian	0.00	4.09	0.00 **
Native American	0.00	0.00	
Minority	0.00	29.79	0.00 ****
Nonminority female	0.00	10.20	0.00 ****
DBE total	0.00	40.00	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	
Other Information Services (NAICS 5191)			
African American	0.00	11.30	0.00
Hispanic	0.00	0.92	0.00
Asian	0.00	6.42	0.00
Native American	0.00	0.00	
Minority	0.00	18.65	0.00
Nonminority female	0.00	28.46	0.00 ****
DBE total	0.00	47.11	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	73.40	11.62	
Hispanic	0.00	2.07	0.00
Asian	0.00	5.43	0.00 *
Native American	0.00	0.00	
Minority	73.40	19.11	
Nonminority female	0.00	23.25	0.00 ****
DBE total	73.40	42.36	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	2.38	5.53	43.05
Hispanic	0.00	0.67	0.00
Asian	0.00	7.92	0.00 ****
Native American	14.82	0.78	
Minority	17.20	14.91	
Nonminority female	42.40	24.69	
DBE total	59.61	39.60	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.13	0.00 ****
Hispanic	0.00	6.23	0.00
Asian	0.00	6.32	0.00
Native American	0.00	0.00	
Minority	0.00	37.68	0.00 ****
Nonminority female	0.00	12.66	0.00 ****
DBE total	0.00	50.34	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.36	0.00 ****
Hispanic	0.00	3.04	0.00 ****
Asian	0.00	2.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	12.10	0.00 ****
Nonminority female	4.55	11.09	41.04
DBE total	4.55	23.18	19.63 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	3.91	2.33	
Minority	3.91	18.60	20.99
Nonminority female	0.00	9.30	0.00
DBE total	3.91	27.91	13.99
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.31	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.98	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00 ****
Asian	0.00	7.01	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Specialized Design Services (NAICS 5414)			
African American	56.21	13.14	
Hispanic	0.00	2.22	0.00
Asian	0.00	5.32	0.00
Native American	0.00	0.13	0.00
Minority	56.21	20.82	
Nonminority female	0.00	38.74	0.00 ****
DBE total	56.21	59.55	94.40
Management of Companies and Enterprises (NAICS 5511)			
African American	0.00	11.14	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	5.94	0.00
Native American	0.00	0.00	
Minority	0.00	17.17	0.00
Nonminority female	0.00	24.98	0.00
DBE total	0.00	42.15	0.00
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00 ****
Hispanic	0.00	8.06	0.00 ***
Asian	0.00	6.39	0.00 ***
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00 ****
DBE total	0.00	51.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	14.80	0.00
Hispanic	0.00	2.44	0.00
Asian	0.00	7.30	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	14.70	0.00
DBE total	0.00	39.23	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	9.95	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	92.75	21.99	
DBE total	92.75	43.50	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.08	0.00 ****
Hispanic	0.00	2.98	0.00
Asian	0.00	12.31	0.00 ****
Native American	0.00	0.56	0.00
Minority	0.00	23.93	0.00 ****
Nonminority female	0.00	20.22	0.00 ****
DBE total	0.00	44.16	0.00 ****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	99.94	18.81	
DBE total	99.94	39.83	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	10.96	0.00
DBE total	0.00	10.96	0.00
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00 *
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00 *
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00 ****
DBE total	0.00	33.29	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	83.46	13.09	
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	83.46	19.52	
Nonminority female	0.00	26.80	0.00 ****
DBE total	83.46	46.32	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.19	0.00
Hispanic	0.00	3.06	0.00
Asian	0.00	7.48	0.00
Native American	0.00	0.20	0.00
Minority	0.00	28.93	0.00 ****
Nonminority female	100.00	19.78	
DBE total	100.00	48.71	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	6.36	11.50	55.31
DBE total	6.36	29.12	21.84
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	6.51	1.12	
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	6.51	16.41	39.70
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.51	36.93	17.64
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00 ****
Nonminority female	0.00	15.62	0.00 ****
DBE total	0.00	34.66	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

Source and Notes: See Table 5.5.

**Table A.18. Industry Group Utilization, Availability, and Disparity Results for MDOT Services Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	8.91	42.76	20.83 **
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.08	0.00
Minority	8.91	53.17	16.75 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	8.91	61.96	14.38 ****
Rail Transportation (NAICS 4821)			
African American	0.16	8.30	1.97
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.17	19.43	0.85
Nonminority female	0.03	12.12	0.27 *
DBE total	0.20	31.55	0.63 *
Charter Bus Industry (NAICS 4855)			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.02	31.83	0.06 ****
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.02	44.78	0.04 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.02	56.00	0.03 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.67	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	0.00
Minority	0.00	24.53	0.00 ****
Nonminority female	0.04	11.78	0.33 ****
DBE total	0.04	36.31	0.11 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.32	8.62	15.29 ****
Hispanic	5.16	3.95	
Asian	8.21	11.13	73.79
Native American	0.00	0.36	0.00 ****
Minority	14.69	24.06	61.04 **
Nonminority female	28.29	14.23	
DBE total	42.98	38.29	
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.66	16.74	3.97 ****
Hispanic	0.00	2.21	0.00 ****
Asian	2.95	7.19	40.98
Native American	0.00	0.30	0.00
Minority	3.61	26.44	13.66 ****
Nonminority female	2.30	27.34	8.43 ****
DBE total	5.92	53.78	11.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.28	0.00 ****
Hispanic	0.00	3.86	0.00 ****
Asian	32.39	17.04	
Native American	0.00	0.50	0.00
Minority	32.39	33.68	96.16
Nonminority female	4.28	13.88	30.83
DBE total	36.67	47.57	77.09
Taxi and Limousine Service (NAICS 4853)			
African American	10.93	19.86	55.04
Hispanic	89.07	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00 ****
DBE total	100.00	46.00	
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.52	0.00 ****
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	14.52	0.00 ****
Nonminority female	0.00	10.37	0.00 ****
DBE total	0.00	24.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Employment Services (NAICS 5613)			
African American	38.81	19.10	
Hispanic	0.00	6.05	0.00 ****
Asian	0.00	6.15	0.00 ****
Native American	0.00	0.40	0.00
Minority	38.81	31.69	
Nonminority female	59.84	18.73	
DBE total	98.65	50.42	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	97.71	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	97.71	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	97.71	29.90	
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	30.38	16.67	
Hispanic	0.00	6.84	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.18	0.00
Minority	30.38	28.49	
Nonminority female	0.00	13.20	0.00 ****
DBE total	30.38	41.70	72.86

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00 ****
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.65	11.27	50.15
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	5.65	17.15	32.96
Nonminority female	0.00	28.09	0.00 ****
DBE total	5.65	45.24	12.49 *
Automotive Repair and Maintenance (NAICS 8111)			
African American	80.09	23.20	
Hispanic	0.00	5.10	0.00 ****
Asian	0.00	6.68	0.00 ****
Native American	0.00	0.28	0.00
Minority	80.09	35.26	
Nonminority female	0.00	12.79	0.00 ****
DBE total	80.09	48.05	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.58	12.05	13.11 ****
Hispanic	0.00	1.46	0.00
Asian	0.00	6.38	0.00 ****
Native American	0.00	0.03	0.00
Minority	1.58	19.92	7.93 ****
Nonminority female	5.38	28.39	18.96 ****
DBE total	6.96	48.31	14.41 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	11.60	7.91	
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	2.10	0.00 ****
Native American	0.00	0.58	0.00 ****
Minority	11.60	14.49	80.03
Nonminority female	0.00	14.62	0.00 ****
DBE total	11.60	29.12	39.84 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	11.33	0.00 ***
Hispanic	0.00	0.91	0.00
Asian	0.00	4.95	0.00
Native American	0.00	0.01	0.00
Minority	0.00	17.20	0.00 ****
Nonminority female	0.05	30.75	0.16 ****
DBE total	0.05	47.95	0.10 ****
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00 ****
DBE total	100.00	47.80	
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83 **
DBE total	55.40	50.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	8.24	0.00
Hispanic	97.85	0.53	
Asian	2.15	3.68	58.41
Native American	0.00	0.47	0.00
Minority	100.00	12.93	
Nonminority female	0.00	38.55	0.00 ****
DBE total	100.00	51.48	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00 ****
DBE total	100.00	48.12	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.83	0.00 ****
Hispanic	16.98	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	16.98	12.55	
Nonminority female	2.51	10.50	23.90 ****
DBE total	19.48	23.05	84.52
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	6.16	0.00 ****
Hispanic	0.00	0.23	0.00
Asian	0.00	9.22	0.00 ****
Native American	0.00	1.12	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	28.92	22.57	
DBE total	28.92	39.30	73.60

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.23	0.00 *
Hispanic	0.00	0.91	0.00
Asian	0.00	7.99	0.00 *
Native American	0.00	1.47	0.00
Minority	0.00	16.59	0.00 ****
Nonminority female	18.80	15.02	
DBE total	18.80	31.61	59.48
Business Support Services (NAICS 5614)			
African American	25.68	13.38	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.06	0.00
Minority	25.68	20.01	
Nonminority female	0.00	26.77	0.00 ****
DBE total	25.68	46.78	54.91
Management of Companies and Enterprises (NAICS 5511)			
African American	0.00	11.14	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	5.94	0.00
Native American	0.00	0.00	
Minority	0.00	17.17	0.00 ****
Nonminority female	0.00	24.98	0.00 ****
DBE total	0.00	42.15	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	80.41	9.88	
Hispanic	0.00	2.04	0.00
Asian	0.00	9.18	0.00
Native American	0.00	0.25	0.00
Minority	80.41	21.36	
Nonminority female	0.00	25.40	0.00 ****
DBE total	80.41	46.75	
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00 ****
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80 *
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00 ****
DBE total	100.00	35.10	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.36	0.00 ****
Hispanic	0.00	7.24	0.00 ****
Asian	0.00	4.24	0.00 ****
Native American	0.00	0.00	
Minority	0.00	29.84	0.00 ****
Nonminority female	0.00	10.90	0.00 ****
DBE total	0.00	40.74	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.13	0.00 ****
Hispanic	0.00	6.23	0.00
Asian	0.00	6.32	0.00
Native American	0.00	0.00	
Minority	0.00	37.68	0.00 ****
Nonminority female	0.00	12.66	0.00 ****
DBE total	0.00	50.34	0.00 ****
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	7.13	0.00
Hispanic	0.00	0.28	0.00
Asian	0.00	3.42	0.00
Native American	0.00	0.28	0.00
Minority	0.00	11.11	0.00
Nonminority female	100.00	34.03	
DBE total	100.00	45.14	
Motion Picture and Video Industries (NAICS 5121)			
African American	16.49	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	16.49	21.41	77.03
Nonminority female	41.84	30.78	
DBE total	58.33	52.19	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.39	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.50	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	5.56	11.16	49.77
DBE total	5.56	23.25	23.89 ***
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	2.14	2.33	92.23
Minority	2.14	18.60	11.53
Nonminority female	0.00	9.30	0.00 ****
DBE total	2.14	27.91	7.69 **
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00 *
Asian	0.00	7.01	0.00 *
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00 ****
Hispanic	0.00	8.06	0.00 ****
Asian	0.00	6.39	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00 ****
DBE total	0.00	51.55	0.00 ****
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	14.80	0.00
Hispanic	0.00	2.44	0.00
Asian	0.00	7.30	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	14.70	0.00
DBE total	0.00	39.23	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	9.94	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.50	0.00 ****
Nonminority female	92.88	21.99	
DBE total	92.88	43.49	
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.46	5.55	26.37
Hispanic	0.00	0.68	0.00
Asian	0.00	7.92	0.00 ****
Native American	24.27	0.78	
Minority	25.73	14.93	
Nonminority female	39.08	24.69	
DBE total	64.81	39.62	
Specialized Design Services (NAICS 5414)			
African American	83.77	13.09	
Hispanic	0.00	2.19	0.00
Asian	0.00	5.36	0.00
Native American	0.00	0.13	0.00
Minority	83.77	20.78	
Nonminority female	0.00	38.57	0.00 ****
DBE total	83.77	59.35	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	10.96	0.00
DBE total	0.00	10.96	0.00
Consumer Goods Rental (NAICS 5322)			
African American	50.86	12.48	
Hispanic	0.00	3.42	0.00
Asian	0.00	5.19	0.00
Native American	0.00	0.00	
Minority	50.86	21.09	
Nonminority female	0.00	20.28	0.00 ****
DBE total	50.86	41.36	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.64	0.00 ****
Hispanic	0.00	3.07	0.00
Asian	0.00	11.13	0.00 ****
Native American	0.00	0.65	0.00
Minority	0.00	23.50	0.00 ****
Nonminority female	0.00	19.51	0.00 ****
DBE total	0.00	43.01	0.00 ****
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Other Information Services (NAICS 5191)			
African American	0.00	11.28	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	6.27	0.00
Native American	0.00	0.00	
Minority	0.00	18.35	0.00
Nonminority female	0.00	27.97	0.00 ****
DBE total	0.00	46.33	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.31	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.27	0.00 ****
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.98	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00 ***
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00 ***
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	99.91	18.81	
DBE total	99.91	39.83	
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00 ****
DBE total	0.00	33.29	0.00 ****
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	3.36	11.50	29.21
DBE total	3.36	29.12	11.53
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.16	0.00
Hispanic	0.00	3.24	0.00
Asian	0.00	7.48	0.00
Native American	0.00	0.22	0.00
Minority	0.00	29.10	0.00 ****
Nonminority female	100.00	20.57	
DBE total	100.00	49.68	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	6.52	1.12	
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	6.52	16.41	39.73
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.52	36.93	17.65
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00 ***
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

Source and Notes: See Table 5.5.

**Table A.19. Industry Group Utilization, Availability, and Disparity Results for MDOT Services Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.09	8.30	1.10
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.09	19.43	0.48
Nonminority female	0.02	12.12	0.17 **
DBE total	0.11	31.55	0.36 **
<b>Other Transit and Ground Passenger Transportation (NAICS 4859)</b>			
African American	0.01	31.83	0.04 *
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.01	44.78	0.03 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.01	56.00	0.02 ****
<b>Urban Transit Systems (NAICS 4851)</b>			
African American	0.32	42.76	0.75 ****
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.32	53.17	0.60 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.32	61.96	0.52 ****
<b>Charter Bus Industry (NAICS 4855)</b>			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
<b>Employment Services (NAICS 5613)</b>			
African American	95.54	19.84	
Hispanic	0.00	6.12	0.00 ***
Asian	0.00	6.58	0.00 ****
Native American	0.00	0.45	0.00
Minority	95.54	33.00	
Nonminority female	4.36	18.86	23.13
DBE total	99.90	51.87	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.52	8.58	41.01 ****
Hispanic	0.75	4.26	17.60 ****
Asian	5.88	11.76	50.03 ***
Native American	0.00	0.40	0.00 ****
Minority	10.15	24.99	40.61 ****
Nonminority female	39.73	13.55	
DBE total	49.88	38.53	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.00	0.00 ****
Hispanic	0.00	6.66	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.79	0.10 ****
DBE total	0.01	36.31	0.03 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	1.58	16.52	9.55 ****
Hispanic	0.00	2.15	0.00 ****
Asian	1.57	7.22	21.76 ****
Native American	0.00	0.30	0.00 **
Minority	3.15	26.18	12.02 ****
Nonminority female	5.08	27.56	18.42 ****
DBE total	8.22	53.74	15.30 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	13.31	0.00 ****
Hispanic	0.00	3.79	0.00 ****
Asian	23.65	17.20	
Native American	0.00	0.56	0.00 **
Minority	23.65	34.85	67.87
Nonminority female	29.75	13.91	
DBE total	53.41	48.76	
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	98.11	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	98.11	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	98.11	29.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	13.18	19.86	66.36
Hispanic	86.82	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00 ****
DBE total	100.00	46.00	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.44	0.00 ****
Hispanic	0.00	5.02	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.00	14.29	0.00 ****
Nonminority female	0.00	10.46	0.00 ****
DBE total	0.00	24.75	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.20	11.75	10.24 ***
Hispanic	0.00	1.76	0.00 ****
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.05	0.00
Minority	1.20	20.18	5.97 ****
Nonminority female	19.74	27.63	71.44
DBE total	20.95	47.81	43.81

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00 ****
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	2.94	11.27	26.11
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	2.94	17.15	17.16
Nonminority female	0.00	28.09	0.00 ****
DBE total	2.94	45.24	6.50 *
Automotive Repair and Maintenance (NAICS 8111)			
African American	90.72	25.34	
Hispanic	0.00	5.67	0.00 **
Asian	0.00	6.58	0.00 ****
Native American	0.00	0.13	0.00
Minority	90.72	37.72	
Nonminority female	0.00	13.03	0.00 ****
DBE total	90.72	50.75	
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00 ****
DBE total	100.00	52.64	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	14.54	15.75	92.32
Hispanic	0.00	6.64	0.00 ****
Asian	0.00	4.60	0.00 ****
Native American	0.00	0.18	0.00
Minority	14.54	27.17	53.52
Nonminority female	0.00	12.45	0.00 ****
DBE total	14.54	39.63	36.70
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00
Nonminority female	0.00	18.30	0.00
DBE total	0.00	38.08	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.44	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.57	0.00 ****
Native American	0.00	0.92	0.00
Minority	0.00	16.20	0.00 ****
Nonminority female	6.71	21.89	30.67
DBE total	6.71	38.09	17.62 ***
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00 ****
DBE total	100.00	47.80	
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.74	0.00 ****
Hispanic	13.69	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	13.69	12.46	
Nonminority female	3.51	10.45	33.61 **
DBE total	17.20	22.91	75.07
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00 ****
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80 *
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 ****
Nonminority female	0.00	14.10	0.00 ****
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	95.93	10.12	
Hispanic	0.00	1.78	0.00
Asian	0.00	9.01	0.00 ****
Native American	0.00	0.25	0.00
Minority	95.93	21.17	
Nonminority female	0.00	26.64	0.00 ****
DBE total	95.93	47.81	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.61	0.00 ****
Hispanic	0.00	2.06	0.00
Asian	0.00	5.66	0.00 **
Native American	0.00	0.14	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	0.52	33.06	1.58 ****
DBE total	0.52	53.53	0.97 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.36	0.00 ****
Hispanic	0.00	7.35	0.00 ****
Asian	0.00	4.09	0.00 **
Native American	0.00	0.00	
Minority	0.00	29.79	0.00 ****
Nonminority female	0.00	10.20	0.00 ****
DBE total	0.00	40.00	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Information Services (NAICS 5191)			
African American	0.00	11.30	0.00
Hispanic	0.00	0.92	0.00
Asian	0.00	6.42	0.00
Native American	0.00	0.00	
Minority	0.00	18.65	0.00
Nonminority female	0.00	28.46	0.00 ****
DBE total	0.00	47.11	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	7.18	13.87	51.79
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	7.18	21.41	33.53
Nonminority female	0.00	30.78	0.00 ****
DBE total	7.18	52.19	13.76 ****
Consumer Goods Rental (NAICS 5322)			
African American	73.40	11.62	
Hispanic	0.00	2.07	0.00
Asian	0.00	5.43	0.00 *
Native American	0.00	0.00	
Minority	73.40	19.11	
Nonminority female	0.00	23.25	0.00 ****
DBE total	73.40	42.36	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	2.39	5.53	43.21
Hispanic	0.00	0.67	0.00
Asian	0.00	7.92	0.00 ****
Native American	14.88	0.78	
Minority	17.27	14.91	
Nonminority female	42.56	24.69	
DBE total	59.83	39.60	
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.37	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.53	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.10	0.00 ****
Nonminority female	0.00	11.10	0.00 ****
DBE total	0.00	23.20	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.31	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.98	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00 ****
Hispanic	0.00	8.06	0.00 ***
Asian	0.00	6.39	0.00 ***
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00 ****
DBE total	0.00	51.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	9.95	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	92.75	21.99	
DBE total	92.75	43.50	
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	99.94	18.80	
DBE total	99.94	39.82	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Drycleaning and Laundry Services (NAICS 8123)</b>			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00 *
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00 *
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****
<b>Personal and Household Goods Repair and Maintenance (NAICS 8114)</b>			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00 ****
Asian	0.00	7.01	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
<b>Special Food Services (NAICS 7223)</b>			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
<b>Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)</b>			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Design Services (NAICS 5414)			
African American	0.00	13.25	0.00 ****
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00 ****
Nonminority female	0.00	39.07	0.00 ****
DBE total	0.00	59.97	0.00 ****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00 ****
DBE total	0.00	33.29	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	23.54	2.33	
Minority	23.54	18.60	
Nonminority female	0.00	9.30	0.00
DBE total	23.54	27.91	84.37

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00 ****
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00 ****
DBE total	0.00	47.85	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	6.36	11.50	55.31
DBE total	6.36	29.12	21.84
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	6.51	1.12	
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	6.51	16.41	39.70
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.51	36.93	17.64
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00 ****
Nonminority female	0.00	15.62	0.00 ****
DBE total	0.00	34.66	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.17	0.00 ****
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00 ****
Nonminority female	0.00	12.68	0.00 ****
DBE total	0.00	50.35	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

Source and Notes: See Table 5.5.

**Table A.20. Industry Group Utilization, Availability, and Disparity Results for MDOT Services Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Rail Transportation (NAICS 4821)			
African American	0.16	8.30	1.97
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.17	19.43	0.85
Nonminority female	0.03	12.12	0.27 *
DBE total	0.20	31.55	0.63 *
Urban Transit Systems (NAICS 4851)			
African American	0.13	42.76	0.30 ****
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.13	53.17	0.24 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.13	61.96	0.21 ****
Charter Bus Industry (NAICS 4855)			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.02	31.83	0.06 ****
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.02	44.78	0.04 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.02	56.00	0.03 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.67	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.78	0.05 ****
DBE total	0.01	36.31	0.02 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.62	8.64	18.73 ****
Hispanic	1.63	4.27	38.27 *
Asian	10.08	11.98	84.15
Native American	0.00	0.42	0.00 ****
Minority	13.34	25.31	52.68 ****
Nonminority female	33.38	13.24	
DBE total	46.72	38.56	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.11	16.75	0.68 ****
Hispanic	0.00	2.23	0.00 ****
Asian	1.56	7.20	21.65 ***
Native American	0.00	0.30	0.00
Minority	1.67	26.47	6.32 ****
Nonminority female	1.37	27.32	5.02 ****
DBE total	3.04	53.79	5.66 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.13	0.00 ****
Hispanic	0.00	3.85	0.00 ****
Asian	30.67	17.14	
Native American	0.00	0.49	0.00
Minority	30.67	33.61	91.25
Nonminority female	4.97	13.88	35.83
DBE total	35.64	47.48	75.06
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.52	0.00 ****
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	14.52	0.00 ****
Nonminority female	0.00	10.37	0.00 ****
DBE total	0.00	24.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	24.65	19.86	
Hispanic	75.35	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00 ****
DBE total	100.00	46.00	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	97.71	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	97.71	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	97.71	29.90	
Employment Services (NAICS 5613)			
African American	49.99	19.17	
Hispanic	0.00	6.05	0.00 ****
Asian	0.00	6.19	0.00 ****
Native American	0.00	0.40	0.00
Minority	49.99	31.82	
Nonminority female	48.27	18.75	
DBE total	98.26	50.57	
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	30.89	16.71	
Hispanic	0.00	6.85	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.18	0.00
Minority	30.89	28.54	
Nonminority female	0.00	13.23	0.00 ****
DBE total	30.89	41.77	73.95
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00 ****
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.65	11.27	50.15
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	5.65	17.15	32.96
Nonminority female	0.00	28.09	0.00 ****
DBE total	5.65	45.24	12.49 *
Automotive Repair and Maintenance (NAICS 8111)			
African American	87.31	24.65	
Hispanic	0.00	5.49	0.00 ****
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.18	0.00
Minority	87.31	36.93	
Nonminority female	0.00	12.95	0.00 ****
DBE total	87.31	49.88	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.67	12.18	13.73 ****
Hispanic	0.00	1.35	0.00
Asian	0.00	6.29	0.00 ****
Native American	0.00	0.02	0.00
Minority	1.67	19.84	8.43 ****
Nonminority female	5.70	28.69	19.85 ****
DBE total	7.37	48.53	15.18 ****
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00 ****
DBE total	100.00	47.80	
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00 ****
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83 **
DBE total	55.40	50.55	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00 ****
DBE total	100.00	48.12	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.83	0.00 ****
Hispanic	16.98	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	16.98	12.55	
Nonminority female	2.51	10.50	23.90 ****
DBE total	19.48	23.05	84.52
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.42	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.58	0.00 ****
Native American	0.00	0.91	0.00
Minority	0.00	16.18	0.00 ****
Nonminority female	17.47	21.90	79.78
DBE total	17.47	38.07	45.88
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00 ****
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80 *
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00 ****
DBE total	100.00	35.10	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.36	0.00 ****
Hispanic	0.00	7.24	0.00 ****
Asian	0.00	4.24	0.00 ****
Native American	0.00	0.00	
Minority	0.00	29.84	0.00 ****
Nonminority female	0.00	10.90	0.00 ****
DBE total	0.00	40.74	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.40	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.49	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	0.00	11.19	0.00 ****
DBE total	0.00	23.28	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	94.34	10.10	
Hispanic	0.00	1.81	0.00
Asian	0.00	9.03	0.00
Native American	0.00	0.25	0.00
Minority	94.34	21.19	
Nonminority female	0.00	26.52	0.00 ****
DBE total	94.34	47.70	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.62	0.00 ****
Hispanic	0.00	2.06	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	0.70	33.09	2.11 ****
DBE total	0.70	53.56	1.30 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00 ****
Hispanic	0.00	8.06	0.00 ****
Asian	0.00	6.39	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00 ****
DBE total	0.00	51.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	9.94	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.50	0.00 ****
Nonminority female	92.88	21.99	
DBE total	92.88	43.49	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motion Picture and Video Industries (NAICS 5121)			
African American	4.11	13.87	29.62
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	4.11	21.41	19.18
Nonminority female	0.00	30.78	0.00 ****
DBE total	4.11	52.19	7.87 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	1.48	5.55	26.69
Hispanic	0.00	0.68	0.00
Asian	0.00	7.92	0.00 ****
Native American	24.57	0.78	
Minority	26.05	14.93	
Nonminority female	39.55	24.70	
DBE total	65.60	39.62	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00 ****
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00 ****
DBE total	0.00	38.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	50.86	12.48	
Hispanic	0.00	3.42	0.00
Asian	0.00	5.19	0.00
Native American	0.00	0.00	
Minority	50.86	21.09	
Nonminority female	0.00	20.28	0.00 ****
DBE total	50.86	41.36	
Other Information Services (NAICS 5191)			
African American	0.00	11.28	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	6.27	0.00
Native American	0.00	0.00	
Minority	0.00	18.35	0.00
Nonminority female	0.00	27.97	0.00 ****
DBE total	0.00	46.33	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00 *
Asian	0.00	7.01	0.00 *
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.31	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.27	0.00 ****
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.98	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00 ****
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00 ****
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00 ***
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00 ***
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	99.91	18.81	
DBE total	99.91	39.83	
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00 ****
DBE total	0.00	33.29	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00 ****
DBE total	100.00	52.64	
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	23.54	2.33	
Minority	23.54	18.60	
Nonminority female	0.00	9.30	0.00 ****
DBE total	23.54	27.91	84.36
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	3.36	11.50	29.21
DBE total	3.36	29.12	11.53

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	13.25	0.00 ****
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00 ****
Nonminority female	0.00	39.07	0.00 ****
DBE total	0.00	59.97	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00 ****
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00 ****
DBE total	0.00	47.85	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	6.52	1.12	
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	6.52	16.41	39.73
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.52	36.93	17.65
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00 ***
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 *
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 *
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.17	0.00 ****
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00 ****
Nonminority female	0.00	12.68	0.00 ****
DBE total	0.00	50.35	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

Source and Notes: See Table 5.5.

**Table A.21. Industry Group Utilization, Availability, and Disparity Results for MDOT CSE Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.83	0.00 ****
Hispanic	0.00	0.63	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.98	0.00 *
Minority	0.00	15.61	0.00 ****
Nonminority female	0.00	18.07	0.00 ****
DBE total	0.00	33.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.45	0.00 ***
Hispanic	0.00	1.60	0.00
Asian	0.00	9.22	0.00 ***
Native American	0.00	0.96	0.00
Minority	0.00	19.23	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.78	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Clothing Stores (NAICS 4481)			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	47.09	12.33	
Native American	0.00	0.42	0.00 ****
Minority	47.09	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	47.09	38.52	
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.55	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.19	0.00
Native American	0.00	1.48	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	14.46	0.00 ****
DBE total	0.00	30.83	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	6.38	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	15.74	0.00
Native American	0.00	0.27	0.00
Minority	0.00	25.02	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	45.58	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	5.40	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.79	0.00 ****
Native American	0.00	2.61	0.00
Minority	0.00	14.80	0.00 ****
Nonminority female	0.00	35.88	0.00 ****
DBE total	0.00	50.68	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****
Scheduled Air Transportation (NAICS 4811)			
African American	0.00	9.65	0.00
Hispanic	0.00	2.82	0.00
Asian	0.00	8.47	0.00
Native American	0.00	0.00	
Minority	0.00	20.94	0.00
Nonminority female	0.00	11.29	0.00
DBE total	0.00	32.24	0.00

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	11.07	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.00	
Minority	0.00	16.90	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	41.84	0.00 ****

Source and Notes: See Table 5.5.

**Table A.22. Industry Group Utilization, Availability, and Disparity Results for MDOT CSE Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.83	0.00 ****
Hispanic	0.00	0.63	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.98	0.00 ***
Minority	0.00	15.61	0.00 ****
Nonminority female	0.00	18.07	0.00 ****
DBE total	0.00	33.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	1.60	0.00
Asian	0.00	9.22	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	19.23	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
DBE total	0.00	36.78	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Clothing Stores (NAICS 4481)			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	47.09	12.33	
Native American	0.00	0.42	0.00 ****
Minority	47.09	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	47.09	38.52	
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.55	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.19	0.00
Native American	0.00	1.48	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	14.46	0.00 ****
DBE total	0.00	30.83	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	6.38	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	15.74	0.00
Native American	0.00	0.27	0.00
Minority	0.00	25.02	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	45.58	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	5.40	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.79	0.00 ****
Native American	0.00	2.61	0.00
Minority	0.00	14.80	0.00 ****
Nonminority female	0.00	35.88	0.00 ****
DBE total	0.00	50.68	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****
Scheduled Air Transportation (NAICS 4811)			
African American	0.00	9.65	0.00
Hispanic	0.00	2.82	0.00
Asian	0.00	8.47	0.00
Native American	0.00	0.00	
Minority	0.00	20.94	0.00
Nonminority female	0.00	11.29	0.00
DBE total	0.00	32.24	0.00

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	11.07	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.00	
Minority	0.00	16.90	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	41.84	0.00 ****

Source and Notes: See Table 5.5.

**Table A.23. Industry Group Utilization, Availability, and Disparity Results for MDOT CSE Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ***
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ***
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Clothing Stores (NAICS 4481)			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 *
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.47	0.00 ****
Native American	0.00	1.73	0.00
Minority	0.00	17.11	0.00 ****
Nonminority female	0.00	13.81	0.00 ****
DBE total	0.00	30.92	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

Source and Notes: See Table 5.5.

**Table A.24. Industry Group Utilization, Availability, and Disparity Results for MDOT CSE Contracting (Federally-Assisted) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00 ****
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00 ****
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Clothing Stores (NAICS 4481)			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 ***
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.47	0.00 ****
Native American	0.00	1.73	0.00
Minority	0.00	17.11	0.00 ****
Nonminority female	0.00	13.81	0.00 ****
DBE total	0.00	30.92	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

Source and Notes: See Table 5.5.

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# **Disadvantaged Business Enterprise Disparity Study: Volume III**

Prepared for the Maryland Department of  
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NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.28 ****
Hispanic	2.47	3.72	66.33
Asian	0.06	1.06	5.48 *
Native American	0.00	0.39	0.27 ****
Minority	2.55	14.02	18.21 ****
Nonminority female	8.49	9.88	85.91
DBE total	11.04	23.91	46.20 *
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Nonresidential Building Construction (NAICS 2362)			
African American	7.41	10.22	72.49
Hispanic	0.04	4.86	0.76 ****
Asian	0.00	3.04	0.00 ****
Native American	0.00	0.83	0.00 ***
Minority	7.45	18.95	39.30 ***
Nonminority female	0.87	13.27	6.52 ****
DBE total	8.31	32.21	25.80 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	18.56	8.38	
Hispanic	18.34	3.43	
Asian	2.01	2.68	75.07
Native American	38.05	0.34	
Minority	76.97	14.84	
Nonminority female	5.80	12.81	45.24 *
DBE total	82.77	27.65	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.13	8.58	1.51 ****
Hispanic	0.01	4.28	0.18 ****
Asian	2.56	11.99	21.39 ****
Native American	0.00	0.40	0.00 ****
Minority	2.70	25.25	10.70 ****
Nonminority female	5.57	12.90	43.19 ****
DBE total	8.28	38.16	21.69 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.26	6.03	4.27 **
Hispanic	0.08	0.19	44.55
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.74	0.00 *
Minority	0.34	14.47	2.36 ****
Nonminority female	2.30	14.96	15.40 *
DBE total	2.65	29.42	8.99 ****
Building Equipment Contractors (NAICS 2382)			
African American	6.01	7.60	79.13
Hispanic	2.00	2.81	71.24
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 *
Minority	8.01	13.36	59.97
Nonminority female	22.85	10.87	
DBE total	30.86	24.24	
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.93	26.77	3.47 *
DBE total	0.93	46.76	1.98 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	8.07	6.38	
Hispanic	1.52	3.05	49.88
Asian	0.37	2.51	14.58
Native American	0.00	0.16	0.00
Minority	9.95	12.09	82.31
Nonminority female	15.33	11.14	
DBE total	25.28	23.23	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	1.27	5.44	23.26
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	1.27	14.74	8.59 **
Nonminority female	60.83	17.15	
DBE total	62.10	31.89	
Utility System Construction (NAICS 2371)			
African American	0.00	6.83	0.00 ****
Hispanic	10.18	2.25	
Asian	5.95	0.42	
Native American	0.00	0.48	0.00
Minority	16.13	9.97	
Nonminority female	24.37	10.34	
DBE total	40.50	20.32	
Specialized Freight Trucking (NAICS 4842)			
African American	26.76	29.94	89.37
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.07	0.00
Native American	0.00	0.40	0.00
Minority	26.76	44.05	60.75
Nonminority female	72.97	11.07	
DBE total	99.73	55.12	
Building Finishing Contractors (NAICS 2383)			
African American	0.71	5.75	12.38 ****
Hispanic	4.59	3.46	
Asian	0.00	2.60	0.00 ****
Native American	0.00	0.04	0.00
Minority	5.30	11.85	44.74 *
Nonminority female	57.32	11.19	
DBE total	62.62	23.04	
General Freight Trucking (NAICS 4841)			
African American	68.21	23.12	
Hispanic	3.21	9.50	33.82 **
Asian	0.00	5.92	0.00 ****
Native American	0.00	0.22	0.00
Minority	71.42	38.75	
Nonminority female	8.62	10.54	81.83
DBE total	80.05	49.29	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.65	14.69	4.45 ****
Hispanic	0.60	1.53	38.95
Asian	0.16	7.41	2.17 ****
Native American	0.00	0.31	0.00 **
Minority	1.41	23.94	5.89 ****
Nonminority female	83.16	29.52	
DBE total	84.57	53.45	
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.37	0.00 ****
Hispanic	8.49	3.36	
Asian	0.00	0.39	0.00
Native American	8.00	0.21	
Minority	16.50	8.32	
Nonminority female	9.60	13.35	71.87
DBE total	26.09	21.67	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	15.06	0.00 ****
Hispanic	0.00	6.48	0.00 ****
Asian	0.00	4.45	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	26.17	0.00 ****
Nonminority female	34.48	11.89	
DBE total	34.48	38.06	90.59

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.81	0.00
Minority	0.00	14.97	0.00 ****
Nonminority female	4.00	24.56	16.30 **
DBE total	4.00	39.53	10.13 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.78	0.00 ****
Hispanic	0.00	0.94	0.00 ****
Asian	12.57	8.01	
Native American	0.00	0.85	0.00
Minority	12.57	15.58	80.67
Nonminority female	23.15	17.12	
DBE total	35.72	32.70	
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.36	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.72	8.09	8.93 ***
Native American	0.00	0.71	0.00
Minority	0.72	14.48	4.99 ****
Nonminority female	15.64	17.79	87.89
DBE total	16.36	32.28	50.69

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.91	0.00 ****
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00 ****
Native American	0.00	1.11	0.00
Minority	0.00	15.17	0.00 ****
Nonminority female	0.00	16.65	0.00 ****
DBE total	0.00	31.83	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	85.29	18.26	
DBE total	85.29	24.86	
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.16	12.26	1.31
DBE total	0.16	57.03	0.28 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.23	0.00 ****
Asian	0.00	4.27	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	25.02	0.00 ****
Nonminority female	0.00	11.54	0.00 ****
DBE total	0.00	36.56	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.30	5.46	5.55 *
Hispanic	0.00	0.54	0.00
Asian	0.00	8.01	0.00 ****
Native American	0.00	0.77	0.00 *
Minority	0.30	14.78	2.05 ****
Nonminority female	9.75	17.37	56.13
DBE total	10.05	32.15	31.27 ***
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.42	0.00
Hispanic	0.00	0.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.63	0.00
Nonminority female	0.00	17.31	0.00 ****
DBE total	0.00	17.95	0.00 ****
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Investigation and Security Services (NAICS 5616)			
African American	90.24	17.93	
Hispanic	0.00	3.81	0.00 ****
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.75	0.00
Minority	90.24	28.33	
Nonminority female	0.00	21.15	0.00 ****
DBE total	90.24	49.48	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	45.10	7.84	
Hispanic	4.62	1.39	
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	49.72	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	49.72	29.12	
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.73	20.41	
DBE total	99.73	46.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.70	0.00 ****
Hispanic	0.00	3.92	0.00 ****
Asian	0.00	16.74	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	33.86	0.00 ****
Nonminority female	0.00	13.89	0.00 ****
DBE total	0.00	47.76	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00
Nonminority female	0.00	15.81	0.00
DBE total	0.00	36.81	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.50	0.00 ****
Hispanic	0.00	6.38	0.00 ****
Asian	0.00	4.75	0.00 **
Native American	0.00	0.30	0.00
Minority	0.00	28.94	0.00 ****
Nonminority female	0.00	11.94	0.00 ****
DBE total	0.00	40.88	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	22.91	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	22.91	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	22.91	30.13	76.03
Gasoline Stations (NAICS 4471)			
African American	65.86	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	65.86	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	65.86	46.57	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	5.55	0.00 ****
Hispanic	0.00	0.17	0.00
Asian	0.00	8.74	0.00 ****
Native American	0.00	1.00	0.00
Minority	0.00	15.45	0.00 ****
Nonminority female	0.00	19.45	0.00 ****
DBE total	0.00	34.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.19	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.75	0.00 ****
Native American	0.00	1.66	0.00
Minority	0.00	17.60	0.00 ****
Nonminority female	0.00	14.92	0.00 ****
DBE total	0.00	32.52	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	58.78	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	58.78	14.68	
Nonminority female	0.00	18.44	0.00 ****
DBE total	58.78	33.12	
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.08	0.00 ****
Hispanic	0.00	2.65	0.00
Asian	0.00	10.30	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	21.64	0.00 ****
Nonminority female	23.14	21.88	
DBE total	23.14	43.52	53.17

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	93.77	21.41	
DBE total	93.77	42.84	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.94	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.61	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.29	0.00 ****
Nonminority female	0.00	17.20	0.00 ****
DBE total	0.00	31.49	0.00 ****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.77	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.35	0.00 ****
Native American	0.00	2.40	0.00
Minority	0.00	18.51	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	30.06	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	18.84	0.00 ****
Hispanic	0.00	6.02	0.00 ***
Asian	0.00	6.00	0.00 ***
Native American	0.00	0.38	0.00
Minority	0.00	31.24	0.00 ****
Nonminority female	0.00	18.69	0.00 ****
DBE total	0.00	49.92	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00 **
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	99.22	28.20	
DBE total	99.22	46.63	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	12.04	0.00
Hispanic	0.00	3.58	0.00
Asian	0.00	8.10	0.00
Native American	0.00	0.00	
Minority	0.00	23.72	0.00 ****
Nonminority female	51.65	12.75	
DBE total	51.65	36.46	
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.21	0.00 ***
Hispanic	0.00	5.85	0.00
Asian	0.00	4.51	0.00
Native American	0.00	0.25	0.00
Minority	0.00	24.82	0.00 ****
Nonminority female	0.00	14.41	0.00 ***
DBE total	0.00	39.23	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.58	0.00
Hispanic	0.00	4.84	0.00
Asian	0.00	4.28	0.00
Native American	0.00	0.12	0.00
Minority	0.00	23.82	0.00
Nonminority female	0.00	16.00	0.00
DBE total	0.00	39.82	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00 ****
Nonminority female	0.00	23.17	0.00 ****
DBE total	0.00	34.47	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	100.00	9.30	
DBE total	100.00	27.91	
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.72	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	9.56	0.00 ****
Native American	0.00	1.05	0.00
Minority	0.00	16.67	0.00 ****
Nonminority female	53.26	21.29	
DBE total	53.26	37.96	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	19.09	0.00 ****
Hispanic	0.00	5.10	0.00 ****
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.36	0.00
Minority	0.00	32.35	0.00 ****
Nonminority female	14.53	16.82	86.39
DBE total	14.53	49.17	29.55
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.39	0.00 ****
Native American	0.00	2.38	0.00
Minority	0.00	19.32	0.00 ****
Nonminority female	0.00	19.43	0.00 ****
DBE total	0.00	38.75	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Home Furnishings Stores (NAICS 4422)			
African American	0.00	7.89	0.00
Hispanic	0.00	2.86	0.00
Asian	0.00	13.56	0.00 ****
Native American	0.00	0.97	0.00
Minority	0.00	25.27	0.00 ****
Nonminority female	100.00	30.97	
DBE total	100.00	56.24	
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)</b>			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
<b>Metalworking Machinery Manufacturing (NAICS 3335)</b>			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
<b>Cable and Other Subscription Programming (NAICS 5152)</b>			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
<b>Natural Gas Distribution (NAICS 2212)</b>			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	25.88	0.00 ****
Hispanic	0.00	5.89	0.00
Asian	0.00	7.19	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.07	0.00 ****
Nonminority female	0.00	17.93	0.00 ****
DBE total	0.00	57.00	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

Source and Notes: See Table 5.5.

**Table B.2. Industry Group Utilization, Availability, and Disparity Results for SHA Construction Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.03	8.85	0.33 ****
Hispanic	2.79	3.72	75.00
Asian	0.12	1.06	11.11
Native American	0.00	0.39	0.41 ***
Minority	2.94	14.02	20.98 ****
Nonminority female	9.40	9.88	95.17
DBE total	12.35	23.91	51.64 **
Nonresidential Building Construction (NAICS 2362)			
African American	5.71	10.07	56.71
Hispanic	0.04	4.80	0.89 ****
Asian	0.00	2.98	0.00 ****
Native American	0.00	0.81	0.00 ****
Minority	5.75	18.65	30.84 ***
Nonminority female	0.87	13.35	6.53 ****
DBE total	6.63	32.01	20.70 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	6.12	8.47	72.17
Hispanic	16.87	3.32	
Asian	2.10	2.68	78.13
Native American	51.89	0.35	
Minority	76.98	14.82	
Nonminority female	4.28	12.95	33.06 ***
DBE total	81.26	27.78	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.41	8.63	4.76 ****
Hispanic	0.01	4.28	0.18 ****
Asian	2.39	12.11	19.74 ****
Native American	0.00	0.41	0.00 ****
Minority	2.81	25.43	11.05 ****
Nonminority female	3.79	12.88	29.42 ****
DBE total	6.60	38.30	17.22 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.85	6.05	14.08
Hispanic	0.13	0.16	78.39
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.98	14.46	6.77 ****
Nonminority female	3.42	14.84	23.05
DBE total	4.40	29.30	15.02 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.24	6.40	81.92
Hispanic	1.82	3.05	59.70
Asian	0.32	2.48	12.97
Native American	0.00	0.16	0.00
Minority	7.38	12.09	61.08
Nonminority female	4.73	11.19	42.28
DBE total	12.12	23.28	52.04
Building Equipment Contractors (NAICS 2382)			
African American	9.35	7.42	
Hispanic	2.64	2.81	93.88
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.18	0.00
Minority	11.98	13.18	90.91
Nonminority female	27.71	10.79	
DBE total	39.69	23.97	
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.83	26.77	3.09
DBE total	0.83	46.76	1.77 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.70	0.00 ****
Hispanic	8.56	2.20	
Asian	4.74	0.34	
Native American	0.00	0.50	0.00
Minority	13.30	9.73	
Nonminority female	21.54	10.25	
DBE total	34.84	19.98	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	1.30	5.44	23.86
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	1.30	14.74	8.81 **
Nonminority female	44.88	17.15	
DBE total	46.18	31.89	
Building Finishing Contractors (NAICS 2383)			
African American	1.04	5.73	18.17 ***
Hispanic	6.78	3.45	
Asian	0.00	2.61	0.00 ****
Native American	0.00	0.05	0.00
Minority	7.82	11.85	66.02
Nonminority female	48.83	11.15	
DBE total	56.65	22.99	
General Freight Trucking (NAICS 4841)			
African American	72.63	23.19	
Hispanic	3.73	9.53	39.10 *
Asian	0.00	5.91	0.00 ****
Native American	0.00	0.22	0.00
Minority	76.36	38.85	
Nonminority female	5.73	10.51	54.46
DBE total	82.09	49.37	
Specialized Freight Trucking (NAICS 4842)			
African American	43.76	29.88	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.08	0.00 **
Native American	0.00	0.40	0.00
Minority	43.76	44.00	99.45
Nonminority female	55.45	11.06	
DBE total	99.21	55.07	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.48	14.62	3.30 ****
Hispanic	0.69	1.53	44.98
Asian	0.21	7.43	2.84 ****
Native American	0.00	0.31	0.00
Minority	1.38	23.89	5.78 ****
Nonminority female	85.28	29.54	
DBE total	86.66	53.43	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.38	0.00 ****
Hispanic	5.99	3.36	
Asian	0.00	0.39	0.00
Native American	8.89	0.21	
Minority	14.89	8.33	
Nonminority female	5.01	13.35	37.53
DBE total	19.90	21.68	91.77
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.59	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.83	0.00 *
Minority	0.00	15.01	0.00 ****
Nonminority female	4.53	24.51	18.47 **
DBE total	4.53	39.52	11.46 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.32	0.00
Asian	0.52	8.07	6.43 ****
Native American	0.00	0.71	0.00 ***
Minority	0.52	14.50	3.58 ****
Nonminority female	15.40	17.83	86.35
DBE total	15.92	32.33	49.24 **

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	15.37	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	4.52	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	26.63	0.00 ****
Nonminority female	40.51	12.15	
DBE total	40.51	38.78	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.76	0.00 ****
Hispanic	0.00	1.16	0.00 *
Asian	22.36	8.09	
Native American	0.00	0.88	0.00 *
Minority	22.36	15.88	
Nonminority female	20.47	17.44	
DBE total	42.83	33.32	
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.91	0.00
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00
Native American	0.00	1.11	0.00
Minority	0.00	15.18	0.00 ****
Nonminority female	0.00	16.65	0.00 ****
DBE total	0.00	31.83	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	81.59	18.26	
DBE total	81.59	24.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.16	5.27	3.00 ***
Hispanic	0.00	0.54	0.00
Asian	0.00	7.96	0.00 ****
Native American	0.00	0.75	0.00 ***
Minority	0.16	14.51	1.09 ****
Nonminority female	5.08	17.06	29.79
DBE total	5.24	31.57	16.60 ****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.23	0.00 ****
Asian	0.00	4.27	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	25.03	0.00 ****
Nonminority female	0.00	11.54	0.00 ****
DBE total	0.00	36.56	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	3.84	12.26	31.32
DBE total	3.84	57.03	6.73

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.51	0.00
Hispanic	0.00	0.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.73	0.00
Nonminority female	0.00	17.21	0.00 ****
DBE total	0.00	17.94	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00
Investigation and Security Services (NAICS 5616)			
African American	13.43	20.57	65.30
Hispanic	0.00	5.93	0.00 ****
Asian	0.00	5.48	0.00 ****
Native American	0.00	0.46	0.00
Minority	13.43	32.45	41.40
Nonminority female	0.00	13.19	0.00 ****
DBE total	13.43	45.63	29.44 ***

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	55.00	7.84	
Hispanic	9.44	1.39	
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	64.44	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	64.44	29.12	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.72	20.41	
DBE total	99.72	46.12	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.47	0.00 ****
Hispanic	0.00	3.90	0.00 ****
Asian	0.00	16.86	0.00 ****
Native American	0.00	0.50	0.00
Minority	0.00	33.72	0.00 ****
Nonminority female	0.00	13.89	0.00 ****
DBE total	0.00	47.61	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00 ****
Nonminority female	0.00	15.81	0.00 ****
DBE total	0.00	36.81	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00 ****
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Gasoline Stations (NAICS 4471)			
African American	67.36	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	67.36	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	67.36	46.57	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.44	0.00 ****
Hispanic	0.00	6.36	0.00 ****
Asian	0.00	4.74	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	28.86	0.00 ****
Nonminority female	0.00	11.79	0.00 ****
DBE total	0.00	40.65	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	5.55	0.00 ****
Hispanic	0.00	0.17	0.00
Asian	0.00	8.74	0.00 ****
Native American	0.00	1.00	0.00
Minority	0.00	15.45	0.00 ****
Nonminority female	0.00	19.45	0.00 ****
DBE total	0.00	34.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	18.90	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	18.90	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	18.90	30.13	62.74
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.21	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.66	0.00 ****
Native American	0.00	1.70	0.00
Minority	0.00	17.56	0.00 ****
Nonminority female	0.00	14.99	0.00 ****
DBE total	0.00	32.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.08	0.00 ****
Hispanic	0.00	2.65	0.00
Asian	0.00	10.30	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	21.63	0.00 ****
Nonminority female	24.78	21.87	
DBE total	24.78	43.50	56.97
Employment Services (NAICS 5613)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	5.71	0.00 ****
Native American	0.00	0.34	0.00
Minority	0.00	30.38	0.00 ****
Nonminority female	0.00	18.60	0.00 ****
DBE total	0.00	48.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.77	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.35	0.00 ****
Native American	0.00	2.40	0.00
Minority	0.00	18.51	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	30.06	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	11.62	0.00 ****
Hispanic	0.00	3.52	0.00
Asian	0.00	8.15	0.00 ****
Native American	0.00	0.00	
Minority	0.00	23.29	0.00 ****
Nonminority female	62.61	12.91	
DBE total	62.61	36.20	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	85.69	21.41	
DBE total	85.69	42.84	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	13.12	0.00 ****
Hispanic	0.00	4.86	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	23.19	0.00 ****
Nonminority female	0.00	19.21	0.00 ****
DBE total	0.00	42.40	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	96.31	28.20	
DBE total	96.31	46.63	
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	0.00	18.44	0.00 ****
DBE total	0.00	33.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.58	0.00 ****
Hispanic	0.00	4.84	0.00
Asian	12.98	4.28	
Native American	0.00	0.12	0.00
Minority	12.98	23.82	54.49
Nonminority female	0.00	16.00	0.00 ****
DBE total	12.98	39.82	32.59 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00
Nonminority female	0.00	23.17	0.00
DBE total	0.00	34.47	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	100.00	9.30	
DBE total	100.00	27.91	
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	29.51	28.09	
DBE total	29.51	45.24	65.23
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	5.09	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.65	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.59	0.00 ****
Nonminority female	0.00	17.10	0.00 ****
DBE total	0.00	31.69	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.69	0.00 ****
Hispanic	0.00	0.33	0.00
Asian	0.00	9.57	0.00 ****
Native American	0.00	1.04	0.00
Minority	0.00	16.62	0.00 ****
Nonminority female	56.14	21.34	
DBE total	56.14	37.96	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00 ****
Nonminority female	0.00	23.33	0.00 ****
DBE total	0.00	38.44	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	19.46	0.00 ****
Hispanic	0.00	5.26	0.00 *
Asian	0.00	7.83	0.00 *
Native American	0.00	0.33	0.00
Minority	0.00	32.88	0.00 ****
Nonminority female	13.20	16.91	78.05
DBE total	13.20	49.79	26.51

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.54	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	11.36	0.00 ****
Native American	0.00	2.36	0.00
Minority	0.00	19.26	0.00 ****
Nonminority female	0.00	19.45	0.00 ****
DBE total	0.00	38.71	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	2.71	0.00
Hispanic	0.00	2.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.42	0.00
Nonminority female	0.00	19.18	0.00
DBE total	0.00	24.60	0.00
Home Furnishings Stores (NAICS 4422)			
African American	0.00	7.89	0.00
Hispanic	0.00	2.86	0.00
Asian	0.00	13.56	0.00 ****
Native American	0.00	0.97	0.00
Minority	0.00	25.27	0.00 ****
Nonminority female	100.00	30.97	
DBE total	100.00	56.24	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metalworking Machinery Manufacturing (NAICS 3335)			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Personal Services (NAICS 8129)			
African American	0.00	25.88	0.00 ****
Hispanic	0.00	5.89	0.00
Asian	0.00	7.19	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	39.07	0.00 ****
Nonminority female	0.00	17.93	0.00 ****
DBE total	0.00	57.00	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00 ****
Waste Collection (NAICS 5621)			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.89	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.30	0.00 ****
Nonminority female	0.00	14.79	0.00 ****
DBE total	0.00	29.09	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

Source and Notes: See Table 5.5.

**Table B.3. Industry Group Utilization, Availability, and Disparity Results for SHA Construction Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.01	8.85	0.12 ****
Hispanic	1.63	3.72	43.72
Asian	0.06	1.06	5.67 *
Native American	0.00	0.39	0.30 ****
Minority	1.70	14.02	12.13 ****
Nonminority female	9.08	9.88	91.94
DBE total	10.79	23.91	45.12 *
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Nonresidential Building Construction (NAICS 2362)			
African American	8.73	10.29	84.89
Hispanic	0.05	4.89	0.93 ****
Asian	0.00	3.07	0.00 ****
Native American	0.00	0.83	0.00 ***
Minority	8.78	19.08	46.01 **
Nonminority female	1.01	13.23	7.60 ****
DBE total	9.78	32.30	30.29 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.13	8.60	1.55 ****
Hispanic	0.01	4.28	0.19 ****
Asian	2.67	12.05	22.11 ****
Native American	0.00	0.41	0.00 ****
Minority	2.81	25.34	11.07 ****
Nonminority female	5.18	12.85	40.28 ****
DBE total	7.98	38.19	20.90 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	20.23	8.60	
Hispanic	15.63	3.29	
Asian	2.05	2.67	76.82
Native American	43.56	0.37	
Minority	81.47	14.92	
Nonminority female	5.45	13.07	41.74 **
DBE total	86.92	27.99	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.05	6.07	0.78 ****
Hispanic	0.10	0.18	53.05
Asian	0.00	7.50	0.00 ****
Native American	0.00	0.74	0.00 *
Minority	0.14	14.49	0.99 ****
Nonminority female	0.85	14.93	5.66 ****
DBE total	0.99	29.42	3.36 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.93	26.77	3.47 *
DBE total	0.93	46.76	1.98 ****
Building Equipment Contractors (NAICS 2382)			
African American	5.85	7.80	75.07
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	5.85	13.58	43.10 **
Nonminority female	23.06	10.97	
DBE total	28.92	24.55	
Other Specialty Trade Contractors (NAICS 2389)			
African American	7.85	6.38	
Hispanic	0.23	3.05	7.58 **
Asian	0.42	2.51	16.80
Native American	0.00	0.16	0.00
Minority	8.50	12.09	70.29
Nonminority female	16.93	11.14	
DBE total	25.43	23.23	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.56	5.44	10.28
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.56	14.74	3.80 ****
Nonminority female	69.30	17.15	
DBE total	69.86	31.89	
Specialized Freight Trucking (NAICS 4842)			
African American	26.87	29.98	89.64
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	26.87	44.08	60.96
Nonminority female	73.13	11.07	
DBE total	100.00	55.15	
Utility System Construction (NAICS 2371)			
African American	0.00	6.83	0.00 ****
Hispanic	11.92	2.25	
Asian	6.97	0.42	
Native American	0.00	0.48	0.00
Minority	18.89	9.97	
Nonminority female	24.16	10.34	
DBE total	43.05	20.31	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	3.46	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.80	0.00 ****
Nonminority female	56.89	11.25	
DBE total	56.89	23.06	
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	75.90	22.95	
Hispanic	4.15	9.46	43.87
Asian	0.00	5.95	0.00 ****
Native American	0.00	0.21	0.00
Minority	80.05	38.57	
Nonminority female	7.39	10.49	70.45
DBE total	87.44	49.06	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.85	14.75	5.75 ****
Hispanic	0.00	1.53	0.00 ****
Asian	0.21	7.39	2.82 ****
Native American	0.00	0.30	0.00 **
Minority	1.06	23.96	4.40 ****
Nonminority female	79.64	29.50	
DBE total	80.69	53.47	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	14.98	0.00 ****
Nonminority female	2.70	24.55	10.99 ***
DBE total	2.70	39.53	6.83 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00 ****
Hispanic	8.47	3.36	
Asian	0.00	0.38	0.00
Native American	5.63	0.21	
Minority	14.11	8.30	
Nonminority female	12.10	13.35	90.64
DBE total	26.21	21.65	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.73	0.00 ****
Hispanic	0.00	6.40	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	25.70	0.00 ****
Nonminority female	33.65	11.62	
DBE total	33.65	37.32	90.16
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.73	0.00 ****
Hispanic	0.00	0.84	0.00
Asian	0.00	8.03	0.00 ****
Native American	0.00	0.90	0.00 ****
Minority	0.00	15.49	0.00 ****
Nonminority female	30.15	17.16	
DBE total	30.15	32.66	92.33
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	6.08	0.00 ****
Hispanic	0.00	0.54	0.00
Asian	0.00	7.61	0.00 ****
Native American	0.00	1.14	0.00
Minority	0.00	15.38	0.00 ****
Nonminority female	0.00	16.56	0.00 ****
DBE total	0.00	31.94	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	93.45	18.26	
DBE total	93.45	24.86	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.47	0.00 ****
Hispanic	0.00	0.31	0.00
Asian	1.35	8.02	16.82 *
Native American	0.00	0.71	0.00
Minority	1.35	14.51	9.30 ****
Nonminority female	19.62	18.01	
DBE total	20.97	32.52	64.48
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.16	12.26	1.31
DBE total	0.16	57.03	0.28 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.44	0.00 ****
Hispanic	0.00	6.21	0.00 ****
Asian	0.00	4.29	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	25.04	0.00 ****
Nonminority female	0.00	11.53	0.00 ****
DBE total	0.00	36.57	0.00 ****
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.27	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.53	0.00
Nonminority female	0.00	17.42	0.00 ****
DBE total	0.00	17.96	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.57	5.28	10.74
Hispanic	0.00	0.58	0.00
Asian	0.00	7.96	0.00 ****
Native American	0.00	0.76	0.00 *
Minority	0.57	14.58	3.89 ****
Nonminority female	0.00	17.02	0.00 ****
DBE total	0.57	31.60	1.80 ****
Investigation and Security Services (NAICS 5616)			
African American	99.03	17.63	
Hispanic	0.00	3.59	0.00 ****
Asian	0.00	5.86	0.00 ****
Native American	0.00	0.78	0.00
Minority	99.03	27.87	
Nonminority female	0.00	22.03	0.00 ****
DBE total	99.03	49.90	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.73	20.41	
DBE total	99.73	46.12	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.70	0.00 ****
Hispanic	0.00	3.92	0.00 ****
Asian	0.00	16.74	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	33.86	0.00 ****
Nonminority female	0.00	13.89	0.00 ****
DBE total	0.00	47.76	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	22.91	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	22.91	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	22.91	30.13	76.03
Gasoline Stations (NAICS 4471)			
African American	65.86	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	65.86	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	65.86	46.57	
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00
Nonminority female	0.00	15.81	0.00
DBE total	0.00	36.81	0.00
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	64.32	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	64.32	14.68	
Nonminority female	0.00	18.44	0.00 ****
DBE total	64.32	33.12	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.21	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.68	0.00 ****
Native American	0.00	1.69	0.00
Minority	0.00	17.57	0.00 ****
Nonminority female	0.00	15.10	0.00 ****
DBE total	0.00	32.67	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	93.77	21.41	
DBE total	93.77	42.84	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.91	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.44	0.00 ****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.12	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	10.42	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	21.84	0.00 ****
Nonminority female	39.63	22.10	
DBE total	39.63	43.94	90.20

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	18.89	0.00 ****
Hispanic	0.00	6.03	0.00 ***
Asian	0.00	6.02	0.00 ***
Native American	0.00	0.38	0.00
Minority	0.00	31.32	0.00 ****
Nonminority female	0.00	18.70	0.00 ****
DBE total	0.00	50.01	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00 **
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	99.22	28.20	
DBE total	99.22	46.63	
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	12.04	0.00
Hispanic	0.00	3.58	0.00
Asian	0.00	8.10	0.00
Native American	0.00	0.00	
Minority	0.00	23.72	0.00 ****
Nonminority female	51.65	12.75	
DBE total	51.65	36.46	
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.58	0.00
Hispanic	0.00	4.84	0.00
Asian	0.00	4.28	0.00
Native American	0.00	0.12	0.00
Minority	0.00	23.82	0.00
Nonminority female	0.00	16.00	0.00
DBE total	0.00	39.82	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Other Crop Farming (NAICS 1119)			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	13.61	0.00 **
Hispanic	0.00	5.30	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.57	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	0.00	17.07	0.00 ***
DBE total	0.00	40.99	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 **
Native American	0.00	0.00	
Minority	0.00	29.68	0.00 ****
Nonminority female	0.00	8.24	0.00 ****
DBE total	0.00	37.91	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.41	0.00 ****
Native American	0.00	2.39	0.00
Minority	0.00	19.36	0.00 ****
Nonminority female	0.00	19.42	0.00 ****
DBE total	0.00	38.78	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00 ****
Nonminority female	0.00	23.17	0.00 ****
DBE total	0.00	34.47	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	23.15	0.00 ****
Hispanic	0.00	6.80	0.00 ****
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.00	
Minority	0.00	38.11	0.00 ****
Nonminority female	0.00	17.79	0.00 ****
DBE total	0.00	55.90	0.00 ****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)</b>			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
<b>Metalworking Machinery Manufacturing (NAICS 3335)</b>			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00
<b>Cable and Other Subscription Programming (NAICS 5152)</b>			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
<b>Plastics Product Manufacturing (NAICS 3261)</b>			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

Source and Notes: See Table 5.5.

**Table B.4. Industry Group Utilization, Availability, and Disparity Results for SHA Construction Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.01	8.85	0.13 ****
Hispanic	1.57	3.72	42.12
Asian	0.13	1.06	12.62
Native American	0.00	0.39	0.48 ***
Minority	1.72	14.02	12.24 ****
Nonminority female	10.48	9.88	
DBE total	12.20	23.91	51.01 **
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Nonresidential Building Construction (NAICS 2362)			
African American	6.84	10.04	68.11
Hispanic	0.05	4.79	1.13 ****
Asian	0.00	2.97	0.00 ****
Native American	0.00	0.81	0.00 ****
Minority	6.90	18.61	37.06 ***
Nonminority female	1.03	13.37	7.72 ****
DBE total	7.93	31.98	24.79 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.43	8.66	5.01 ****
Hispanic	0.01	4.29	0.19 ****
Asian	2.51	12.17	20.61 ****
Native American	0.00	0.41	0.00 ****
Minority	2.95	25.53	11.56 ****
Nonminority female	3.52	12.81	27.47 ****
DBE total	6.47	38.34	16.87 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	5.88	8.74	67.23
Hispanic	12.99	3.12	
Asian	2.06	2.67	77.09
Native American	60.89	0.39	
Minority	81.81	14.92	
Nonminority female	4.01	13.28	30.20 ***
DBE total	85.82	28.20	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.60	6.11	9.75 *
Hispanic	0.16	0.15	
Asian	0.00	7.50	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.75	14.50	5.20 ****
Nonminority female	1.17	14.80	7.92 ****
DBE total	1.93	29.30	6.58 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.83	26.77	3.09
DBE total	0.83	46.76	1.77 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.15	6.40	80.44
Hispanic	0.38	3.05	12.48
Asian	0.37	2.48	14.94
Native American	0.00	0.16	0.00
Minority	5.90	12.09	48.80
Nonminority female	4.81	11.20	42.99
DBE total	10.71	23.29	46.01
Building Equipment Contractors (NAICS 2382)			
African American	11.14	7.69	
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.19	0.00 **
Minority	11.14	13.46	82.76
Nonminority female	32.89	10.92	
DBE total	44.03	24.38	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.67	0.00 ****
Hispanic	10.27	2.19	
Asian	5.68	0.32	
Native American	0.00	0.50	0.00
Minority	15.95	9.68	
Nonminority female	20.89	10.23	
DBE total	36.84	19.91	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.12	5.44	2.19 ***
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.12	14.74	0.81 ****
Nonminority female	54.70	17.15	
DBE total	54.82	31.89	
Specialized Freight Trucking (NAICS 4842)			
African American	44.33	29.97	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	44.33	44.07	
Nonminority female	55.57	11.07	
DBE total	99.89	55.14	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.72	0.00 ****
Hispanic	0.00	3.44	0.00 ****
Asian	0.00	2.58	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.77	0.00 ****
Nonminority female	46.12	11.24	
DBE total	46.12	23.01	
General Freight Trucking (NAICS 4841)			
African American	84.51	23.02	
Hispanic	4.69	9.50	49.30
Asian	0.00	5.94	0.00 ****
Native American	0.00	0.21	0.00
Minority	89.20	38.67	
Nonminority female	3.32	10.46	31.77 ***
DBE total	92.52	49.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.67	14.66	4.59 ****
Hispanic	0.00	1.52	0.00 ****
Asian	0.29	7.42	3.96 ****
Native American	0.00	0.31	0.00
Minority	0.97	23.90	4.05 ****
Nonminority female	81.66	29.54	
DBE total	82.63	53.44	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00 ****
Hispanic	5.08	3.36	
Asian	0.00	0.38	0.00
Native American	7.17	0.21	
Minority	12.25	8.30	
Nonminority female	6.04	13.35	45.22
DBE total	18.29	21.65	84.46
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.65	0.00
Asian	0.00	7.94	0.00 ****
Native American	0.00	0.84	0.00 *
Minority	0.00	15.03	0.00 ****
Nonminority female	4.47	24.49	18.27 **
DBE total	4.47	39.52	11.32 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.94	0.00
Hispanic	0.00	0.56	0.00
Asian	0.00	7.60	0.00
Native American	0.00	1.12	0.00
Minority	0.00	15.21	0.00 ****
Nonminority female	0.00	16.64	0.00 ****
DBE total	0.00	31.84	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.79	0.00 ****
Hispanic	0.00	6.42	0.00 ****
Asian	0.00	4.40	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	25.79	0.00 ****
Nonminority female	49.19	11.67	
DBE total	49.19	37.46	
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	92.43	18.26	
DBE total	92.43	24.86	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.22	5.13	4.20 **
Hispanic	0.00	0.52	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.22	14.32	1.50 ****
Nonminority female	0.00	16.81	0.00 ****
DBE total	0.22	31.13	0.69 ****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	8.90	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.01	0.00
Minority	0.00	16.68	0.00 ****
Nonminority female	0.00	26.06	0.00 ****
DBE total	0.00	42.74	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.52	0.00 ****
Hispanic	0.00	0.31	0.00
Asian	0.98	8.00	12.23 ***
Native American	0.00	0.71	0.00 ***
Minority	0.98	14.53	6.73 ****
Nonminority female	19.90	18.07	
DBE total	20.88	32.60	64.05
<b>Architectural and Structural Metals Manufacturing (NAICS 3323)</b>			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	1.09	0.00 *
Asian	0.00	8.19	0.00 ****
Native American	0.00	1.00	0.00 *
Minority	0.00	15.91	0.00 ****
Nonminority female	35.45	17.82	
DBE total	35.45	33.73	
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	14.44	0.00 ****
Hispanic	0.00	6.21	0.00 ****
Asian	0.00	4.29	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	25.05	0.00 ****
Nonminority female	0.00	11.53	0.00 ****
DBE total	0.00	36.57	0.00 ****
<b>Facilities Support Services (NAICS 5612)</b>			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	3.84	12.26	31.32
DBE total	3.84	57.03	6.73

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.30	0.00
Hispanic	0.00	0.28	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.57	0.00
Nonminority female	0.00	17.38	0.00 ****
DBE total	0.00	17.95	0.00 ****
Land Subdivision (NAICS 2372)			
African American	0.00	7.17	0.00
Hispanic	0.00	1.35	0.00
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	8.54	0.00
Nonminority female	0.00	7.41	0.00
DBE total	0.00	15.94	0.00
Investigation and Security Services (NAICS 5616)			
African American	15.01	20.52	73.13
Hispanic	0.00	5.91	0.00 ****
Asian	0.00	5.48	0.00 ****
Native American	0.00	0.46	0.00
Minority	15.01	32.38	46.35
Nonminority female	0.00	13.30	0.00 ****
DBE total	15.01	45.68	32.85 **
Direct Selling Establishments (NAICS 4543)			
African American	0.00	6.50	0.00 ****
Hispanic	0.00	2.55	0.00
Asian	0.00	16.53	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	25.71	0.00 ****
Nonminority female	99.72	20.41	
DBE total	99.72	46.12	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.47	0.00 ****
Hispanic	0.00	3.90	0.00 ****
Asian	0.00	16.86	0.00 ****
Native American	0.00	0.50	0.00
Minority	0.00	33.72	0.00 ****
Nonminority female	0.00	13.89	0.00 ****
DBE total	0.00	47.61	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00 ****
Native American	0.00	3.03	0.00 ****
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	12.07	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	5.17	0.00
Native American	0.00	0.02	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	28.08	0.00 ****
DBE total	0.00	45.92	0.00 ****
Gasoline Stations (NAICS 4471)			
African American	67.36	5.65	
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	67.36	26.14	
Nonminority female	0.00	20.43	0.00 ****
DBE total	67.36	46.57	
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	18.90	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	18.90	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	18.90	30.13	62.74
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00 ****
Hispanic	0.00	7.98	0.00 ****
Asian	0.00	6.08	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00 ****
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.24	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.52	0.00 ****
Native American	0.00	1.76	0.00
Minority	0.00	17.51	0.00 ****
Nonminority female	0.00	15.28	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	18.34	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	5.70	0.00 ****
Native American	0.00	0.34	0.00
Minority	0.00	30.35	0.00 ****
Nonminority female	0.00	18.60	0.00 ****
DBE total	0.00	48.94	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	6.19	0.00
Hispanic	0.00	1.32	0.00
Asian	0.00	11.02	0.00
Native American	0.00	2.47	0.00
Minority	0.00	21.00	0.00 ****
Nonminority female	0.00	15.81	0.00 ****
DBE total	0.00	36.81	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.12	0.00 ****
Hispanic	0.00	2.70	0.00
Asian	0.00	10.44	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	21.85	0.00 ****
Nonminority female	44.67	22.10	
DBE total	44.67	43.95	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	11.62	0.00 ****
Hispanic	0.00	3.52	0.00
Asian	0.00	8.15	0.00 ****
Native American	0.00	0.00	
Minority	0.00	23.29	0.00 ****
Nonminority female	62.61	12.91	
DBE total	62.61	36.20	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	0.00	8.29	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	85.69	21.41	
DBE total	85.69	42.84	
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	96.31	28.20	
DBE total	96.31	46.63	
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.58	0.00 ****
Hispanic	0.00	4.84	0.00
Asian	12.98	4.28	
Native American	0.00	0.12	0.00
Minority	12.98	23.82	54.49
Nonminority female	0.00	16.00	0.00 ****
DBE total	12.98	39.82	32.59 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	0.00	18.44	0.00 ****
DBE total	0.00	33.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	29.51	28.09	
DBE total	29.51	45.24	65.23
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00 ****
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Remediation and Other Waste Management Services (NAICS 5629)</b>			
African American	0.00	13.11	0.00 ****
Hispanic	0.00	4.85	0.00 ****
Asian	0.00	4.39	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	23.18	0.00 ****
Nonminority female	0.00	19.24	0.00 ****
DBE total	0.00	42.42	0.00 ****
<b>Other Crop Farming (NAICS 1119)</b>			
African American	0.00	2.63	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.02	0.00
Native American	0.00	0.00	
Minority	0.00	5.23	0.00
Nonminority female	0.00	14.08	0.00
DBE total	0.00	19.32	0.00 ****
<b>Waste Treatment and Disposal (NAICS 5622)</b>			
African American	0.00	18.33	0.00 ****
Hispanic	0.00	7.61	0.00 ****
Asian	0.00	3.68	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	29.63	0.00 ****
Nonminority female	0.00	8.29	0.00 ****
DBE total	0.00	37.92	0.00 ****
<b>Industrial Machinery Manufacturing (NAICS 3332)</b>			
African American	0.00	6.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.87	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.75	0.00
Nonminority female	0.00	12.64	0.00
DBE total	0.00	32.39	0.00 ****
<b>Water, Sewage and Other Systems (NAICS 2213)</b>			
African American	0.00	2.60	0.00
Hispanic	0.00	2.60	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.19	0.00
Nonminority female	0.00	14.19	0.00
DBE total	0.00	19.38	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.75	0.00
Native American	0.00	2.30	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	0.00	13.29	0.00
DBE total	0.00	32.83	0.00 ****
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.55	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	11.37	0.00 ****
Native American	0.00	2.37	0.00
Minority	0.00	19.29	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	38.73	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	10.81	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.41	0.00
Native American	0.00	0.00	
Minority	0.00	16.22	0.00
Nonminority female	0.00	24.32	0.00
DBE total	0.00	40.54	0.00 ****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	10.72	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.46	0.00
Native American	0.00	2.44	0.00
Minority	0.00	22.61	0.00 ****
Nonminority female	0.00	21.25	0.00 ****
DBE total	0.00	43.86	0.00 ****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	3.42	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.20	0.00
Native American	0.00	0.68	0.00
Minority	0.00	11.30	0.00
Nonminority female	0.00	23.17	0.00
DBE total	0.00	34.47	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	2.71	0.00
Hispanic	0.00	2.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.42	0.00
Nonminority female	0.00	19.18	0.00
DBE total	0.00	24.60	0.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	23.15	0.00 ****
Hispanic	0.00	6.80	0.00 *
Asian	0.00	8.17	0.00 *
Native American	0.00	0.00	
Minority	0.00	38.11	0.00 ****
Nonminority female	0.00	17.79	0.00 ****
DBE total	0.00	55.90	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****
Metalworking Machinery Manufacturing (NAICS 3335)			
African American	0.00	12.53	0.00
Hispanic	0.00	0.00	
Asian	0.00	12.54	0.00
Native American	0.00	1.95	0.00
Minority	0.00	27.02	0.00
Nonminority female	0.00	9.99	0.00
DBE total	0.00	37.01	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)</b>			
African American	0.00	9.56	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.52	0.00 ****
Native American	0.00	2.20	0.00
Minority	0.00	19.28	0.00 ****
Nonminority female	0.00	22.67	0.00 ****
DBE total	0.00	41.96	0.00 ****
<b>Paint, Coating, and Adhesive Manufacturing (NAICS 3255)</b>			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****
<b>Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)</b>			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00 ****
<b>Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)</b>			
African American	0.00	4.91	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Cable and Other Subscription Programming (NAICS 5152)</b>			
African American	0.00	13.50	0.00
Hispanic	0.00	6.55	0.00
Asian	0.00	4.33	0.00
Native American	0.00	0.00	
Minority	0.00	24.38	0.00
Nonminority female	0.00	10.64	0.00
DBE total	0.00	35.02	0.00
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	20.84	0.00
Hispanic	0.00	6.31	0.00
Asian	0.00	4.20	0.00
Native American	0.00	0.00	
Minority	0.00	31.35	0.00
Nonminority female	0.00	11.89	0.00
DBE total	0.00	43.24	0.00
<b>Plastics Product Manufacturing (NAICS 3261)</b>			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.11	0.00
Native American	0.00	2.31	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	14.29	0.00
DBE total	0.00	33.62	0.00
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	5.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.89	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	14.30	0.00 ****
Nonminority female	0.00	14.79	0.00 ****
DBE total	0.00	29.09	0.00 ****
<b>Paper and Paper Product Merchant Wholesalers (NAICS 4241)</b>			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

Source and Notes: See Table 5.5.

**Table B.5. Industry Group Utilization, Availability, and Disparity Results for SHA AE-CRS Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.32	8.70	15.18 ****
Hispanic	0.26	4.28	6.14 ****
Asian	14.21	12.23	
Native American	0.00	0.42	0.00 ****
Minority	15.79	25.63	61.62 ****
Nonminority female	7.87	12.85	61.19 *
DBE total	23.66	38.48	61.48 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	21.32	14.86	
Hispanic	0.00	1.55	0.00 ****
Asian	5.17	7.08	73.05
Native American	0.00	0.31	0.00 **
Minority	26.49	23.80	
Nonminority female	34.91	29.07	
DBE total	61.41	52.87	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.79	0.00 ****
Hispanic	0.00	3.95	0.00 ****
Asian	38.42	15.14	
Native American	0.00	0.61	0.00 **
Minority	38.42	35.48	
Nonminority female	11.42	14.78	77.25
DBE total	49.84	50.26	99.16
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.92	0.00 ****
Hispanic	0.00	1.56	0.00 ****
Asian	0.00	4.82	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	19.33	0.00 ****
Nonminority female	12.02	32.80	36.64
DBE total	12.02	52.14	23.05 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ***
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.22	0.00 ****
Hispanic	0.00	3.91	0.00
Asian	0.00	8.66	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.89	0.00 ****
Nonminority female	0.00	14.24	0.00 ****
DBE total	0.00	34.13	0.00 ****
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Business Support Services (NAICS 5614)			
African American	86.06	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	86.06	19.99	
Nonminority female	7.97	26.77	29.76
DBE total	94.02	46.76	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	9.90	12.63	78.45
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00 **
Native American	0.00	0.00	
Minority	9.90	18.43	53.75
Nonminority female	10.49	28.20	37.19
DBE total	20.39	46.63	43.73
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.59	0.00 ****
Hispanic	0.00	2.78	0.00 ****
Asian	0.00	2.78	0.00 ****
Native American	0.00	0.14	0.00
Minority	0.00	12.29	0.00 ****
Nonminority female	3.57	10.38	34.37 **
DBE total	3.57	22.67	15.73 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	99.77	16.02	
Hispanic	0.00	10.80	0.00 **
Asian	0.00	9.24	0.00
Native American	0.00	1.33	0.00
Minority	99.77	37.39	
Nonminority female	0.00	18.99	0.00 ****
DBE total	99.77	56.38	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 *
Minority	0.00	14.90	0.00 ****
Nonminority female	8.07	18.18	44.40
DBE total	8.07	33.09	24.41 ****
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
<b>Other Specialty Trade Contractors (NAICS 2389)</b>			
African American	62.61	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	62.61	12.11	
Nonminority female	0.00	10.76	0.00 ****
DBE total	62.61	22.87	
<b>Utility System Construction (NAICS 2371)</b>			
African American	97.22	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	97.22	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	97.22	19.55	
<b>Foundation, Structure, and Building Exterior Contractors (NAICS 2381)</b>			
African American	3.23	6.63	48.82
Hispanic	88.05	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.28	14.82	
Nonminority female	7.87	10.24	76.85
DBE total	99.15	25.06	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	17.12	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	17.12	14.02	
Nonminority female	55.75	9.88	
DBE total	72.87	23.91	
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00 ****
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Administrative Services (NAICS 5611)			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	6.46	0.00 ****
Asian	0.00	4.91	0.00 **
Native American	0.00	0.19	0.00
Minority	0.00	29.37	0.00 ****
Nonminority female	0.00	13.13	0.00 ****
DBE total	0.00	42.50	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	49.78	10.58	
DBE total	49.78	49.96	99.65
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.15	0.00 ****
Hispanic	0.00	6.53	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	24.69	0.00 ****
Nonminority female	0.00	11.69	0.00 ****
DBE total	0.00	36.39	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	7.18	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	12.10	0.00 ****
Native American	0.00	0.57	0.00
Minority	0.00	19.86	0.00 ****
Nonminority female	0.00	17.66	0.00 ****
DBE total	0.00	37.52	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	0.00	18.44	0.00 ****
DBE total	0.00	33.12	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00
Nonminority female	0.00	26.46	0.00
DBE total	0.00	56.94	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.26	0.00
Hispanic	0.00	0.26	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.52	0.00
Nonminority female	0.00	17.43	0.00 ****
DBE total	0.00	17.96	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	100.00	11.31	
DBE total	100.00	23.24	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.88	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.63	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	31.34	0.00 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.35	0.00 ****
Hispanic	0.00	0.85	0.00 *
Asian	0.00	7.64	0.00 ****
Native American	0.00	0.71	0.00 *
Minority	0.00	14.55	0.00 ****
Nonminority female	0.00	17.57	0.00 ****
DBE total	0.00	32.12	0.00 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	79.73	17.64	
DBE total	79.73	31.05	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.97	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.41	0.00
Native American	0.00	2.38	0.00
Minority	0.00	20.92	0.00
Nonminority female	0.00	15.29	0.00
DBE total	0.00	36.21	0.00
Support Activities for Mining (NAICS 2131)			
African American	0.00	2.66	0.00
Hispanic	0.00	2.66	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.32	0.00
Nonminority female	0.00	17.14	0.00
DBE total	0.00	22.47	0.00
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.00	12.26	0.00
DBE total	0.00	57.03	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	15.66	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	5.84	0.00 ****
Native American	0.00	1.97	0.00
Minority	0.00	23.47	0.00 ****
Nonminority female	0.00	22.00	0.00 ****
DBE total	0.00	45.47	0.00 ****

Source and Notes: See Table 5.5.

**Table B.6. Industry Group Utilization, Availability, and Disparity Results for SHA AE-CRS Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.85	8.71	9.79 ****
Hispanic	0.32	4.28	7.48 ****
Asian	16.29	12.26	
Native American	0.00	0.42	0.00 ****
Minority	17.46	25.67	68.03
Nonminority female	8.16	12.83	63.65
DBE total	25.62	38.49	66.57 **
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	13.30	14.60	91.15
Hispanic	0.00	1.50	0.00 ****
Asian	6.97	6.92	
Native American	0.00	0.34	0.00
Minority	20.27	23.35	86.83
Nonminority female	29.60	28.96	
DBE total	49.87	52.31	95.34
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.26	0.00 ****
Hispanic	0.00	4.05	0.00 ****
Asian	27.68	15.51	
Native American	0.00	0.60	0.00 *
Minority	27.68	35.43	78.12
Nonminority female	9.44	14.20	66.51
DBE total	37.12	49.63	74.80
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.88	0.00 ****
Hispanic	0.00	1.59	0.00
Asian	0.00	4.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	19.36	0.00 ****
Nonminority female	12.98	32.68	39.72 ***
DBE total	12.98	52.04	24.94 ****
Business Support Services (NAICS 5614)			
African American	90.50	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	90.50	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	90.50	46.76	
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.71	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	12.42	0.00 ****
Nonminority female	4.23	10.44	40.57 **
DBE total	4.23	22.85	18.53 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00 ***
Minority	0.00	14.90	0.00 ****
Nonminority female	8.07	18.18	44.40
DBE total	8.07	33.09	24.41 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	58.01	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	58.01	12.11	
Nonminority female	0.00	10.75	0.00 ****
DBE total	58.01	22.87	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	3.26	6.63	49.13
Hispanic	87.78	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.03	14.82	
Nonminority female	8.11	10.24	79.25
DBE total	99.15	25.06	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	15.44	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	15.44	14.02	
Nonminority female	56.95	9.88	
DBE total	72.39	23.91	
Utility System Construction (NAICS 2371)			
African American	94.63	6.54	
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	94.63	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	94.63	19.55	
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	56.12	10.58	
DBE total	56.12	49.96	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	6.46	0.00 ****
Asian	0.00	4.91	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	29.37	0.00 ****
Nonminority female	0.00	13.13	0.00 ****
DBE total	0.00	42.50	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	98.64	16.01	
Hispanic	0.00	10.75	0.00 ****
Asian	0.00	9.19	0.00 ****
Native American	0.00	1.32	0.00
Minority	98.64	37.26	
Nonminority female	0.00	18.91	0.00 ****
DBE total	98.64	56.17	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.15	0.00 ****
Hispanic	0.00	6.53	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	24.69	0.00 ****
Nonminority female	0.00	11.69	0.00 ****
DBE total	0.00	36.39	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	7.45	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	12.37	0.00 ****
Native American	0.00	0.56	0.00
Minority	0.00	20.38	0.00 ****
Nonminority female	0.00	17.40	0.00 ****
DBE total	0.00	37.78	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	8.62	28.20	30.58
DBE total	8.62	46.63	18.50
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	0.00	18.44	0.00 ****
DBE total	0.00	33.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.26	0.00
Hispanic	0.00	0.26	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.52	0.00
Nonminority female	0.00	17.43	0.00 ****
DBE total	0.00	17.96	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00 ****
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	0.00	56.94	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00 ****
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00 ****
DBE total	0.00	27.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.88	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	8.63	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	31.34	0.00 ****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.35	0.00 ****
Hispanic	0.00	0.85	0.00 ***
Asian	0.00	7.64	0.00 ****
Native American	0.00	0.71	0.00 ***
Minority	0.00	14.55	0.00 ****
Nonminority female	0.00	17.57	0.00 ****
DBE total	0.00	32.12	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00 ***
Minority	0.00	13.41	0.00 ****
Nonminority female	79.73	17.64	
DBE total	79.73	31.05	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.97	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.41	0.00
Native American	0.00	2.38	0.00
Minority	0.00	20.92	0.00
Nonminority female	0.00	15.29	0.00
DBE total	0.00	36.21	0.00
Support Activities for Mining (NAICS 2131)			
African American	0.00	2.66	0.00
Hispanic	0.00	2.66	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.32	0.00
Nonminority female	0.00	17.14	0.00
DBE total	0.00	22.47	0.00
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00 ****
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00 ****
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00 ****
Nonminority female	0.00	12.26	0.00 ****
DBE total	0.00	57.03	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00 ****
Nonminority female	0.00	20.56	0.00 ****
DBE total	0.00	34.41	0.00 ****

Source and Notes: See Table 5.5.

**Table B.7. Industry Group Utilization, Availability, and Disparity Results for SHA AE-CRS Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.33	8.70	15.31 ****
Hispanic	0.27	4.28	6.19 ****
Asian	14.17	12.23	
Native American	0.00	0.42	0.00 ****
Minority	15.76	25.63	61.51 ****
Nonminority female	7.88	12.85	61.29 *
DBE total	23.64	38.48	61.44 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	22.93	14.79	
Hispanic	0.00	1.55	0.00 ****
Asian	5.56	7.08	78.53
Native American	0.00	0.32	0.00 **
Minority	28.49	23.75	
Nonminority female	33.79	29.08	
DBE total	62.27	52.83	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.04	0.00 ****
Hispanic	0.00	4.07	0.00 ****
Asian	59.83	15.74	
Native American	0.00	0.60	0.00 **
Minority	59.83	35.45	
Nonminority female	8.01	13.97	57.34
DBE total	67.84	49.42	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.92	0.00 ****
Hispanic	0.00	1.56	0.00 ****
Asian	0.00	4.82	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	19.33	0.00 ****
Nonminority female	12.01	32.80	36.62
DBE total	12.01	52.14	23.04 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ***
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.22	0.00 ****
Hispanic	0.00	3.91	0.00
Asian	0.00	8.66	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.89	0.00 ****
Nonminority female	0.00	14.24	0.00 ****
DBE total	0.00	34.13	0.00 ****
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Business Support Services (NAICS 5614)			
African American	92.54	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	92.54	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	92.54	46.76	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	9.96	12.63	78.91
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00 **
Native American	0.00	0.00	
Minority	9.96	18.43	54.07
Nonminority female	9.96	28.20	35.33
DBE total	19.93	46.63	42.73
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.03	
Hispanic	0.00	10.81	0.00 **
Asian	0.00	9.25	0.00
Native American	0.00	1.33	0.00
Minority	100.00	37.42	
Nonminority female	0.00	19.00	0.00 ****
DBE total	100.00	56.42	
Other Specialty Trade Contractors (NAICS 2389)			
African American	63.16	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	63.16	12.11	
Nonminority female	0.00	10.75	0.00 ****
DBE total	63.16	22.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	97.81	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	97.81	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	97.81	19.55	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.06	0.00 ****
Hispanic	0.00	2.77	0.00 ****
Asian	0.00	2.78	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	11.73	0.00 ****
Nonminority female	5.07	10.12	50.09
DBE total	5.07	21.85	23.20 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	91.80	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.80	14.82	
Nonminority female	8.20	10.24	80.12
DBE total	100.00	25.06	
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	20.59	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	20.59	14.02	
Nonminority female	66.52	9.88	
DBE total	87.11	23.91	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00 ***
Asian	0.00	5.03	0.00 ***
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00 ****
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	61.90	10.58	
DBE total	61.90	49.96	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	7.18	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	12.10	0.00 ****
Native American	0.00	0.57	0.00
Minority	0.00	19.86	0.00 ****
Nonminority female	0.00	17.66	0.00 ****
DBE total	0.00	37.52	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00
Nonminority female	0.00	26.46	0.00
DBE total	0.00	56.94	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	100.00	11.31	
DBE total	100.00	23.24	
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
<b>Medical and Diagnostic Laboratories (NAICS 6215)</b>			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
<b>Waste Treatment and Disposal (NAICS 5622)</b>			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 **
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****

Source and Notes: See Table 5.5.

**Table B.8. Industry Group Utilization, Availability, and Disparity Results for SHA AE-CRS Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.86	8.71	9.93 ****
Hispanic	0.32	4.28	7.59 ****
Asian	16.33	12.26	
Native American	0.00	0.42	0.00 ****
Minority	17.52	25.67	68.27
Nonminority female	8.24	12.82	64.24
DBE total	25.76	38.49	66.93 **
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	14.52	14.52	100.00
Hispanic	0.00	1.50	0.00 ****
Asian	7.61	6.89	
Native American	0.00	0.35	0.00
Minority	22.12	23.26	95.12
Nonminority female	25.91	28.97	89.47
DBE total	48.04	52.22	91.98
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	14.77	0.00 ****
Hispanic	0.00	4.04	0.00 ****
Asian	49.48	15.92	
Native American	0.00	0.59	0.00 *
Minority	49.48	35.33	
Nonminority female	9.69	13.96	69.41
DBE total	59.17	49.28	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	6.60	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00
Native American	0.00	2.39	0.00
Minority	0.00	17.70	0.00
Nonminority female	100.00	15.63	
DBE total	100.00	33.33	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.88	0.00 ****
Hispanic	0.00	1.59	0.00
Asian	0.00	4.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	19.36	0.00 ****
Nonminority female	12.94	32.68	39.60 ***
DBE total	12.94	52.04	24.87 ****
Civic and Social Organizations (NAICS 8134)			
African American	0.00	22.13	0.00
Hispanic	0.00	5.15	0.00
Asian	0.00	6.37	0.00
Native American	0.00	0.23	0.00
Minority	0.00	33.88	0.00
Nonminority female	0.00	12.08	0.00
DBE total	0.00	45.96	0.00
Business Support Services (NAICS 5614)			
African American	88.14	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	88.14	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	88.14	46.76	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	58.68	6.25	
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	58.68	12.11	
Nonminority female	0.00	10.75	0.00 ****
DBE total	58.68	22.86	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.09	0.00 ****
Hispanic	0.00	2.77	0.00 ****
Asian	0.00	2.78	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	11.76	0.00 ****
Nonminority female	6.53	10.13	64.45
DBE total	6.53	21.89	29.83 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	91.54	5.56	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	91.54	14.82	
Nonminority female	8.46	10.24	82.65
DBE total	100.00	25.06	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	95.75	6.54	
Hispanic	0.00	2.14	0.00 ***
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	95.75	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	95.75	19.55	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	18.43	3.72	
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	18.43	14.02	
Nonminority female	67.47	9.88	
DBE total	85.90	23.91	
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	65.86	10.58	
DBE total	65.86	49.96	
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00 ****
Nonminority female	0.00	19.44	0.00 ****
DBE total	0.00	49.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	100.00	12.94	
DBE total	100.00	37.27	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00 ****
Nonminority female	0.00	17.71	0.00 ****
DBE total	0.00	33.04	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	100.00	24.95	
DBE total	100.00	47.51	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	100.00	16.03	
Hispanic	0.00	10.81	0.00 ****
Asian	0.00	9.25	0.00 ****
Native American	0.00	1.33	0.00
Minority	100.00	37.42	
Nonminority female	0.00	19.00	0.00 ****
DBE total	100.00	56.42	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	7.45	0.00 *
Hispanic	0.00	0.00	
Asian	0.00	12.37	0.00 ****
Native American	0.00	0.56	0.00
Minority	0.00	20.38	0.00 ****
Nonminority female	0.00	17.40	0.00 ****
DBE total	0.00	37.78	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	0.00	28.20	0.00 ****
DBE total	0.00	46.63	0.00 ****
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00 ****
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	0.00	56.94	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 ****
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00 ****
DBE total	0.00	46.28	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	0.00	18.26	0.00 ****
DBE total	0.00	24.86	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.56	0.00 ****
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00 ****
Native American	0.00	1.21	0.00
Minority	0.00	26.41	0.00 ****
Nonminority female	0.00	21.39	0.00 ****
DBE total	0.00	47.80	0.00 ****

Source and Notes: See Table 5.5.

**Table B.9. Industry Group Utilization, Availability, and Disparity Results for SHA Maintenance Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.24 ****
Hispanic	0.01	3.72	0.34 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.03	14.02	0.24 ****
Nonminority female	20.79	9.88	
DBE total	20.82	23.91	87.10
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.92	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	0.00	13.71	0.00 ****
Nonminority female	49.36	11.03	
DBE total	49.36	24.73	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.63	7.07	65.46
Hispanic	44.50	5.05	
Asian	2.70	2.61	
Native American	0.00	0.12	0.00 ***
Minority	51.82	14.84	
Nonminority female	8.32	10.87	76.55
DBE total	60.15	25.72	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.03	7.84	0.44
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.03	17.62	0.19 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.03	29.12	0.12 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	1.60	10.40	15.39 ****
Hispanic	0.63	4.93	12.73 **
Asian	0.00	3.11	0.00 ****
Native American	0.00	0.85	0.00 ***
Minority	2.23	19.29	11.55 ****
Nonminority female	0.00	13.16	0.00 ****
DBE total	2.23	32.45	6.87 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	1.82	3.51	51.84
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	1.82	11.93	15.24 ****
Nonminority female	36.91	11.31	
DBE total	38.73	23.24	
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00 ****
Asian	0.00	5.49	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	29.52	24.69	
DBE total	29.52	39.56	74.63

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Residential Building Construction (NAICS 2361)</b>			
African American	1.03	4.32	23.76
Hispanic	1.58	3.41	46.47
Asian	0.00	0.38	0.00
Native American	0.00	0.19	0.00
Minority	2.61	8.29	31.45
Nonminority female	0.00	13.42	0.00 ****
DBE total	2.61	21.72	12.01 ***
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	3.55	15.33	23.19
Hispanic	0.65	6.14	10.57
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.17	0.00
Minority	4.20	26.19	16.05
Nonminority female	10.05	13.05	77.03
DBE total	14.26	39.24	36.33
<b>Employment Services (NAICS 5613)</b>			
African American	78.38	18.69	
Hispanic	0.00	6.01	0.00 ***
Asian	0.00	5.91	0.00 ***
Native American	0.00	0.37	0.00
Minority	78.38	30.97	
Nonminority female	19.17	18.66	
DBE total	97.56	49.63	
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	8.65	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.48	0.00 ****
Native American	0.00	2.41	0.00
Minority	0.00	19.54	0.00 ****
Nonminority female	19.58	18.32	
DBE total	19.58	37.86	51.72 *
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	0.00	16.52	0.00 ****
Hispanic	3.44	2.38	
Asian	0.00	7.42	0.00 ****
Native American	0.00	0.34	0.00 **
Minority	3.44	26.66	12.89 ****
Nonminority female	6.50	26.98	24.08 ****
DBE total	9.94	53.64	18.52 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Dentists (NAICS 6212)			
African American	0.00	15.05	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	7.56	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.25	0.00
Nonminority female	0.00	18.06	0.00
DBE total	0.00	43.32	0.00
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.78	6.42	12.13 ***
Hispanic	12.20	3.05	
Asian	0.00	2.45	0.00 ****
Native American	0.00	0.16	0.00
Minority	12.98	12.09	
Nonminority female	4.71	11.26	41.86
DBE total	17.69	23.34	75.79
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.02	0.00 ****
Hispanic	0.00	0.89	0.00 *
Asian	0.00	7.85	0.00 ****
Native American	0.00	0.69	0.00 *
Minority	0.00	14.45	0.00 ****
Nonminority female	34.78	18.74	
DBE total	34.78	33.19	
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	18.49	7.10	
Hispanic	1.34	4.33	30.97 ****
Asian	0.00	8.67	0.00 ****
Native American	0.00	0.38	0.00 ****
Minority	19.83	20.48	96.81
Nonminority female	18.06	14.79	
DBE total	37.88	35.27	
General Freight Trucking (NAICS 4841)			
African American	60.88	23.62	
Hispanic	7.90	9.56	82.62
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.24	0.00
Minority	68.78	39.26	
Nonminority female	12.99	10.76	
DBE total	81.77	50.01	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ***
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.87	0.00 ****
Hispanic	0.00	0.26	0.00
Asian	1.08	7.80	13.81 **
Native American	0.00	0.70	0.00
Minority	1.08	14.63	7.36 ****
Nonminority female	95.10	18.72	
DBE total	96.18	33.35	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	99.74	18.26	
DBE total	99.74	24.86	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00 ***
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00 ***
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.42	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	7.99	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.21	0.00
Nonminority female	0.00	15.99	0.00
DBE total	0.00	30.20	0.00 ****
Utility System Construction (NAICS 2371)			
African American	0.00	7.10	0.00 ****
Hispanic	0.00	2.35	0.00 ****
Asian	0.00	0.59	0.00 ***
Native American	0.00	0.45	0.00
Minority	0.00	10.50	0.00 ****
Nonminority female	0.00	10.55	0.00 ****
DBE total	0.00	21.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	100.00	30.13	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	70.72	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	70.72	14.68	
Nonminority female	18.46	18.44	
DBE total	89.18	33.12	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.15	0.00 ****
Hispanic	0.00	1.04	0.00 *
Asian	0.00	7.68	0.00 ****
Native American	0.00	0.70	0.00 *
Minority	0.00	14.57	0.00 ****
Nonminority female	0.00	18.31	0.00 ****
DBE total	0.00	32.87	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00 ****
Nonminority female	0.00	17.15	0.00 ****
DBE total	0.00	31.89	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.33	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	4.17	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	24.91	0.00 ****
Nonminority female	1.94	11.59	16.70
DBE total	1.94	36.50	5.30 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.09	0.00
Hispanic	0.00	0.76	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.85	0.00
Nonminority female	0.00	15.03	0.00 ****
DBE total	0.00	17.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 **
Native American	0.00	0.00	
Minority	0.00	29.68	0.00 ****
Nonminority female	0.00	8.24	0.00 ****
DBE total	0.00	37.91	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	26.77	
DBE total	100.00	46.76	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00 ****
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	2.27	0.00
Asian	0.00	6.70	0.00
Native American	0.00	0.84	0.00
Minority	0.00	22.69	0.00 ****
Nonminority female	0.00	13.64	0.00 ****
DBE total	0.00	36.33	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	17.56	0.00 ****
Hispanic	0.00	3.60	0.00
Asian	0.00	6.95	0.00 ****
Native American	0.00	0.67	0.00
Minority	0.00	28.78	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	40.94	0.00 ****
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00 **
Minority	0.00	35.57	0.00 ****
Nonminority female	0.00	13.98	0.00 ****
DBE total	0.00	49.55	0.00 ****
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	29.98	0.00 ****
Hispanic	0.00	8.64	0.00 ***
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	0.00	44.08	0.00 ****
Nonminority female	0.00	11.07	0.00 ****
DBE total	0.00	55.15	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.13	0.00 ****
Hispanic	0.00	2.54	0.00
Asian	0.00	14.61	0.00 ****
Native American	0.00	0.24	0.00
Minority	0.00	24.52	0.00 ****
Nonminority female	84.05	21.62	
DBE total	84.05	46.14	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.35	0.00
Hispanic	0.00	3.94	0.00
Asian	0.00	7.78	0.00
Native American	0.00	0.00	
Minority	0.00	26.06	0.00 ****
Nonminority female	0.00	11.85	0.00
DBE total	0.00	37.91	0.00 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	22.29	0.00 ****
Hispanic	0.00	8.15	0.00
Asian	0.00	6.45	0.00
Native American	0.00	0.21	0.00
Minority	0.00	37.10	0.00 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.00	48.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00 *
Asian	0.00	4.66	0.00 *
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ****
DBE total	0.00	39.12	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	15.98	0.00 ****
DBE total	0.00	30.74	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Insurance Carriers (NAICS 5241)			
African American	0.00	11.69	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	4.71	0.00
Native American	0.00	0.00	
Minority	0.00	18.46	0.00
Nonminority female	0.00	23.00	0.00
DBE total	0.00	41.45	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.70	0.00 ***
Hispanic	0.00	6.29	0.00
Asian	0.00	4.56	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	12.26	0.00 **
DBE total	0.00	37.82	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	15.67	0.00 ****
Hispanic	0.00	6.30	0.00
Asian	0.00	5.86	0.00
Native American	0.00	0.13	0.00
Minority	0.00	27.95	0.00 ****
Nonminority female	0.00	10.67	0.00 ****
DBE total	0.00	38.62	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 ****
Asian	0.00	7.60	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	5.18	17.12	30.24
DBE total	5.18	44.11	11.73
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
General Rental Centers (NAICS 5323)			
African American	0.00	12.78	0.00
Hispanic	0.00	5.40	0.00
Asian	0.00	3.95	0.00
Native American	0.00	0.00	
Minority	0.00	22.13	0.00
Nonminority female	0.00	18.03	0.00
DBE total	0.00	40.16	0.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	12.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00
Native American	0.00	2.18	0.00
Minority	0.00	23.69	0.00
Nonminority female	0.00	8.72	0.00
DBE total	0.00	32.41	0.00
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****

Source and Notes: See Table 5.5.

**Table B.10. Industry Group Utilization, Availability, and Disparity Results for SHA Maintenance Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.02	8.85	0.28 ****
Hispanic	0.01	3.72	0.40 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.04	14.02	0.28 ****
Nonminority female	16.96	9.88	
DBE total	17.00	23.91	71.12
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.88	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 **
Minority	0.00	13.66	0.00 ****
Nonminority female	11.53	11.01	
DBE total	11.53	24.68	46.72 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.03	7.84	0.44
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.03	17.62	0.19 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.03	29.12	0.12 ****
Nonresidential Building Construction (NAICS 2362)			
African American	1.68	10.46	16.07 ****
Hispanic	0.65	4.96	13.14 **
Asian	0.00	3.14	0.00 ****
Native American	0.00	0.85	0.00 ****
Minority	2.33	19.40	12.02 ****
Nonminority female	0.00	13.13	0.00 ****
DBE total	2.33	32.53	7.17 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	1.18	3.51	33.63
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	1.18	11.93	9.89 ****
Nonminority female	34.06	11.31	
DBE total	35.24	23.24	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	5.48	7.36	74.44
Hispanic	15.25	4.71	
Asian	1.84	2.62	69.97
Native American	0.00	0.17	0.00 **
Minority	22.57	14.86	
Nonminority female	10.28	11.29	91.01
DBE total	32.85	26.16	
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00 ****
Asian	0.00	5.49	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
Residential Building Construction (NAICS 2361)			
African American	1.12	4.32	25.99
Hispanic	2.58	3.41	75.84
Asian	0.00	0.38	0.00
Native American	0.00	0.19	0.00
Minority	3.71	8.30	44.66
Nonminority female	0.00	13.43	0.00 ****
DBE total	3.71	21.73	17.06 ***

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.66	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.88	0.00 ****
Nonminority female	44.53	24.67	
DBE total	44.53	39.55	
Services to Buildings and Dwellings (NAICS 5617)			
African American	4.82	15.51	31.05
Hispanic	0.99	6.26	15.79
Asian	0.00	4.59	0.00 ****
Native American	0.00	0.17	0.00
Minority	5.81	26.54	21.88
Nonminority female	8.50	13.00	65.35
DBE total	14.30	39.54	36.17
Offices of Dentists (NAICS 6212)			
African American	0.00	15.05	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	7.56	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.25	0.00
Nonminority female	0.00	18.06	0.00
DBE total	0.00	43.32	0.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.18	0.00 ****
Hispanic	4.81	2.24	
Asian	0.00	7.43	0.00 ****
Native American	0.00	0.34	0.00
Minority	4.81	26.19	18.37 ****
Nonminority female	11.54	27.41	42.09 ****
DBE total	16.35	53.60	30.50 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.16	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.00	0.00 ****
Native American	0.00	2.30	0.00 ****
Minority	0.00	19.46	0.00 ****
Nonminority female	4.76	17.73	26.86
DBE total	4.76	37.19	12.81 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	1.50	6.39	23.46
Hispanic	1.37	3.05	44.99
Asian	0.00	2.50	0.00 ****
Native American	0.00	0.16	0.00
Minority	2.87	12.09	23.73 *
Nonminority female	2.55	11.15	22.88 *
DBE total	5.42	23.25	23.33 ***
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.01	0.00 ****
Hispanic	0.00	0.90	0.00 ***
Asian	0.00	7.85	0.00 ****
Native American	0.00	0.69	0.00 ***
Minority	0.00	14.45	0.00 ****
Nonminority female	33.60	18.74	
DBE total	33.60	33.19	
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00 ****
Native American	4.85	0.67	
Minority	4.85	17.26	28.07
Nonminority female	0.00	16.86	0.00 ****
DBE total	4.85	34.13	14.20 *
General Freight Trucking (NAICS 4841)			
African American	54.21	23.63	
Hispanic	16.74	9.57	
Asian	0.00	5.83	0.00 ****
Native American	0.00	0.24	0.00
Minority	70.95	39.27	
Nonminority female	0.75	10.73	7.00 ****
DBE total	71.70	50.00	
Employment Services (NAICS 5613)			
African American	66.48	17.68	
Hispanic	0.00	5.91	0.00 ****
Asian	0.00	5.31	0.00 ****
Native American	0.00	0.29	0.00
Minority	66.48	29.18	
Nonminority female	20.21	18.48	
DBE total	86.69	47.66	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	14.07	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.48	0.00 ****
Native American	0.00	2.25	0.00
Minority	0.00	23.80	0.00 ****
Nonminority female	0.00	19.60	0.00 ****
DBE total	0.00	43.40	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.62	0.00 ****
Hispanic	0.00	0.26	0.00
Asian	0.65	7.89	8.29 ****
Native American	0.00	0.71	0.00 ***
Minority	0.65	14.49	4.52 ****
Nonminority female	83.07	18.42	
DBE total	83.72	32.91	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.29	0.00
Hispanic	0.00	0.09	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	14.16	0.00 ****
Nonminority female	0.00	16.62	0.00 ****
DBE total	0.00	30.79	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	16.58	6.95	
Hispanic	2.15	4.34	49.50
Asian	0.00	8.69	0.00 ****
Native American	0.00	0.28	0.00 ****
Minority	18.73	20.25	92.47
Nonminority female	16.74	14.10	
DBE total	35.46	34.36	
Utility System Construction (NAICS 2371)			
African American	0.00	7.35	0.00 ****
Hispanic	0.00	2.45	0.00 ***
Asian	0.00	0.74	0.00
Native American	0.00	0.42	0.00
Minority	0.00	10.96	0.00 ****
Nonminority female	7.68	10.73	71.61
DBE total	7.68	21.69	35.43 **
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	99.51	18.26	
DBE total	99.51	24.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00 ****
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00 ****
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.16	0.00 ****
Hispanic	0.00	1.03	0.00 ***
Asian	0.00	7.68	0.00 ****
Native American	0.00	0.70	0.00 ***
Minority	0.00	14.57	0.00 ****
Nonminority female	0.00	18.28	0.00 ****
DBE total	0.00	32.84	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	0.00	5.44	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00 ****
Nonminority female	0.00	17.15	0.00 ****
DBE total	0.00	31.89	0.00 ****
<b>Nonmetallic Mineral Mining and Quarrying (NAICS 2123)</b>			
African American	0.00	1.88	0.00
Hispanic	0.00	0.68	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.55	0.00
Nonminority female	0.00	15.34	0.00 ****
DBE total	0.00	17.89	0.00 ****
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	14.33	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	4.17	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	24.91	0.00 ****
Nonminority female	1.94	11.59	16.70
DBE total	1.94	36.50	5.30 ****
<b>Waste Treatment and Disposal (NAICS 5622)</b>			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.65	0.00 ****
Asian	0.00	3.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	29.68	0.00 ****
Nonminority female	0.00	8.24	0.00 ****
DBE total	0.00	37.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	14.29	0.00 ****
Hispanic	0.00	2.73	0.00 ****
Asian	0.00	7.10	0.00 ****
Native American	0.00	0.89	0.00
Minority	0.00	25.01	0.00 ****
Nonminority female	0.00	11.80	0.00 ****
DBE total	0.00	36.81	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	70.83	18.44	
DBE total	70.83	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	2.27	0.00
Asian	0.00	6.70	0.00
Native American	0.00	0.84	0.00
Minority	0.00	22.69	0.00 ****
Nonminority female	0.00	13.64	0.00 ****
DBE total	0.00	36.33	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	51.00	29.98	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	51.00	44.08	
Nonminority female	0.00	11.07	0.00 ****
DBE total	51.00	55.15	92.47
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	100.00	30.13	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00 *
Minority	0.00	35.57	0.00 ****
Nonminority female	0.00	13.98	0.00 ****
DBE total	0.00	49.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	0.00	7.13	0.00 ****
Hispanic	0.00	2.54	0.00
Asian	0.00	14.61	0.00 ****
Native American	0.00	0.24	0.00
Minority	0.00	24.52	0.00 ****
Nonminority female	84.05	21.62	
DBE total	84.05	46.14	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	11.29	0.00 ****
Hispanic	0.00	3.19	0.00 ****
Asian	0.00	4.19	0.00 ****
Native American	0.00	1.77	0.00
Minority	0.00	20.44	0.00 ****
Nonminority female	0.00	27.27	0.00 ****
DBE total	0.00	47.72	0.00 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	22.29	0.00 ****
Hispanic	0.00	8.15	0.00
Asian	0.00	6.45	0.00
Native American	0.00	0.21	0.00
Minority	0.00	37.10	0.00 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.00	48.12	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00 ****
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00 ***
DBE total	0.00	39.12	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.34	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	7.78	0.00 ****
Native American	0.00	0.00	
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	11.85	0.00 ****
DBE total	0.00	37.90	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	11.27	0.00 ****
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	17.15	0.00 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	0.00	45.24	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	76.49	26.77	
DBE total	76.49	46.76	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Insurance Carriers (NAICS 5241)			
African American	0.00	11.69	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	4.71	0.00
Native American	0.00	0.00	
Minority	0.00	18.46	0.00
Nonminority female	0.00	23.00	0.00
DBE total	0.00	41.45	0.00
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
DBE total	0.00	42.94	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	15.98	0.00 ****
DBE total	0.00	30.74	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 *
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 *
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	15.67	0.00
Hispanic	0.00	6.30	0.00
Asian	0.00	5.86	0.00
Native American	0.00	0.13	0.00
Minority	0.00	27.95	0.00 ****
Nonminority female	0.00	10.67	0.00
DBE total	0.00	38.62	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	5.18	17.12	30.24
DBE total	5.18	44.11	11.73
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	5.75	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.00	
Minority	0.00	23.95	0.00 ****
Nonminority female	0.00	10.10	0.00 ****
DBE total	0.00	34.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00 ****
Nonminority female	0.00	23.24	0.00 ****
DBE total	0.00	48.98	0.00 ****
General Rental Centers (NAICS 5323)			
African American	0.00	12.78	0.00
Hispanic	0.00	5.40	0.00
Asian	0.00	3.95	0.00
Native American	0.00	0.00	
Minority	0.00	22.13	0.00
Nonminority female	0.00	18.03	0.00
DBE total	0.00	40.16	0.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	12.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00
Native American	0.00	2.18	0.00
Minority	0.00	23.69	0.00
Nonminority female	0.00	8.72	0.00
DBE total	0.00	32.41	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	6.66	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.80	0.00
Native American	0.00	2.38	0.00
Minority	0.00	17.84	0.00
Nonminority female	0.00	14.62	0.00
DBE total	0.00	32.46	0.00 ****
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)			
African American	0.00	5.97	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.19	0.00
Native American	0.00	2.21	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	19.48	0.00 ****
DBE total	0.00	35.85	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****

Source and Notes: See Table 5.5.

**Table B.11. Industry Group Utilization, Availability, and Disparity Results for SHA Maintenance Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	0.00	13.72	0.00 ****
Nonminority female	54.23	11.03	
DBE total	54.23	24.75	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.02	3.72	0.65 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.02	14.02	0.17 ****
Nonminority female	13.31	9.88	
DBE total	13.34	23.91	55.80
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	35.35	11.31	
DBE total	35.35	23.24	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	18.55	24.69	75.13
DBE total	18.55	39.56	46.89
Nonresidential Building Construction (NAICS 2362)			
African American	4.01	7.88	50.93
Hispanic	0.00	3.89	0.00 ****
Asian	0.00	2.09	0.00 ****
Native American	0.00	0.57	0.00 ***
Minority	4.01	14.43	27.81 ***
Nonminority female	0.00	14.64	0.00 ****
DBE total	4.01	29.07	13.80 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00 ****
Hispanic	0.00	3.36	0.00 *
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.00	8.30	0.00 ****
Nonminority female	0.00	13.36	0.00 ****
DBE total	0.00	21.65	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.99	6.63	14.87 ****
Hispanic	36.29	5.56	
Asian	5.85	2.59	
Native American	0.00	0.05	0.00
Minority	43.12	14.82	
Nonminority female	27.03	10.24	
DBE total	70.15	25.06	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	8.39	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.72	0.00 ****
Native American	0.00	2.47	0.00
Minority	0.00	19.58	0.00 ****
Nonminority female	27.09	18.62	
DBE total	27.09	38.20	70.93
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.01	0.00 ****
Hispanic	0.00	0.90	0.00 *
Asian	0.00	7.85	0.00 ****
Native American	0.00	0.68	0.00 *
Minority	0.00	14.45	0.00 ****
Nonminority female	35.21	18.75	
DBE total	35.21	33.19	
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	100.00	18.26	
DBE total	100.00	24.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00 ***
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00 ***
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	84.89	23.65	
Hispanic	15.11	9.66	
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	100.00	39.38	
Nonminority female	0.00	10.58	0.00 ****
DBE total	100.00	49.96	
Utility System Construction (NAICS 2371)			
African American	0.00	7.16	0.00 ****
Hispanic	0.00	2.37	0.00 ****
Asian	0.00	0.62	0.00 ***
Native American	0.00	0.44	0.00
Minority	0.00	10.60	0.00 ****
Nonminority female	0.00	10.59	0.00 ****
DBE total	0.00	21.18	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	26.10	6.86	
Hispanic	0.00	4.34	0.00 ****
Asian	0.00	8.56	0.00 ****
Native American	0.00	0.25	0.00 ****
Minority	26.10	20.01	
Nonminority female	34.63	14.02	
DBE total	60.73	34.04	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.29	0.00
Hispanic	0.00	0.09	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.72	0.00
Minority	0.00	14.16	0.00
Nonminority female	0.00	16.63	0.00
DBE total	0.00	30.79	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.43	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.43	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	12.44	11.30	
DBE total	12.44	23.38	53.22
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	14.45	0.00 ****
Hispanic	47.96	1.51	
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00 **
Minority	47.96	23.76	
Nonminority female	8.80	29.63	29.70 ****
DBE total	56.76	53.39	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00 ****
DBE total	100.00	30.13	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	95.86	5.63	
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	95.86	14.68	
Nonminority female	0.00	18.44	0.00 ****
DBE total	95.86	33.12	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	38.79	11.55	
DBE total	38.79	37.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00 **
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.97	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	20.63	7.77	
Native American	0.00	0.69	0.00
Minority	20.63	14.71	
Nonminority female	37.50	18.79	
DBE total	58.12	33.50	
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00 ****
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.66	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.52	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	25.31	0.00 ****
Nonminority female	100.00	11.40	
DBE total	100.00	36.71	

Source and Notes: See Table 5.5.

**Table B.12. Industry Group Utilization, Availability, and Disparity Results for SHA Maintenance Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.03	3.72	0.80 ****
Asian	0.00	1.06	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.03	14.02	0.21 ****
Nonminority female	3.96	9.88	40.13 **
DBE total	3.99	23.91	16.71 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.92	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 **
Minority	0.00	13.71	0.00 ****
Nonminority female	12.17	11.04	
DBE total	12.17	24.75	49.19 ***
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00 ****
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.82	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	11.93	0.00 ****
Nonminority female	32.78	11.31	
DBE total	32.78	23.24	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.66	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.88	0.00 ****
Nonminority female	30.80	24.67	
DBE total	30.80	39.55	77.87
Nonresidential Building Construction (NAICS 2362)			
African American	4.42	7.78	56.83
Hispanic	0.00	3.85	0.00 ****
Asian	0.00	2.05	0.00 ****
Native American	0.00	0.56	0.00 ****
Minority	4.42	14.24	31.05 ***
Nonminority female	0.00	14.70	0.00 ****
DBE total	4.42	28.94	15.28 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.34	0.00 ****
Hispanic	0.00	3.36	0.00 ****
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.00	8.30	0.00 ****
Nonminority female	0.00	13.36	0.00 ****
DBE total	0.00	21.66	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.19	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.97	0.00 ****
Native American	0.00	2.29	0.00 ****
Minority	0.00	19.45	0.00 ****
Nonminority female	3.77	17.69	21.29
DBE total	3.77	37.14	10.14 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	2.22	6.63	33.49
Hispanic	36.44	5.56	
Asian	2.45	2.59	94.47
Native American	0.00	0.05	0.00
Minority	41.10	14.82	
Nonminority female	32.85	10.24	
DBE total	73.95	25.06	
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00 ****
Nonminority female	0.00	15.60	0.00 ****
DBE total	0.00	34.18	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.00	0.00 ****
Hispanic	0.00	0.91	0.00 ***
Asian	0.00	7.85	0.00 ****
Native American	0.00	0.68	0.00 ***
Minority	0.00	14.44	0.00 ****
Nonminority female	34.02	18.75	
DBE total	34.02	33.19	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00 ****
Native American	5.10	0.67	
Minority	5.10	17.26	29.52
Nonminority female	0.00	16.86	0.00 ****
DBE total	5.10	34.13	14.93 *
General Freight Trucking (NAICS 4841)			
African American	61.38	23.65	
Hispanic	22.61	9.66	
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	83.99	39.38	
Nonminority female	0.64	10.58	6.09 ****
DBE total	84.64	49.96	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.29	0.00 ****
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.64	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	4.86	10.85	44.80
DBE total	4.86	22.95	21.17 ****
Utility System Construction (NAICS 2371)			
African American	0.00	7.42	0.00 ****
Hispanic	0.00	2.47	0.00 ***
Asian	0.00	0.79	0.00
Native American	0.00	0.41	0.00
Minority	0.00	11.09	0.00 ****
Nonminority female	8.36	10.78	77.54
DBE total	8.36	21.88	38.22 ***
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	5.13	0.00
Hispanic	0.00	0.13	0.00
Asian	0.00	8.12	0.00 ****
Native American	0.00	0.72	0.00
Minority	0.00	14.10	0.00 ****
Nonminority female	0.00	17.40	0.00 ****
DBE total	0.00	31.50	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00 ****
Hispanic	0.00	2.63	0.00 **
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00 ****
Nonminority female	100.00	18.26	
DBE total	100.00	24.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	14.45	0.00 ****
Hispanic	35.26	1.51	
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	35.26	23.77	
Nonminority female	8.20	29.63	27.69 ****
DBE total	43.47	53.40	81.41
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	32.54	6.87	
Hispanic	0.00	4.34	0.00 ****
Asian	0.00	8.56	0.00 ****
Native American	0.00	0.26	0.00 ****
Minority	32.54	20.03	
Nonminority female	18.50	14.07	
DBE total	51.04	34.11	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.71	0.00 ****
Hispanic	0.00	0.36	0.00
Asian	4.49	8.02	56.07
Native American	0.00	0.69	0.00 ***
Minority	4.49	14.78	30.42 **
Nonminority female	17.16	17.99	95.43
DBE total	21.66	32.76	66.11
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	12.16	0.00 ****
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00 *
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00 ****
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
<b>Nonmetallic Mineral Mining and Quarrying (NAICS 2123)</b>			
African American	0.00	1.84	0.00
Hispanic	0.00	1.84	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.67	0.00 ****
Nonminority female	0.00	14.28	0.00 ****
DBE total	0.00	17.95	0.00 ****
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	29.10	11.55	
DBE total	29.10	37.13	78.37
<b>Other Heavy and Civil Engineering Construction (NAICS 2379)</b>			
African American	100.00	14.21	
Hispanic	0.00	3.30	0.00
Asian	0.00	0.85	0.00
Native American	0.00	0.08	0.00
Minority	100.00	18.43	
Nonminority female	0.00	11.70	0.00
DBE total	100.00	30.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	19.88	0.00 ****
Hispanic	0.00	6.12	0.00 ****
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	33.07	0.00 ****
Nonminority female	0.00	18.87	0.00 ****
DBE total	0.00	51.94	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00 ****
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	100.00	29.98	
Hispanic	0.00	8.64	0.00 ****
Asian	0.00	5.06	0.00 **
Native American	0.00	0.40	0.00
Minority	100.00	44.08	
Nonminority female	0.00	11.07	0.00 ****
DBE total	100.00	55.15	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00 ****
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00 ****
Nonminority female	0.00	14.71	0.00 ****
DBE total	0.00	32.41	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	100.00	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.73	0.00
Minority	100.00	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	100.00	29.90	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery Stores (NAICS 4451)			
African American	0.00	5.73	0.00
Hispanic	0.00	2.89	0.00
Asian	0.00	17.01	0.00
Native American	0.00	0.23	0.00
Minority	0.00	25.87	0.00
Nonminority female	0.00	21.60	0.00
DBE total	0.00	47.46	0.00
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	1.27	0.00
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.00	
Minority	0.00	20.60	0.00 ****
Nonminority female	0.00	28.96	0.00 ****
DBE total	0.00	49.56	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	9.00	0.00 ****
Hispanic	0.00	1.13	0.00
Asian	0.00	3.95	0.00 ****
Native American	0.00	2.95	0.00 ****
Minority	0.00	17.03	0.00 ****
Nonminority female	0.00	37.30	0.00 ****
DBE total	0.00	54.33	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 *
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 *
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	100.00	16.66	
DBE total	100.00	39.86	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00 ****
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.66	0.00 ****
Hispanic	0.00	5.97	0.00 ****
Asian	0.00	4.52	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	25.31	0.00 ****
Nonminority female	100.00	11.40	
DBE total	100.00	36.71	
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	14.38	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	7.77	0.00 ****
Native American	0.00	0.00	
Minority	0.00	26.10	0.00 ****
Nonminority female	0.00	11.83	0.00 ****
DBE total	0.00	37.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	6.28	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.46	0.00 ****
Native American	0.00	0.74	0.00 ***
Minority	0.00	14.49	0.00 ****
Nonminority female	0.00	14.22	0.00 ****
DBE total	0.00	28.71	0.00 ****
<b>Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)</b>			
African American	0.00	5.97	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.19	0.00
Native American	0.00	2.21	0.00
Minority	0.00	16.37	0.00 ****
Nonminority female	0.00	19.48	0.00 ****
DBE total	0.00	35.85	0.00 ****
<b>Personal and Household Goods Repair and Maintenance (NAICS 8114)</b>			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00 *
Asian	0.00	7.60	0.00 *
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American		0.00	
Hispanic		0.00	
Asian		0.00	
Native American		0.00	
Minority		0.00	
Nonminority female		0.00	
DBE total		0.00	

Source and Notes: See Table 5.5.

**Table B.13. Industry Group Utilization, Availability, and Disparity Results for SHA IT Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	6.24	16.60	37.59
Hispanic	0.00	3.63	0.00 ****
Asian	6.53	14.30	45.66
Native American	0.00	0.59	0.00 **
Minority	12.77	35.12	36.36 ****
Nonminority female	3.93	16.44	23.92 **
DBE total	16.70	51.56	32.39 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.93	0.00 ****
Hispanic	0.00	2.55	0.00 ****
Asian	6.64	7.41	89.58
Native American	0.00	0.35	0.00 **
Minority	6.64	27.23	24.38 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	6.64	53.69	12.36 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.67	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	96.64	12.21	
Native American	0.00	0.42	0.00 ****
Minority	96.64	25.58	
Nonminority female	0.00	12.79	0.00 ****
DBE total	96.64	38.36	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00 ****
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 ****
Nonminority female	100.00	14.10	
DBE total	100.00	33.91	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 *
Minority	0.00	13.72	0.00 ****
Nonminority female	100.00	11.03	
DBE total	100.00	24.75	

Source and Notes: See Table 5.5.

**Table B.14. Industry Group Utilization, Availability, and Disparity Results for SHA IT Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	6.74	17.16	39.27
Hispanic	0.00	3.22	0.00 ****
Asian	26.19	13.70	
Native American	0.00	0.57	0.00 *
Minority	32.93	34.64	95.07
Nonminority female	1.75	18.25	9.57 ****
DBE total	34.68	52.90	65.56
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.93	0.00 ****
Hispanic	0.00	2.55	0.00 ****
Asian	8.69	7.41	
Native American	0.00	0.35	0.00
Minority	8.69	27.23	31.90 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	8.69	53.69	16.18 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	92.66	12.06	
Native American	0.00	0.41	0.00 ****
Minority	92.66	25.34	
Nonminority female	0.00	12.83	0.00 ****
DBE total	92.66	38.17	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00 **
Nonminority female	100.00	14.10	
DBE total	100.00	33.91	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	0.00	2.82	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00 **
Minority	0.00	13.72	0.00 ****
Nonminority female	100.00	11.03	
DBE total	100.00	24.75	

Source and Notes: See Table 5.5.

**Table B.15. Industry Group Utilization, Availability, and Disparity Results for SHA IT Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	12.80	18.56	68.93
Hispanic	0.00	3.07	0.00 ****
Asian	0.00	12.79	0.00 ****
Native American	0.00	0.59	0.00 **
Minority	12.80	35.02	36.54 ****
Nonminority female	8.53	19.33	44.12
DBE total	21.33	54.35	39.24 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

Source and Notes: See Table 5.5.

**Table B.16. Industry Group Utilization, Availability, and Disparity Results for SHA IT Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	10.54	20.36	51.74
Hispanic	0.00	2.75	0.00 ****
Asian	0.00	11.54	0.00 ****
Native American	0.00	0.61	0.00 *
Minority	10.54	35.26	29.88 ***
Nonminority female	2.94	21.25	13.86 ****
DBE total	13.48	56.51	23.86 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00 ****
DBE total	0.00	41.86	0.00 ****

Source and Notes: See Table 5.5.

**Table B.17. Industry Group Utilization, Availability, and Disparity Results for SHA Services Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	89.48	19.85	
Hispanic	0.00	6.12	0.00 ***
Asian	0.00	6.59	0.00 ****
Native American	0.00	0.45	0.00
Minority	89.48	33.00	
Nonminority female	10.52	18.86	55.77
DBE total	100.00	51.87	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.97	8.46	46.92 ***
Hispanic	1.90	3.71	51.12
Asian	2.73	10.03	27.25 ****
Native American	0.00	0.29	0.00 ****
Minority	8.60	22.50	38.24 ****
Nonminority female	30.25	15.61	
DBE total	38.85	38.10	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	14.92	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	43.93	17.02	
Native American	0.00	0.64	0.00 **
Minority	43.93	36.36	
Nonminority female	53.77	13.96	
DBE total	97.70	50.32	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.05	0.00 ****
Hispanic	0.00	1.54	0.00 ****
Asian	0.00	6.93	0.00 ****
Native American	0.00	0.22	0.00 **
Minority	0.00	24.73	0.00 ****
Nonminority female	9.71	29.06	33.44 ****
DBE total	9.71	53.79	18.06 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.02	11.88	17.02
Hispanic	0.00	1.48	0.00 ****
Asian	0.00	6.34	0.00 ****
Native American	0.00	0.03	0.00
Minority	2.02	19.73	10.25 ****
Nonminority female	10.34	28.28	36.57
DBE total	12.36	48.01	25.76 ***
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	7.13	0.00
Hispanic	0.00	0.28	0.00
Asian	0.00	3.42	0.00
Native American	0.00	0.28	0.00
Minority	0.00	11.11	0.00
Nonminority female	100.00	34.03	
DBE total	100.00	45.14	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	11.40	0.00 ****
Hispanic	0.00	0.97	0.00
Asian	0.00	4.98	0.00 **
Native American	0.00	0.02	0.00
Minority	0.00	17.36	0.00 ****
Nonminority female	0.13	30.87	0.42 ****
DBE total	0.13	48.22	0.27 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.99	0.00 ****
Hispanic	0.00	0.24	0.00
Asian	0.00	9.31	0.00 ****
Native American	0.00	1.08	0.00
Minority	0.00	16.62	0.00 ****
Nonminority female	9.70	22.32	43.45
DBE total	9.70	38.94	24.90 *

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.22	0.00 ****
Hispanic	0.00	0.91	0.00
Asian	0.00	7.98	0.00 ****
Native American	0.00	1.47	0.00
Minority	0.00	16.58	0.00 ****
Nonminority female	18.82	15.02	
DBE total	18.82	31.60	59.56
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	0.00	13.87	0.00 ****
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	0.00	21.41	0.00 ****
Nonminority female	0.00	30.78	0.00 ****
DBE total	0.00	52.19	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Management of Companies and Enterprises (NAICS 5511)			
African American	0.00	11.14	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	5.94	0.00
Native American	0.00	0.00	
Minority	0.00	17.17	0.00
Nonminority female	0.00	24.98	0.00
DBE total	0.00	42.15	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	58.78	24.69	
DBE total	58.78	39.56	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 **
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
DBE total	0.00	36.97	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	100.00	18.81	
DBE total	100.00	39.83	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	10.96	0.00
DBE total	0.00	10.96	0.00
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Other Information Services (NAICS 5191)			
African American	0.00	11.16	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	5.30	0.00
Native American	0.00	0.00	
Minority	0.00	16.54	0.00
Nonminority female	0.00	24.99	0.00
DBE total	0.00	41.53	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Wired Telecommunications Carriers (NAICS 5171)</b>			
African American	0.00	13.44	0.00 ***
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ***
DBE total	0.00	41.48	0.00 ****
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	14.43	0.00 ****
Hispanic	0.00	6.22	0.00 ****
Asian	0.00	4.28	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	25.04	0.00 ****
Nonminority female	65.13	11.53	
DBE total	65.13	36.57	
<b>Other Specialty Trade Contractors (NAICS 2389)</b>			
African American	0.00	6.25	0.00 ****
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	100.00	10.74	
DBE total	100.00	22.85	
<b>Performing Arts Companies (NAICS 7111)</b>			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	
<b>Other Telecommunications (NAICS 5179)</b>			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table B.18. Industry Group Utilization, Availability, and Disparity Results for SHA Services Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.80	8.49	21.21 ****
Hispanic	3.87	3.18	
Asian	0.56	8.83	6.37 ****
Native American	0.00	0.17	0.00 **
Minority	6.24	20.67	30.16 ****
Nonminority female	25.43	16.89	
DBE total	31.66	37.56	84.29
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.38	0.00 ****
Hispanic	0.00	1.54	0.00 ****
Asian	0.00	6.82	0.00 ****
Native American	0.00	0.20	0.00
Minority	0.00	24.93	0.00 ****
Nonminority female	3.49	28.94	12.06 ****
DBE total	3.49	53.87	6.48 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	3.93	0.00 ****
Asian	88.51	16.53	
Native American	0.00	0.56	0.00 *
Minority	88.51	34.71	
Nonminority female	11.49	13.92	82.51
DBE total	100.00	48.64	
Employment Services (NAICS 5613)			
African American	48.04	19.03	
Hispanic	0.00	6.04	0.00 ****
Asian	0.00	6.11	0.00 ****
Native American	0.00	0.39	0.00
Minority	48.04	31.57	
Nonminority female	51.96	18.72	
DBE total	100.00	50.29	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	11.30	0.00 ***
Hispanic	0.00	0.88	0.00
Asian	0.00	4.92	0.00
Native American	0.00	0.01	0.00
Minority	0.00	17.11	0.00 ****
Nonminority female	0.05	30.69	0.16 ****
DBE total	0.05	47.79	0.10 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.18	12.19	17.87 ***
Hispanic	0.00	1.23	0.00
Asian	0.00	6.16	0.00 ****
Native American	0.00	0.01	0.00
Minority	2.18	19.58	11.13 ****
Nonminority female	1.55	28.95	5.35 ****
DBE total	3.73	48.53	7.68 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.22	0.00 *
Hispanic	0.00	0.91	0.00
Asian	0.00	7.98	0.00 *
Native American	0.00	1.47	0.00
Minority	0.00	16.58	0.00 ****
Nonminority female	18.82	15.02	
DBE total	18.82	31.60	59.56
Management of Companies and Enterprises (NAICS 5511)			
African American	0.00	11.14	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	5.94	0.00
Native American	0.00	0.00	
Minority	0.00	17.17	0.00 ****
Nonminority female	0.00	24.98	0.00 ****
DBE total	0.00	42.15	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	6.68	0.00 ****
Hispanic	0.00	0.21	0.00
Asian	0.00	8.97	0.00 ****
Native American	0.00	1.28	0.00
Minority	0.00	17.13	0.00 ****
Nonminority female	23.24	22.96	
DBE total	23.24	40.09	57.96
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	7.13	0.00
Hispanic	0.00	0.28	0.00
Asian	0.00	3.42	0.00
Native American	0.00	0.28	0.00
Minority	0.00	11.11	0.00
Nonminority female	100.00	34.03	
DBE total	100.00	45.14	
Legal Services (NAICS 5411)			
African American	0.00	5.86	0.00
Hispanic	0.00	4.00	0.00
Asian	0.00	8.71	0.00
Native American	0.00	0.06	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.00	31.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.09	0.00 ****
Hispanic	0.00	6.26	0.00
Asian	0.00	6.35	0.00
Native American	0.00	0.00	
Minority	0.00	37.70	0.00 ****
Nonminority female	0.00	12.62	0.00 ****
DBE total	0.00	50.33	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 ****
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	0.00	13.87	0.00 ****
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	0.00	21.41	0.00 ****
Nonminority female	0.00	30.78	0.00 ****
DBE total	0.00	52.19	0.00 ****
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	10.96	0.00
DBE total	0.00	10.96	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00 ****
DBE total	0.00	46.14	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.83	0.00 ****
Hispanic	0.00	3.10	0.00
Asian	0.00	10.75	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	23.35	0.00 ****
Nonminority female	0.00	19.28	0.00 ****
DBE total	0.00	42.63	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00 ****
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	5.46	0.00 ****
Asian	0.00	5.65	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.54	0.00 ****
Nonminority female	0.00	16.93	0.00 ****
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	58.78	24.69	
DBE total	58.78	39.56	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.26	0.00 ****
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
DBE total	0.00	36.97	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	100.00	18.81	
DBE total	100.00	39.83	
Other Information Services (NAICS 5191)			
African American	0.00	11.16	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	5.30	0.00
Native American	0.00	0.00	
Minority	0.00	16.54	0.00
Nonminority female	0.00	24.99	0.00
DBE total	0.00	41.53	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Special Food Services (NAICS 7223)</b>			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	14.43	0.00 ****
Hispanic	0.00	6.22	0.00 ****
Asian	0.00	4.28	0.00 ****
Native American	0.00	0.11	0.00
Minority	0.00	25.04	0.00 ****
Nonminority female	65.13	11.53	
DBE total	65.13	36.57	
<b>Other Specialty Trade Contractors (NAICS 2389)</b>			
African American	0.00	6.25	0.00 ****
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.14	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	100.00	10.74	
DBE total	100.00	22.85	
<b>Performing Arts Companies (NAICS 7111)</b>			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	
<b>Other Telecommunications (NAICS 5179)</b>			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table B.19. Industry Group Utilization, Availability, and Disparity Results for SHA Services Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	99.07	19.86	
Hispanic	0.00	6.12	0.00 ***
Asian	0.00	6.59	0.00 ****
Native American	0.00	0.45	0.00
Minority	99.07	33.03	
Nonminority female	0.93	18.87	4.93
DBE total	100.00	51.89	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	5.25	8.45	62.10
Hispanic	0.00	4.23	0.00 ****
Asian	3.61	11.28	32.04 ****
Native American	0.00	0.38	0.00 ****
Minority	8.86	24.33	36.42 ****
Nonminority female	39.03	14.21	
DBE total	47.89	38.54	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	14.92	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	43.93	17.02	
Native American	0.00	0.64	0.00 **
Minority	43.93	36.36	
Nonminority female	53.77	13.96	
DBE total	97.70	50.32	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.02	0.00 ****
Hispanic	0.00	1.53	0.00 ****
Asian	0.00	6.94	0.00 ****
Native American	0.00	0.22	0.00 **
Minority	0.00	24.71	0.00 ****
Nonminority female	4.26	29.07	14.67 ****
DBE total	4.26	53.78	7.93 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.04	11.88	17.14
Hispanic	0.00	1.48	0.00 ****
Asian	0.00	6.34	0.00 ****
Native American	0.00	0.03	0.00
Minority	2.04	19.73	10.32 ****
Nonminority female	10.41	28.27	36.81
DBE total	12.44	48.00	25.92 ***
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.50	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.55	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	16.26	0.00 ****
Nonminority female	0.00	21.86	0.00 ****
DBE total	0.00	38.12	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	0.00	13.87	0.00 ****
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	0.00	21.41	0.00 ****
Nonminority female	0.00	30.78	0.00 ****
DBE total	0.00	52.19	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.64	0.00 ****
Hispanic	0.00	2.05	0.00
Asian	0.00	5.64	0.00 **
Native American	0.00	0.14	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	1.14	33.17	3.45 ****
DBE total	1.14	53.63	2.13 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00 ****
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	58.78	24.69	
DBE total	58.78	39.56	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 **
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
DBE total	0.00	36.97	0.00 ****
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	100.00	18.81	
DBE total	100.00	39.83	
Other Information Services (NAICS 5191)			
African American	0.00	11.16	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	5.30	0.00
Native American	0.00	0.00	
Minority	0.00	16.54	0.00
Nonminority female	0.00	24.99	0.00
DBE total	0.00	41.53	0.00 ****
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00 ****
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 ****
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	7.37	0.00 ****
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	2.02	0.00 ****
Native American	0.00	0.00	
Minority	0.00	12.70	0.00 ****
Nonminority female	0.00	14.32	0.00 ****
DBE total	0.00	27.02	0.00 ****

Source and Notes: See Table 5.5.

**Table B.20. Industry Group Utilization, Availability, and Disparity Results for SHA Services Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.37	0.00 ****
Hispanic	0.00	1.54	0.00 ****
Asian	0.00	6.82	0.00 ****
Native American	0.00	0.20	0.00
Minority	0.00	24.93	0.00 ****
Nonminority female	0.00	28.94	0.00 ****
DBE total	0.00	53.87	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	13.70	0.00 ****
Hispanic	0.00	3.93	0.00 ****
Asian	88.51	16.53	
Native American	0.00	0.56	0.00 *
Minority	88.51	34.71	
Nonminority female	11.49	13.92	82.51
DBE total	100.00	48.64	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.57	8.47	42.19 ***
Hispanic	0.00	4.23	0.00 ****
Asian	1.12	11.46	9.74 ****
Native American	0.00	0.33	0.00 ****
Minority	4.69	24.49	19.15 ****
Nonminority female	47.59	13.87	
DBE total	52.28	38.36	
Employment Services (NAICS 5613)			
African American	71.85	19.13	
Hispanic	0.00	6.05	0.00 ****
Asian	0.00	6.16	0.00 ****
Native American	0.00	0.40	0.00
Minority	71.85	31.74	
Nonminority female	28.15	18.74	
DBE total	100.00	50.47	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.22	12.18	18.23 ***
Hispanic	0.00	1.22	0.00
Asian	0.00	6.15	0.00 ****
Native American	0.00	0.01	0.00
Minority	2.22	19.57	11.35 ****
Nonminority female	1.58	28.95	5.45 ****
DBE total	3.80	48.51	7.83 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.50	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.55	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	16.26	0.00 ****
Nonminority female	0.00	21.86	0.00 ****
DBE total	0.00	38.12	0.00 ****
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00 ****
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00 ****
Nonminority female	0.00	12.94	0.00 ****
DBE total	0.00	37.27	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.35	0.00 ****
Hispanic	0.00	6.74	0.00 ****
Asian	0.00	4.94	0.00 ****
Native American	0.00	0.00	
Minority	0.00	30.03	0.00 ****
Nonminority female	0.00	14.11	0.00 ****
DBE total	0.00	44.14	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Motion Picture and Video Industries (NAICS 5121)</b>			
African American	0.00	13.87	0.00 ****
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	0.00	21.41	0.00 ****
Nonminority female	0.00	30.78	0.00 ****
DBE total	0.00	52.19	0.00 ****
<b>Other Professional, Scientific, and Technical Services (NAICS 5419)</b>			
African American	0.00	12.64	0.00 ****
Hispanic	0.00	2.05	0.00
Asian	0.00	5.64	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	1.14	33.17	3.45 ****
DBE total	1.14	53.63	2.13 ****
<b>Other Personal Services (NAICS 8129)</b>			
African American	0.00	24.02	0.00 ****
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00 ****
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00 ****
Nonminority female	0.00	18.77	0.00 ****
DBE total	0.00	56.96	0.00 ****
<b>Other Miscellaneous Manufacturing (NAICS 3399)</b>			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	58.78	24.69	
DBE total	58.78	39.56	
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	9.32	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.85	0.00 ****
Native American	0.00	2.26	0.00 ****
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
DBE total	0.00	36.97	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Sound Recording Industries (NAICS 5122)			
African American	0.00	13.88	0.00
Hispanic	0.00	2.11	0.00
Asian	0.00	7.45	0.00
Native American	0.00	0.00	
Minority	0.00	23.44	0.00
Nonminority female	0.00	30.74	0.00 ****
DBE total	0.00	54.18	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	9.38	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.34	0.00
Native American	0.00	2.30	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	100.00	18.81	
DBE total	100.00	39.83	
Other Information Services (NAICS 5191)			
African American	0.00	11.16	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	5.30	0.00
Native American	0.00	0.00	
Minority	0.00	16.54	0.00
Nonminority female	0.00	24.99	0.00
DBE total	0.00	41.53	0.00 ****
Special Food Services (NAICS 7223)			
African American	0.00	17.92	0.00
Hispanic	0.00	2.94	0.00
Asian	0.00	7.33	0.00
Native American	0.00	0.28	0.00
Minority	0.00	28.47	0.00
Nonminority female	0.00	22.51	0.00
DBE total	0.00	50.98	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.26	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	7.49	0.00
Native American	0.00	0.15	0.00
Minority	0.00	28.59	0.00 ****
Nonminority female	100.00	18.22	
DBE total	100.00	46.82	
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00 ****
DBE total	0.00	46.32	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	13.92	0.00
Hispanic	0.00	5.63	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	0.00	24.79	0.00
Nonminority female	100.00	20.99	
DBE total	100.00	45.78	
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00 ****
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00 ****
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00 ****
Nonminority female	0.00	15.80	0.00 ****
DBE total	0.00	36.04	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00 ****
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00 ****
Nonminority female	0.00	24.95	0.00 ****
DBE total	0.00	47.51	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00 **
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	7.37	0.00 ****
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	2.02	0.00 ****
Native American	0.00	0.00	
Minority	0.00	12.70	0.00 ****
Nonminority female	0.00	14.32	0.00 ****
DBE total	0.00	27.02	0.00 ****

Source and Notes: See Table 5.5.

**Table B.21. Industry Group Utilization, Availability, and Disparity Results for SHA CSE Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

Source and Notes: See Table 5.5.

**Table B.22. Industry Group Utilization, Availability, and Disparity Results for SHA CSE Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	12.55	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	9.24	0.00
Native American	0.00	0.80	0.00
Minority	0.00	23.28	0.00 ****
Nonminority female	0.00	24.43	0.00 ****
DBE total	0.00	47.71	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	1.64	0.00
Asian	0.00	12.02	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	23.31	0.00 ****
Nonminority female	0.00	18.16	0.00 ****
DBE total	0.00	41.47	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00 ****
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****

Source and Notes: See Table 5.5.

**Table C.1. Industry Group Utilization, Availability, and Disparity Results for MTA Construction Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	8.63	7.55	
Hispanic	3.79	2.81	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.18	0.00
Minority	12.42	13.32	93.26
Nonminority female	2.48	10.85	22.88
DBE total	14.90	24.17	61.66
<b>Highway, Street, and Bridge Construction (NAICS 2373)</b>			
African American	0.15	8.85	1.65 ****
Hispanic	0.88	3.72	23.71
Asian	0.00	1.06	0.00
Native American	0.22	0.39	57.65
Minority	1.25	14.02	8.94
Nonminority female	0.33	9.88	3.31 **
DBE total	1.58	23.91	6.61 ***
<b>Nonresidential Building Construction (NAICS 2362)</b>			
African American	1.15	11.16	10.33
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	3.42	0.00 ****
Native American	0.00	0.93	0.00
Minority	1.15	20.77	5.55 *
Nonminority female	8.17	12.71	64.26
DBE total	9.32	33.48	27.84
<b>Foundation, Structure, and Building Exterior Contractors (NAICS 2381)</b>			
African American	0.79	8.06	9.80
Hispanic	7.15	3.44	
Asian	10.22	2.61	
Native American	0.00	0.29	0.00
Minority	18.16	14.40	
Nonminority female	0.32	12.72	2.51 ****
DBE total	18.48	27.12	68.14

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	25.88	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	25.88	12.11	
Nonminority female	0.25	10.76	2.32
DBE total	26.13	22.87	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.69	0.00 ****
Hispanic	0.00	4.25	0.00 ****
Asian	67.22	12.13	
Native American	0.00	0.41	0.00 ****
Minority	67.22	25.48	
Nonminority female	14.45	12.94	
DBE total	81.67	38.42	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00
Nonminority female	0.00	15.60	0.00
DBE total	0.00	34.18	0.00
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00
Hispanic	0.43	3.36	12.84
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.43	8.30	5.20
Nonminority female	0.00	13.35	0.00
DBE total	0.43	21.65	1.99
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.94	0.00
Hispanic	0.00	0.91	0.00
Asian	56.61	7.86	
Native American	0.00	0.70	0.00
Minority	56.61	15.40	
Nonminority female	0.00	16.51	0.00 ****
DBE total	56.61	31.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.77	0.00 ****
Hispanic	4.44	3.68	
Asian	0.00	2.45	0.00
Native American	5.08	0.20	
Minority	9.52	12.11	78.62
Nonminority female	18.56	10.87	
DBE total	28.08	22.98	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	30.93	0.24	
Native American	0.00	0.52	0.00
Minority	30.93	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	30.93	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.83	0.00
Hispanic	0.00	1.01	0.00
Asian	0.00	7.59	0.00
Native American	0.00	0.69	0.00
Minority	0.00	15.12	0.00 ****
Nonminority female	0.00	17.88	0.00 ****
DBE total	0.00	33.00	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	87.72	18.44	
DBE total	87.72	33.12	
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.33	0.00
Hispanic	0.00	0.39	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	0.70	0.00
Minority	0.00	14.64	0.00 ****
Nonminority female	75.18	17.35	
DBE total	75.18	31.99	
<b>Other Miscellaneous Manufacturing (NAICS 3399)</b>			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	8.90	24.69	36.05
DBE total	8.90	39.56	22.49 **
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	0.00	14.55	0.00 ****
Hispanic	0.00	1.56	0.00 ****
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	100.00	29.50	
DBE total	100.00	53.41	
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	20.86	14.64	
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	20.86	25.58	81.52
Nonminority female	69.56	11.55	
DBE total	90.41	37.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00
DBE total	100.00	56.71	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	80.96	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	80.96	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	80.96	29.12	
General Freight Trucking (NAICS 4841)			
African American	98.01	23.65	
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	98.01	39.38	
Nonminority female	0.00	10.58	0.00 ****
DBE total	98.01	49.96	
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.10	0.00
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	0.00	23.66	0.00
Nonminority female	0.00	11.44	0.00
DBE total	0.00	35.10	0.00 ****
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 *
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	5.16	13.98	36.88
DBE total	5.16	49.55	10.41 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.19	0.00 ****
Hispanic	0.00	6.48	0.00 ****
Asian	0.00	4.03	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.74	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
DBE total	0.00	36.41	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	99.53	18.20	
DBE total	99.53	33.11	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	1.22	0.00
Hispanic	0.00	1.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.43	0.00
Nonminority female	0.00	15.52	0.00 ****
DBE total	0.00	17.95	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	3.63	0.00
Hispanic	0.00	0.75	0.00
Asian	0.00	7.37	0.00
Native American	0.00	0.73	0.00
Minority	0.00	12.48	0.00
Nonminority female	0.00	17.88	0.00
DBE total	0.00	30.36	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00
Nonminority female	0.00	17.15	0.00
DBE total	0.00	31.89	0.00
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	100.00	8.55	
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	100.00	20.57	
Nonminority female	0.00	17.49	0.00 ****
DBE total	100.00	38.07	
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table C.2. Industry Group Utilization, Availability, and Disparity Results for MTA Construction Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	13.22	7.83	
Hispanic	4.74	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	17.96	13.62	
Nonminority female	3.77	10.99	34.31
DBE total	21.73	24.60	88.32
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.15	8.85	1.66 ***
Hispanic	0.89	3.72	23.83
Asian	0.00	1.06	0.00
Native American	0.23	0.39	57.90
Minority	1.26	14.02	8.98
Nonminority female	0.36	9.88	3.62 *
DBE total	1.62	23.91	6.77 **
Nonresidential Building Construction (NAICS 2362)			
African American	1.61	11.57	13.88
Hispanic	0.00	5.42	0.00 ****
Asian	0.00	3.59	0.00 ****
Native American	0.00	0.97	0.00
Minority	1.61	21.55	7.45 *
Nonminority female	10.86	12.47	87.12
DBE total	12.47	34.02	36.65
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.79	8.06	9.83
Hispanic	6.85	3.43	
Asian	10.25	2.61	
Native American	0.00	0.29	0.00
Minority	17.90	14.40	
Nonminority female	0.32	12.73	2.51 ****
DBE total	18.22	27.13	67.17

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	39.43	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	39.43	12.11	
Nonminority female	0.38	10.77	3.53
DBE total	39.81	22.88	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.70	0.00 ****
Hispanic	0.00	4.24	0.00 ****
Asian	68.85	12.14	
Native American	0.00	0.41	0.00
Minority	68.85	25.49	
Nonminority female	14.42	12.94	
DBE total	83.27	38.43	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00
Nonminority female	0.00	15.60	0.00
DBE total	0.00	34.18	0.00
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00
Hispanic	0.43	3.36	12.83
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.43	8.30	5.20
Nonminority female	0.00	13.35	0.00
DBE total	0.43	21.65	1.99
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.94	0.00
Hispanic	0.00	0.90	0.00
Asian	56.02	7.85	
Native American	0.00	0.70	0.00
Minority	56.02	15.39	
Nonminority female	0.00	16.51	0.00 ****
DBE total	56.02	31.89	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	5.77	0.00 ****
Hispanic	4.49	3.68	
Asian	0.00	2.45	0.00
Native American	5.14	0.20	
Minority	9.63	12.11	79.54
Nonminority female	17.49	10.87	
DBE total	27.12	22.98	
<b>Utility System Construction (NAICS 2371)</b>			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	30.93	0.24	
Native American	0.00	0.52	0.00
Minority	30.93	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	30.93	19.55	
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	5.84	0.00
Hispanic	0.00	1.01	0.00
Asian	0.00	7.59	0.00
Native American	0.00	0.69	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.86	0.00 ****
DBE total	0.00	32.99	0.00 ****
<b>Business Support Services (NAICS 5614)</b>			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	87.72	18.44	
DBE total	87.72	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.33	0.00
Hispanic	0.00	0.39	0.00
Asian	0.00	8.21	0.00
Native American	0.00	0.70	0.00
Minority	0.00	14.64	0.00
Nonminority female	75.77	17.35	
DBE total	75.77	31.99	
<b>Other Miscellaneous Manufacturing (NAICS 3399)</b>			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	9.01	24.69	36.49
DBE total	9.01	39.56	22.77
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	0.00	14.55	0.00 ****
Hispanic	0.00	1.56	0.00
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	100.00	29.50	
DBE total	100.00	53.41	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	20.86	14.64	
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	20.86	25.58	81.52
Nonminority female	69.56	11.55	
DBE total	90.41	37.13	
General Freight Trucking (NAICS 4841)			
African American	98.07	23.65	
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	98.07	39.38	
Nonminority female	0.00	10.58	0.00 ****
DBE total	98.07	49.96	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	80.96	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	80.96	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	80.96	29.12	
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00
DBE total	100.00	56.71	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.10	0.00
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	0.00	23.66	0.00
Nonminority female	0.00	11.44	0.00
DBE total	0.00	35.10	0.00 ****
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 *
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	5.16	13.98	36.91
DBE total	5.16	49.55	10.41 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.19	0.00 ****
Hispanic	0.00	6.48	0.00 ****
Asian	0.00	4.03	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.74	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
DBE total	0.00	36.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.75	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	99.51	18.19	
DBE total	99.51	33.11	
<b>Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)</b>			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00
<b>Nonmetallic Mineral Mining and Quarrying (NAICS 2123)</b>			
African American	0.00	1.22	0.00
Hispanic	0.00	1.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.43	0.00
Nonminority female	0.00	15.52	0.00 ****
DBE total	0.00	17.95	0.00 ****
<b>Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)</b>			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	3.63	0.00
Hispanic	0.00	0.75	0.00
Asian	0.00	7.37	0.00
Native American	0.00	0.73	0.00
Minority	0.00	12.48	0.00
Nonminority female	0.00	17.88	0.00
DBE total	0.00	30.36	0.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	0.00	5.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00
Nonminority female	0.00	17.15	0.00
DBE total	0.00	31.89	0.00
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
<b>Other Professional, Scientific, and Technical Services (NAICS 5419)</b>			
African American	100.00	8.55	
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	100.00	20.57	
Nonminority female	0.00	17.49	0.00 ****
DBE total	100.00	38.07	
<b>Other Chemical Product and Preparation Manufacturing (NAICS 3259)</b>			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table C.3. Industry Group Utilization, Availability, and Disparity Results for MTA Construction Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	8.63	7.55	
Hispanic	3.79	2.81	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.18	0.00
Minority	12.42	13.32	93.26
Nonminority female	2.48	10.85	22.88
DBE total	14.90	24.17	61.66
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.15	8.85	1.65 ****
Hispanic	0.88	3.72	23.71
Asian	0.00	1.06	0.00
Native American	0.22	0.39	57.65
Minority	1.25	14.02	8.94
Nonminority female	0.33	9.88	3.31 **
DBE total	1.58	23.91	6.61 ***
Nonresidential Building Construction (NAICS 2362)			
African American	1.15	11.16	10.33
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	3.42	0.00 ****
Native American	0.00	0.93	0.00
Minority	1.15	20.77	5.55 *
Nonminority female	8.17	12.71	64.26
DBE total	9.32	33.48	27.84
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.79	8.06	9.80
Hispanic	7.15	3.44	
Asian	10.22	2.61	
Native American	0.00	0.29	0.00
Minority	18.16	14.40	
Nonminority female	0.32	12.72	2.51 ****
DBE total	18.48	27.12	68.14

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	25.88	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	25.88	12.11	
Nonminority female	0.25	10.76	2.32
DBE total	26.13	22.87	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.69	0.00 ****
Hispanic	0.00	4.25	0.00 ****
Asian	67.22	12.13	
Native American	0.00	0.41	0.00 ****
Minority	67.22	25.48	
Nonminority female	14.45	12.94	
DBE total	81.67	38.42	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00
Nonminority female	0.00	15.60	0.00
DBE total	0.00	34.18	0.00
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00
Hispanic	0.43	3.36	12.84
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.43	8.30	5.20
Nonminority female	0.00	13.35	0.00
DBE total	0.43	21.65	1.99
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.94	0.00
Hispanic	0.00	0.91	0.00
Asian	56.61	7.86	
Native American	0.00	0.70	0.00
Minority	56.61	15.40	
Nonminority female	0.00	16.51	0.00 ****
DBE total	56.61	31.91	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.77	0.00 ****
Hispanic	4.44	3.68	
Asian	0.00	2.45	0.00
Native American	5.08	0.20	
Minority	9.52	12.11	78.62
Nonminority female	18.56	10.87	
DBE total	28.08	22.98	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	30.93	0.24	
Native American	0.00	0.52	0.00
Minority	30.93	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	30.93	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	5.83	0.00
Hispanic	0.00	1.01	0.00
Asian	0.00	7.59	0.00
Native American	0.00	0.69	0.00
Minority	0.00	15.12	0.00 ****
Nonminority female	0.00	17.88	0.00 ****
DBE total	0.00	33.00	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	87.72	18.44	
DBE total	87.72	33.12	
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.33	0.00
Hispanic	0.00	0.39	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	0.70	0.00
Minority	0.00	14.64	0.00 ****
Nonminority female	75.18	17.35	
DBE total	75.18	31.99	
<b>Other Miscellaneous Manufacturing (NAICS 3399)</b>			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	8.90	24.69	36.05
DBE total	8.90	39.56	22.49 **
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	0.00	14.55	0.00 ****
Hispanic	0.00	1.56	0.00 ****
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	100.00	29.50	
DBE total	100.00	53.41	
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	20.86	14.64	
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	20.86	25.58	81.52
Nonminority female	69.56	11.55	
DBE total	90.41	37.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00
DBE total	100.00	56.71	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	80.96	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	80.96	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	80.96	29.12	
General Freight Trucking (NAICS 4841)			
African American	98.01	23.65	
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	98.01	39.38	
Nonminority female	0.00	10.58	0.00 ****
DBE total	98.01	49.96	
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.10	0.00
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	0.00	23.66	0.00
Nonminority female	0.00	11.44	0.00
DBE total	0.00	35.10	0.00 ****
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 *
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	5.16	13.98	36.88
DBE total	5.16	49.55	10.41 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.19	0.00 ****
Hispanic	0.00	6.48	0.00 ****
Asian	0.00	4.03	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.74	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
DBE total	0.00	36.41	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	99.53	18.20	
DBE total	99.53	33.11	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	1.22	0.00
Hispanic	0.00	1.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.43	0.00
Nonminority female	0.00	15.52	0.00 ****
DBE total	0.00	17.95	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	3.63	0.00
Hispanic	0.00	0.75	0.00
Asian	0.00	7.37	0.00
Native American	0.00	0.73	0.00
Minority	0.00	12.48	0.00
Nonminority female	0.00	17.88	0.00
DBE total	0.00	30.36	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00
Nonminority female	0.00	17.15	0.00
DBE total	0.00	31.89	0.00
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	100.00	8.55	
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	100.00	20.57	
Nonminority female	0.00	17.49	0.00 ****
DBE total	100.00	38.07	
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table C.4. Industry Group Utilization, Availability, and Disparity Results for MTA Construction Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	13.22	7.83	
Hispanic	4.74	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	17.96	13.62	
Nonminority female	3.77	10.99	34.31
DBE total	21.73	24.60	88.32
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.15	8.85	1.66 ***
Hispanic	0.89	3.72	23.83
Asian	0.00	1.06	0.00
Native American	0.23	0.39	57.90
Minority	1.26	14.02	8.98
Nonminority female	0.36	9.88	3.62 *
DBE total	1.62	23.91	6.77 **
Nonresidential Building Construction (NAICS 2362)			
African American	1.61	11.57	13.88
Hispanic	0.00	5.42	0.00 ****
Asian	0.00	3.59	0.00 ****
Native American	0.00	0.97	0.00
Minority	1.61	21.55	7.45 *
Nonminority female	10.86	12.47	87.12
DBE total	12.47	34.02	36.65
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.79	8.06	9.83
Hispanic	6.85	3.43	
Asian	10.25	2.61	
Native American	0.00	0.29	0.00
Minority	17.90	14.40	
Nonminority female	0.32	12.73	2.51 ****
DBE total	18.22	27.13	67.17

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	39.43	6.26	
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.68	0.00 ****
Native American	0.00	0.14	0.00
Minority	39.43	12.11	
Nonminority female	0.38	10.77	3.53
DBE total	39.81	22.88	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.70	0.00 ****
Hispanic	0.00	4.24	0.00 ****
Asian	68.85	12.14	
Native American	0.00	0.41	0.00
Minority	68.85	25.49	
Nonminority female	14.42	12.94	
DBE total	83.27	38.43	
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	25.45	0.00 ****
Hispanic	0.00	6.55	0.00 ****
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	38.88	0.00 ****
Nonminority female	0.00	14.00	0.00 ****
DBE total	0.00	52.89	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	7.39	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	9.08	0.00
Native American	0.00	1.73	0.00
Minority	0.00	18.58	0.00
Nonminority female	0.00	15.60	0.00
DBE total	0.00	34.18	0.00
Residential Building Construction (NAICS 2361)			
African American	0.00	4.35	0.00
Hispanic	0.43	3.36	12.83
Asian	0.00	0.38	0.00
Native American	0.00	0.21	0.00
Minority	0.43	8.30	5.20
Nonminority female	0.00	13.35	0.00
DBE total	0.43	21.65	1.99
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.94	0.00
Hispanic	0.00	0.90	0.00
Asian	56.02	7.85	
Native American	0.00	0.70	0.00
Minority	56.02	15.39	
Nonminority female	0.00	16.51	0.00 ****
DBE total	56.02	31.89	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	5.77	0.00 ****
Hispanic	4.49	3.68	
Asian	0.00	2.45	0.00
Native American	5.14	0.20	
Minority	9.63	12.11	79.54
Nonminority female	17.49	10.87	
DBE total	27.12	22.98	
<b>Utility System Construction (NAICS 2371)</b>			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	30.93	0.24	
Native American	0.00	0.52	0.00
Minority	30.93	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	30.93	19.55	
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	5.84	0.00
Hispanic	0.00	1.01	0.00
Asian	0.00	7.59	0.00
Native American	0.00	0.69	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.86	0.00 ****
DBE total	0.00	32.99	0.00 ****
<b>Business Support Services (NAICS 5614)</b>			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ****
Nonminority female	0.00	26.77	0.00 ****
DBE total	0.00	46.76	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	87.72	18.44	
DBE total	87.72	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.33	0.00
Hispanic	0.00	0.39	0.00
Asian	0.00	8.21	0.00
Native American	0.00	0.70	0.00
Minority	0.00	14.64	0.00
Nonminority female	75.77	17.35	
DBE total	75.77	31.99	
<b>Other Miscellaneous Manufacturing (NAICS 3399)</b>			
African American	0.00	5.51	0.00 ****
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00 ****
Nonminority female	9.01	24.69	36.49
DBE total	9.01	39.56	22.77
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	0.00	14.55	0.00 ****
Hispanic	0.00	1.56	0.00
Asian	0.00	7.48	0.00 ****
Native American	0.00	0.32	0.00
Minority	0.00	23.91	0.00 ****
Nonminority female	100.00	29.50	
DBE total	100.00	53.41	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	20.86	14.64	
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	20.86	25.58	81.52
Nonminority female	69.56	11.55	
DBE total	90.41	37.13	
General Freight Trucking (NAICS 4841)			
African American	98.07	23.65	
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	98.07	39.38	
Nonminority female	0.00	10.58	0.00 ****
DBE total	98.07	49.96	
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	80.96	7.84	
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	80.96	17.62	
Nonminority female	0.00	11.50	0.00 ****
DBE total	80.96	29.12	
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	100.00	22.33	
Hispanic	0.00	4.17	0.00
Asian	0.00	11.27	0.00
Native American	0.00	1.67	0.00
Minority	100.00	39.43	
Nonminority female	0.00	17.28	0.00
DBE total	100.00	56.71	
Lessors of Real Estate (NAICS 5311)			
African American	0.00	14.10	0.00
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	0.00	23.66	0.00
Nonminority female	0.00	11.44	0.00
DBE total	0.00	35.10	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware Manufacturing (NAICS 3325)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.94	0.00
Native American	0.00	2.37	0.00
Minority	0.00	18.06	0.00
Nonminority female	0.00	13.10	0.00
DBE total	0.00	31.16	0.00
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 *
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	5.16	13.98	36.91
DBE total	5.16	49.55	10.41 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.19	0.00 ****
Hispanic	0.00	6.48	0.00 ****
Asian	0.00	4.03	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	24.74	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
DBE total	0.00	36.41	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.75	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	99.51	18.19	
DBE total	99.51	33.11	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	1.22	0.00
Hispanic	0.00	1.22	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.43	0.00
Nonminority female	0.00	15.52	0.00 ****
DBE total	0.00	17.95	0.00 ****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.08	0.00
Hispanic	0.00	0.32	0.00
Asian	0.00	9.39	0.00
Native American	0.00	2.55	0.00
Minority	0.00	20.34	0.00
Nonminority female	0.00	18.61	0.00
DBE total	0.00	38.95	0.00
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	3.63	0.00
Hispanic	0.00	0.75	0.00
Asian	0.00	7.37	0.00
Native American	0.00	0.73	0.00
Minority	0.00	12.48	0.00
Nonminority female	0.00	17.88	0.00
DBE total	0.00	30.36	0.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	7.12	0.00
Hispanic	0.00	1.31	0.00
Asian	0.00	8.50	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.19	0.00
Nonminority female	100.00	15.30	
DBE total	100.00	34.49	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	100.00	11.02	
Hispanic	0.00	0.36	0.00
Asian	0.00	8.44	0.00 ****
Native American	0.00	0.61	0.00
Minority	100.00	20.43	
Nonminority female	0.00	18.35	0.00 ****
DBE total	100.00	38.78	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00
Nonminority female	0.00	17.15	0.00
DBE total	0.00	31.89	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	100.00	8.55	
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	100.00	20.57	
Nonminority female	0.00	17.49	0.00 ****
DBE total	100.00	38.07	
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00 ****
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	6.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.34	0.00
Native American	0.00	2.43	0.00
Minority	0.00	17.14	0.00 ****
Nonminority female	0.00	19.53	0.00 ****
DBE total	0.00	36.67	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****

Source and Notes: See Table 5.5.

**Table C.5. Industry Group Utilization, Availability, and Disparity Results for MTA AE-CRS Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.86	8.65	33.02 *
Hispanic	0.71	4.25	16.68 ***
Asian	9.64	11.98	80.41
Native American	0.00	0.40	0.00 ****
Minority	13.20	25.28	52.23 ***
Nonminority female	3.85	13.18	29.21 ***
DBE total	17.05	38.46	44.34 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.94	16.09	30.70
Hispanic	0.13	2.16	5.93 ***
Asian	3.72	7.38	50.40
Native American	0.00	0.33	0.00
Minority	8.79	25.95	33.86 *
Nonminority female	16.31	27.63	59.05
DBE total	25.10	53.58	46.85 ***
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.61	0.00 ****
Hispanic	0.00	4.05	0.00 *
Asian	0.55	15.75	3.52 ***
Native American	0.00	0.63	0.00
Minority	0.55	36.05	1.54 ****
Nonminority female	1.66	13.98	11.87
DBE total	2.21	50.03	4.43 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	100.00	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	100.00	13.72	
Nonminority female	0.00	11.03	0.00 ****
DBE total	100.00	24.75	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	25.95	10.04	
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	7.26	0.00 ****
Native American	0.00	0.19	0.00
Minority	25.95	20.81	
Nonminority female	74.05	24.77	
DBE total	100.00	45.58	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.79	0.00 ****
Hispanic	0.00	1.99	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.13	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	0.00	33.74	0.00 ****
DBE total	0.00	54.22	0.00 ****
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	8.64	0.00
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	0.00	18.95	0.00 ****
DBE total	0.00	41.29	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	100.00	7.77	
Native American	0.00	0.30	0.00
Minority	100.00	30.00	
Nonminority female	0.00	19.44	0.00
DBE total	100.00	49.44	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	0.00	10.13	0.00
DBE total	0.00	19.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.80	0.00 ****
DBE total	0.00	34.47	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00
Nonminority female	0.00	12.26	0.00
DBE total	0.00	57.03	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.46	0.00
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	18.58	0.00 ****
DBE total	0.00	33.33	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00
Nonminority female	0.00	17.41	0.00
DBE total	0.00	42.94	0.00
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.48	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.37	0.00 ****
Native American	0.00	0.17	0.00
Minority	0.00	12.08	0.00 ****
Nonminority female	0.00	11.43	0.00 ****
DBE total	0.00	23.51	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.91	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.44	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	39.12	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00
Nonminority female	0.00	18.26	0.00
DBE total	0.00	24.86	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	100.00	17.64	
DBE total	100.00	31.05	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

Source and Notes: See Table 5.5.

**Table C.6. Industry Group Utilization, Availability, and Disparity Results for MTA AE-CRS Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.99	8.64	11.51 ****
Hispanic	0.94	4.24	22.20
Asian	6.49	11.94	54.34
Native American	0.00	0.39	0.00
Minority	8.43	25.21	33.42 ***
Nonminority female	1.91	13.24	14.42 ****
DBE total	10.34	38.45	26.88 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.91	16.26	30.19
Hispanic	0.21	2.25	9.32
Asian	2.56	7.37	34.81
Native American	0.00	0.33	0.00
Minority	7.68	26.21	29.32
Nonminority female	3.60	27.39	13.13 ***
DBE total	11.28	53.60	21.04 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.59	0.00 ****
Hispanic	0.00	4.08	0.00 *
Asian	0.22	15.63	1.42 ****
Native American	0.00	0.63	0.00
Minority	0.22	35.93	0.62 ****
Nonminority female	1.66	13.98	11.88
DBE total	1.88	49.91	3.77 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	100.00	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	100.00	13.72	
Nonminority female	0.00	11.03	0.00 ****
DBE total	100.00	24.75	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	32.96	10.37	
Hispanic	0.00	3.11	0.00
Asian	0.00	6.99	0.00 ***
Native American	0.00	0.18	0.00
Minority	32.96	20.65	
Nonminority female	67.04	25.68	
DBE total	100.00	46.32	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.79	0.00 ****
Hispanic	0.00	1.99	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.13	0.00
Minority	0.00	20.47	0.00 ****
Nonminority female	0.00	33.74	0.00 ****
DBE total	0.00	54.22	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	0.00	10.13	0.00
DBE total	0.00	19.55	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.81	0.00 ****
DBE total	0.00	34.48	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	100.00	7.77	
Native American	0.00	0.30	0.00
Minority	100.00	30.00	
Nonminority female	0.00	19.44	0.00
DBE total	100.00	49.44	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	25.91	0.00
Hispanic	0.00	7.12	0.00
Asian	0.00	10.78	0.00
Native American	0.00	0.96	0.00
Minority	0.00	44.77	0.00
Nonminority female	0.00	12.26	0.00
DBE total	0.00	57.03	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.46	0.00
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	18.58	0.00 ****
DBE total	0.00	33.33	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	0.00	11.50	0.00 ****
DBE total	0.00	29.12	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	14.90	0.00
Hispanic	0.00	2.74	0.00
Asian	0.00	7.86	0.00
Native American	0.00	0.02	0.00
Minority	0.00	25.53	0.00
Nonminority female	0.00	17.41	0.00
DBE total	0.00	42.94	0.00
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.48	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.37	0.00 ****
Native American	0.00	0.17	0.00
Minority	0.00	12.08	0.00 ****
Nonminority female	0.00	11.43	0.00 ****
DBE total	0.00	23.51	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.83	0.00 ****
Nonminority female	0.00	15.07	0.00 ****
DBE total	0.00	29.90	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.91	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.60	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	14.22	0.00 ****
Nonminority female	0.00	17.22	0.00 ****
DBE total	0.00	31.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Material and Supplies Dealers (NAICS 4441)</b>			
African American	0.00	9.32	0.00
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00 ****
Nonminority female	0.00	20.60	0.00 ****
DBE total	0.00	38.42	0.00 ****
<b>Consumer Goods Rental (NAICS 5322)</b>			
African American	0.00	14.42	0.00
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	39.12	0.00 ****
<b>Support Activities for Crop Production (NAICS 1151)</b>			
African American	0.00	3.98	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00
Nonminority female	0.00	18.26	0.00
DBE total	0.00	24.86	0.00
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00
Nonminority female	100.00	17.64	
DBE total	100.00	31.05	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

Source and Notes: See Table 5.5.

**Table C.7. Industry Group Utilization, Availability, and Disparity Results for MTA AE-CRS Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.95	8.65	34.09 *
Hispanic	0.73	4.25	17.22 ***
Asian	9.85	11.99	82.15
Native American	0.00	0.40	0.00 ****
Minority	13.53	25.28	53.51 ***
Nonminority female	3.96	13.18	30.04 ***
DBE total	17.49	38.46	45.47 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.96	16.08	30.83
Hispanic	0.13	2.16	6.06 ***
Asian	2.76	7.38	37.38
Native American	0.00	0.33	0.00
Minority	7.85	25.95	30.25 **
Nonminority female	16.71	27.63	60.50
DBE total	24.56	53.57	45.85 ***
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.61	0.00 ****
Hispanic	0.00	4.05	0.00 *
Asian	0.57	15.77	3.64 ***
Native American	0.00	0.63	0.00
Minority	0.57	36.06	1.59 ****
Nonminority female	1.72	13.98	12.28
DBE total	2.29	50.04	4.58 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	100.00	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	100.00	13.72	
Nonminority female	0.00	11.03	0.00 ****
DBE total	100.00	24.75	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	26.03	10.05	
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	7.26	0.00 ****
Native American	0.00	0.19	0.00
Minority	26.03	20.81	
Nonminority female	73.97	24.78	
DBE total	100.00	45.59	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	8.64	0.00
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	0.00	18.95	0.00 ****
DBE total	0.00	41.29	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	100.00	7.77	
Native American	0.00	0.30	0.00
Minority	100.00	30.00	
Nonminority female	0.00	19.44	0.00
DBE total	100.00	49.44	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	0.00	10.13	0.00
DBE total	0.00	19.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.80	0.00 ****
DBE total	0.00	34.47	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.57	0.00 ****
Hispanic	0.00	0.46	0.00
Asian	0.00	7.88	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.75	0.00 ****
Nonminority female	0.00	18.58	0.00 ****
DBE total	0.00	33.33	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****

Source and Notes: See Table 5.5.

**Table C.8. Industry Group Utilization, Availability, and Disparity Results for MTA AE-CRS Contracting (Federally-Assisted) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.04	8.64	12.02 ****
Hispanic	0.98	4.24	23.20
Asian	6.49	11.97	54.20
Native American	0.00	0.39	0.00
Minority	8.51	25.25	33.71 ***
Nonminority female	1.94	13.20	14.73 ****
DBE total	10.46	38.46	27.19 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.93	16.24	30.37
Hispanic	0.22	2.25	9.67
Asian	0.92	7.38	12.49
Native American	0.00	0.33	0.00
Minority	6.07	26.21	23.17 *
Nonminority female	3.74	27.38	13.67 **
DBE total	9.82	53.59	18.32 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.60	0.00 ****
Hispanic	0.00	4.08	0.00 *
Asian	0.23	15.64	1.47 ****
Native American	0.00	0.63	0.00
Minority	0.23	35.94	0.64 ****
Nonminority female	1.72	13.98	12.29
DBE total	1.95	49.92	3.90 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	7.93	0.00 ****
Hispanic	100.00	2.82	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.20	0.00
Minority	100.00	13.72	
Nonminority female	0.00	11.03	0.00 ****
DBE total	100.00	24.75	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	33.10	10.38	
Hispanic	0.00	3.11	0.00
Asian	0.00	6.98	0.00 ***
Native American	0.00	0.18	0.00
Minority	33.10	20.64	
Nonminority female	66.90	25.70	
DBE total	100.00	46.34	
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	100.00	9.97	
Hispanic	0.00	1.22	0.00
Asian	0.00	12.04	0.00
Native American	0.00	2.38	0.00
Minority	100.00	25.61	
Nonminority female	0.00	14.74	0.00 ****
DBE total	100.00	40.34	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	0.00	10.13	0.00
DBE total	0.00	19.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	9.99	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	11.41	0.00 ****
Native American	0.00	1.89	0.00
Minority	0.00	23.67	0.00 ****
Nonminority female	0.00	10.81	0.00 ****
DBE total	0.00	34.48	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	100.00	7.77	
Native American	0.00	0.30	0.00
Minority	100.00	30.00	
Nonminority female	0.00	19.44	0.00
DBE total	100.00	49.44	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	0.00	18.44	0.00 ****
DBE total	0.00	33.12	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00 ****
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00 ****
DBE total	0.00	33.44	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****

Source and Notes: See Table 5.5.

**Table C.9. Industry Group Utilization, Availability, and Disparity Results for MTA Maintenance Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	80.05	7.88	
Hispanic	0.00	3.21	0.00 ****
Asian	0.00	2.81	0.00 ****
Native American	0.00	0.04	0.00
Minority	80.05	13.94	
Nonminority female	0.00	13.62	0.00 ****
DBE total	80.05	27.56	
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
<b>General Freight Trucking (NAICS 4841)</b>			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	0.00	10.58	0.00 ****
DBE total	0.00	49.96	0.00 ****
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	21.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.02	0.00
Native American	0.00	1.91	0.00
Minority	0.00	30.25	0.00 ****
Nonminority female	0.00	11.87	0.00
DBE total	0.00	42.12	0.00 ****
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	8.30	0.00 ****
Hispanic	83.73	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.73	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.73	31.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	100.00	18.44	
DBE total	100.00	33.12	
Employment Services (NAICS 5613)			
African American	0.00	20.69	0.00 ****
Hispanic	0.00	4.06	0.00
Asian	0.00	4.39	0.00
Native American	0.00	3.70	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	28.67	0.00 ****
DBE total	0.00	61.51	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	7.29	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00 ****
Native American	0.00	3.04	0.00
Minority	0.00	19.03	0.00 ****
Nonminority female	0.00	13.40	0.00 ****
DBE total	0.00	32.43	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	8.64	0.00
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	0.00	18.95	0.00 ****
DBE total	0.00	41.29	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	100.00	14.94	
DBE total	100.00	28.38	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

Source and Notes: See Table 5.5.

**Table C.10. Industry Group Utilization, Availability, and Disparity Results for MTA Maintenance Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	81.09	7.88	
Hispanic	0.00	3.22	0.00 ****
Asian	0.00	2.81	0.00 ****
Native American	0.00	0.04	0.00
Minority	81.09	13.95	
Nonminority female	0.00	13.65	0.00 ****
DBE total	81.09	27.60	
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	21.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.02	0.00
Native American	0.00	1.91	0.00
Minority	0.00	30.25	0.00 ****
Nonminority female	0.00	11.87	0.00
DBE total	0.00	42.12	0.00 ****
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	8.30	0.00 ****
Hispanic	83.91	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.91	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.91	31.55	
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 *
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	0.00	10.58	0.00 ****
DBE total	0.00	49.96	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	100.00	18.44	
DBE total	100.00	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	20.69	0.00 ****
Hispanic	0.00	4.06	0.00
Asian	0.00	4.39	0.00
Native American	0.00	3.70	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	28.67	0.00 ****
DBE total	0.00	61.51	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	7.29	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00 ****
Native American	0.00	3.04	0.00
Minority	0.00	19.03	0.00 ****
Nonminority female	0.00	13.40	0.00 ****
DBE total	0.00	32.43	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	8.64	0.00
Hispanic	0.00	3.35	0.00
Asian	0.00	10.10	0.00
Native American	0.00	0.26	0.00
Minority	0.00	22.35	0.00
Nonminority female	0.00	18.95	0.00
DBE total	0.00	41.29	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	100.00	14.94	
DBE total	100.00	28.38	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

Source and Notes: See Table 5.5.

**Table C.11. Industry Group Utilization, Availability, and Disparity Results for MTA Maintenance Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	80.05	7.88	
Hispanic	0.00	3.21	0.00 ****
Asian	0.00	2.81	0.00 ****
Native American	0.00	0.04	0.00
Minority	80.05	13.94	
Nonminority female	0.00	13.62	0.00 ****
DBE total	80.05	27.56	
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
<b>General Freight Trucking (NAICS 4841)</b>			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	0.00	10.58	0.00 ****
DBE total	0.00	49.96	0.00 ****
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	21.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.02	0.00
Native American	0.00	1.91	0.00
Minority	0.00	30.25	0.00 ****
Nonminority female	0.00	11.87	0.00
DBE total	0.00	42.12	0.00 ****
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	8.30	0.00 ****
Hispanic	83.73	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.73	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.73	31.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****
<b>Highway, Street, and Bridge Construction (NAICS 2373)</b>			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
<b>Investigation and Security Services (NAICS 5616)</b>			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	100.00	18.44	
DBE total	100.00	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	20.69	0.00 ****
Hispanic	0.00	4.06	0.00
Asian	0.00	4.39	0.00
Native American	0.00	3.70	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	28.67	0.00 ****
DBE total	0.00	61.51	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	7.29	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00 ****
Native American	0.00	3.04	0.00
Minority	0.00	19.03	0.00 ****
Nonminority female	0.00	13.40	0.00 ****
DBE total	0.00	32.43	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	100.00	14.94	
DBE total	100.00	28.38	

Source and Notes: See Table 5.5.

**Table C.12. Industry Group Utilization, Availability, and Disparity Results for MTA Maintenance Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.45	0.00 ****
Hispanic	0.00	5.97	0.00
Asian	0.00	4.44	0.00
Native American	0.00	0.08	0.00
Minority	0.00	52.93	0.00 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.00	61.72	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00 ****
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Individual and Family Services (NAICS 6241)			
African American	0.00	7.97	0.00
Hispanic	0.00	0.05	0.00
Asian	0.00	3.88	0.00
Native American	0.00	0.04	0.00
Minority	0.00	11.95	0.00
Nonminority female	0.00	30.27	0.00 ****
DBE total	0.00	42.21	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	81.09	7.88	
Hispanic	0.00	3.22	0.00 ****
Asian	0.00	2.81	0.00 ****
Native American	0.00	0.04	0.00
Minority	81.09	13.95	
Nonminority female	0.00	13.65	0.00 ****
DBE total	81.09	27.60	
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	21.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.02	0.00
Native American	0.00	1.91	0.00
Minority	0.00	30.25	0.00 ****
Nonminority female	0.00	11.87	0.00
DBE total	0.00	42.12	0.00 ****
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	8.30	0.00 ****
Hispanic	83.91	2.79	
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	83.91	19.43	
Nonminority female	0.00	12.12	0.00 ****
DBE total	83.91	31.55	
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 *
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	21.01	0.00 ****
Hispanic	0.00	6.12	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.45	0.00
Minority	0.00	33.06	0.00 ****
Nonminority female	0.00	12.17	0.00 ****
DBE total	0.00	45.23	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	0.00	23.65	0.00 ****
Hispanic	0.00	9.66	0.00
Asian	0.00	5.82	0.00
Native American	0.00	0.25	0.00
Minority	0.00	39.38	0.00 ****
Nonminority female	0.00	10.58	0.00 ****
DBE total	0.00	49.96	0.00 ****
Other Support Services (NAICS 5619)			
African American	0.00	12.16	0.00
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	0.00	18.68	0.00
Nonminority female	0.00	33.75	0.00 ****
DBE total	0.00	52.43	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00 ****
Nonminority female	100.00	18.44	
DBE total	100.00	33.12	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	0.00	20.69	0.00 ****
Hispanic	0.00	4.06	0.00
Asian	0.00	4.39	0.00
Native American	0.00	3.70	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	28.67	0.00 ****
DBE total	0.00	61.51	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	0.00	11.55	0.00 ****
DBE total	0.00	37.13	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	7.29	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.70	0.00 ****
Native American	0.00	3.04	0.00
Minority	0.00	19.03	0.00 ****
Nonminority female	0.00	13.40	0.00 ****
DBE total	0.00	32.43	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	100.00	14.94	
DBE total	100.00	28.38	

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00 ****
DBE total	0.00	17.95	0.00 ****

Source and Notes: See Table 5.5.

**Table C.13. Industry Group Utilization, Availability, and Disparity Results for MTA IT Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.15	0.00 ****
Hispanic	0.00	3.87	0.00 *
Asian	0.00	17.02	0.00 ****
Native American	0.00	0.49	0.00
Minority	0.00	33.53	0.00 ****
Nonminority female	0.00	13.88	0.00 ****
DBE total	0.00	47.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00
Nonminority female	0.00	23.33	0.00
DBE total	0.00	38.44	0.00
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00
Asian	0.00	5.03	0.00
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00
Hispanic	0.00	1.15	0.00
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

Source and Notes: See Table 5.5.

**Table C.14. Industry Group Utilization, Availability, and Disparity Results for MTA IT Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.15	0.00 ****
Hispanic	0.00	3.87	0.00 *
Asian	0.00	17.02	0.00 ****
Native American	0.00	0.49	0.00
Minority	0.00	33.53	0.00 ****
Nonminority female	0.00	13.88	0.00 ****
DBE total	0.00	47.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00
Nonminority female	0.00	23.33	0.00
DBE total	0.00	38.44	0.00
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00
Asian	0.00	5.03	0.00
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00
Hispanic	0.00	1.15	0.00
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

Source and Notes: See Table 5.5.

**Table C.15. Industry Group Utilization, Availability, and Disparity Results for MTA IT Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.00	0.00 ****
Hispanic	0.00	3.77	0.00 *
Asian	0.00	17.61	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	13.84	0.00 ****
DBE total	0.00	46.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00
Nonminority female	0.00	23.33	0.00
DBE total	0.00	38.44	0.00
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00
Asian	0.00	5.03	0.00
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00
Hispanic	0.00	1.15	0.00
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

Source and Notes: See Table 5.5.

**Table C.16. Industry Group Utilization, Availability, and Disparity Results for MTA IT Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.00	0.00 ****
Hispanic	0.00	3.77	0.00 *
Asian	0.00	17.61	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	32.84	0.00 ****
Nonminority female	0.00	13.84	0.00 ****
DBE total	0.00	46.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.98	0.00 ****
Hispanic	0.00	0.90	0.00
Asian	0.00	8.68	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.40	0.00 ****
Nonminority female	0.00	19.86	0.00 ****
DBE total	0.00	35.27	0.00 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	13.43	0.00
Hispanic	0.00	2.50	0.00
Asian	0.00	4.99	0.00
Native American	0.00	1.64	0.00
Minority	0.00	22.56	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	47.51	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00 ****
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.73	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	8.68	0.00
Native American	0.00	0.63	0.00
Minority	0.00	15.11	0.00
Nonminority female	0.00	23.33	0.00
DBE total	0.00	38.44	0.00
Rail Transportation (NAICS 4821)			
African American	0.00	8.30	0.00 ****
Hispanic	0.00	2.79	0.00 ****
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	12.12	0.00 ****
DBE total	0.00	31.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.21	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	8.07	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	14.89	0.00 ****
Nonminority female	0.00	17.90	0.00 ****
DBE total	0.00	32.79	0.00 ****
Employment Services (NAICS 5613)			
African American	0.00	17.19	0.00 ****
Hispanic	0.00	5.86	0.00
Asian	0.00	5.03	0.00
Native American	0.00	0.25	0.00
Minority	0.00	28.33	0.00 ****
Nonminority female	0.00	18.39	0.00 ****
DBE total	0.00	46.72	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.30	0.00
Native American	0.00	2.30	0.00
Minority	0.00	18.51	0.00
Nonminority female	0.00	15.58	0.00
DBE total	0.00	34.08	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.58	0.00
Hispanic	0.00	1.15	0.00
Asian	0.00	8.28	0.00 ****
Native American	0.00	1.08	0.00
Minority	0.00	16.09	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
DBE total	0.00	34.23	0.00 ****
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00 ****
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	10.51	0.00
Hispanic	0.00	2.52	0.00
Asian	0.00	4.50	0.00
Native American	0.00	0.72	0.00
Minority	0.00	18.25	0.00
Nonminority female	0.00	27.99	0.00 ****
DBE total	0.00	46.24	0.00 ****

Source and Notes: See Table 5.5.

**Table C.17. Industry Group Utilization, Availability, and Disparity Results for MTA Services Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.09	8.30	1.10
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.09	19.43	0.48
Nonminority female	0.02	12.12	0.17 **
DBE total	0.11	31.55	0.36
<b>Other Transit and Ground Passenger Transportation (NAICS 4859)</b>			
African American	0.01	31.83	0.04 *
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.01	44.78	0.03 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.01	56.00	0.02 ****
<b>Urban Transit Systems (NAICS 4851)</b>			
African American	0.32	42.76	0.75 **
Hispanic	0.00	5.94	0.00
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	0.32	53.17	0.60 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.32	61.96	0.52 ****
<b>Charter Bus Industry (NAICS 4855)</b>			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.00	0.00 ****
Hispanic	0.00	6.66	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.79	0.10
DBE total	0.01	36.31	0.03 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.92	8.62	33.88 *
Hispanic	1.01	4.27	23.62 *
Asian	6.66	11.92	55.91
Native American	0.00	0.41	0.00 ****
Minority	10.59	25.21	42.01 ****
Nonminority female	39.97	13.32	
DBE total	50.56	38.53	
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.18	16.72	13.04 ****
Hispanic	0.00	2.39	0.00 ****
Asian	4.63	7.32	63.26
Native American	0.00	0.33	0.00
Minority	6.81	26.76	25.45 ***
Nonminority female	5.28	26.98	19.59 ****
DBE total	12.09	53.73	22.50 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	98.11	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	98.11	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	98.11	29.90	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	13.18	19.86	66.36
Hispanic	86.82	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.44	0.00 ****
Hispanic	0.00	5.02	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.00	14.29	0.00 ****
Nonminority female	0.00	10.46	0.00 ****
DBE total	0.00	24.75	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.56	0.00 ****
Hispanic	0.00	3.82	0.00 *
Asian	0.98	17.33	5.68 ***
Native American	0.00	0.47	0.00
Minority	0.98	33.17	2.97 ****
Nonminority female	1.69	13.86	12.18
DBE total	2.67	47.03	5.68 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	2.94	11.27	26.11
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	2.94	17.15	17.16 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	2.94	45.24	6.50 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	90.72	25.34	
Hispanic	0.00	5.67	0.00 ****
Asian	0.00	6.58	0.00 ****
Native American	0.00	0.13	0.00
Minority	90.72	37.72	
Nonminority female	0.00	13.03	0.00 ****
DBE total	90.72	50.75	
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00
DBE total	100.00	52.64	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	11.57	0.00 ****
Hispanic	0.00	2.17	0.00 ****
Asian	0.00	7.01	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	20.83	0.00 ****
Nonminority female	33.26	26.71	
DBE total	33.26	47.54	69.96
Employment Services (NAICS 5613)			
African American	12.11	19.49	62.11
Hispanic	0.00	6.09	0.00
Asian	0.00	6.38	0.00
Native American	0.00	0.43	0.00
Minority	12.11	32.38	37.39
Nonminority female	85.55	18.80	
DBE total	97.66	51.19	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	14.25	15.73	90.60
Hispanic	0.00	6.63	0.00 ****
Asian	0.00	4.60	0.00 ****
Native American	0.00	0.18	0.00
Minority	14.25	27.14	52.51
Nonminority female	0.00	12.43	0.00 ****
DBE total	14.25	39.58	36.01
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00
DBE total	100.00	47.80	
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.39	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.58	0.00 ****
Native American	0.00	0.90	0.00
Minority	0.00	16.15	0.00 ****
Nonminority female	12.57	21.91	57.39
DBE total	12.57	38.06	33.04

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.74	0.00 ****
Hispanic	13.69	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	13.69	12.46	
Nonminority female	3.51	10.45	33.61
DBE total	17.20	22.91	75.07
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	84.84	9.95	
Hispanic	0.00	1.96	0.00
Asian	0.00	9.13	0.00
Native American	0.00	0.25	0.00
Minority	84.84	21.30	
Nonminority female	0.00	25.75	0.00 ****
DBE total	84.84	47.05	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.52	0.00
Asian	0.00	3.84	0.00
Native American	0.00	0.00	
Minority	0.00	29.73	0.00 ****
Nonminority female	0.00	9.09	0.00
DBE total	0.00	38.82	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	
Consumer Goods Rental (NAICS 5322)			
African American	73.40	11.62	
Hispanic	0.00	2.07	0.00
Asian	0.00	5.43	0.00
Native American	0.00	0.00	
Minority	73.40	19.11	
Nonminority female	0.00	23.25	0.00 ****
DBE total	73.40	42.36	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.59	0.00 ****
Hispanic	0.00	2.08	0.00
Asian	0.00	5.67	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.48	0.00 ****
Nonminority female	0.00	32.97	0.00 ****
DBE total	0.00	53.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Information Services (NAICS 5191)			
African American	0.00	11.33	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	6.68	0.00
Native American	0.00	0.00	
Minority	0.00	19.13	0.00
Nonminority female	0.00	29.25	0.00
DBE total	0.00	48.38	0.00
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.37	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.53	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.10	0.00 ****
Nonminority female	0.00	11.10	0.00 ****
DBE total	0.00	23.20	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	3.91	2.33	
Minority	3.91	18.60	20.99 ****
Nonminority female	0.00	9.30	0.00
DBE total	3.91	27.91	13.99 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	3.97	5.55	71.49
Hispanic	0.00	0.68	0.00
Asian	0.00	7.92	0.00 ****
Native American	24.68	0.78	
Minority	28.65	14.93	
Nonminority female	31.87	24.70	
DBE total	60.52	39.62	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00
Nonminority female	0.00	18.77	0.00
DBE total	0.00	56.96	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00
Hispanic	0.00	8.06	0.00
Asian	0.00	6.39	0.00
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00
DBE total	0.00	51.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Material and Supplies Dealers (NAICS 4441)</b>			
African American	0.00	8.23	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	9.95	0.00
Native American	0.00	0.63	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	92.75	21.99	
DBE total	92.75	43.50	
<b>Nonscheduled Air Transportation (NAICS 4812)</b>			
African American	0.00	10.40	0.00
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00
Nonminority female	0.00	12.94	0.00
DBE total	0.00	37.27	0.00 ****
<b>Drycleaning and Laundry Services (NAICS 8123)</b>			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Electric Lighting Equipment Manufacturing (NAICS 3351)</b>			
African American	0.00	9.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.86	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00
Nonminority female	0.00	17.56	0.00
DBE total	0.00	37.00	0.00
<b>Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)</b>			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
<b>Specialized Design Services (NAICS 5414)</b>			
African American	0.00	13.25	0.00
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00
Nonminority female	0.00	39.07	0.00
DBE total	0.00	59.97	0.00 ****
<b>Motion Picture and Video Industries (NAICS 5121)</b>			
African American	49.16	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	49.16	21.41	
Nonminority female	0.00	30.78	0.00 ****
DBE total	49.16	52.19	94.18 ****
<b>Other Electrical Equipment and Component Manufacturing (NAICS 3359)</b>			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00
DBE total	0.00	33.29	0.00
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00
DBE total	0.00	47.85	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	6.36	11.50	55.31
DBE total	6.36	29.12	21.84

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	6.51	1.12	
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	6.51	16.41	39.70
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.51	36.93	17.64

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
<b>Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)</b>			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
<b>Foundries (NAICS 3315)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

Source and Notes: See Table 5.5.

**Table C.18. Industry Group Utilization, Availability, and Disparity Results for MTA Services Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.16	8.30	1.97
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.17	19.43	0.85
Nonminority female	0.03	12.12	0.27 *
DBE total	0.20	31.55	0.63
<b>Urban Transit Systems (NAICS 4851)</b>			
African American	0.13	42.76	0.30 ***
Hispanic	0.00	5.94	0.00
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	0.13	53.17	0.24 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.13	61.96	0.21 ****
<b>Charter Bus Industry (NAICS 4855)</b>			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
<b>Other Transit and Ground Passenger Transportation (NAICS 4859)</b>			
African American	0.02	31.83	0.06 ****
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.02	44.78	0.04 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.02	56.00	0.03 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.67	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.78	0.05
DBE total	0.01	36.31	0.02 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.18	8.68	13.61 ***
Hispanic	2.00	4.28	46.72
Asian	12.09	12.10	99.89
Native American	0.00	0.44	0.00
Minority	15.27	25.49	59.88
Nonminority female	30.21	13.10	
DBE total	45.48	38.60	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.15	16.88	0.91 ****
Hispanic	0.00	2.46	0.00 *
Asian	3.61	7.33	49.23
Native American	0.00	0.33	0.00
Minority	3.76	27.01	13.93 **
Nonminority female	1.85	26.75	6.91 ****
DBE total	5.61	53.76	10.44 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.52	0.00 ****
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	14.52	0.00 ****
Nonminority female	0.00	10.37	0.00 ****
DBE total	0.00	24.89	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.43	0.00 ****
Hispanic	0.00	3.81	0.00 *
Asian	0.51	17.39	2.96 ****
Native American	0.00	0.46	0.00
Minority	0.51	33.10	1.56 ****
Nonminority female	1.47	13.85	10.63
DBE total	1.99	46.95	4.23 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	24.65	19.86	
Hispanic	75.35	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	97.71	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	97.71	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	97.71	29.90	
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00
Services to Buildings and Dwellings (NAICS 5617)			
African American	30.38	16.67	
Hispanic	0.00	6.84	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.18	0.00
Minority	30.38	28.49	
Nonminority female	0.00	13.20	0.00 ****
DBE total	30.38	41.70	72.86

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.65	11.27	50.15
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	5.65	17.15	32.96 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	5.65	45.24	12.49 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	87.31	24.65	
Hispanic	0.00	5.49	0.00 ****
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.18	0.00
Minority	87.31	36.93	
Nonminority female	0.00	12.95	0.00 ****
DBE total	87.31	49.88	
Employment Services (NAICS 5613)			
African American	19.63	19.24	
Hispanic	0.00	6.06	0.00
Asian	0.00	6.23	0.00
Native American	0.00	0.41	0.00
Minority	19.63	31.94	61.47
Nonminority female	76.21	18.76	
DBE total	95.84	50.70	
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00
DBE total	100.00	47.80	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.83	0.00 ****
Hispanic	16.98	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	16.98	12.55	
Nonminority female	2.51	10.50	23.90
DBE total	19.48	23.05	84.52
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 *
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.18	0.00 ****
Hispanic	0.00	1.75	0.00
Asian	0.00	6.72	0.00 ***
Native American	0.00	0.04	0.00
Minority	0.00	20.69	0.00 ****
Nonminority female	18.26	27.90	65.42
DBE total	18.26	48.60	37.56 *
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	
Scientific Research and Development Services (NAICS 5417)			
African American	69.34	9.71	
Hispanic	0.00	2.22	0.00
Asian	0.00	9.31	0.00
Native American	0.00	0.25	0.00
Minority	69.34	21.49	
Nonminority female	0.00	24.51	0.00
DBE total	69.34	46.00	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.33	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.60	0.00 ****
Native American	0.00	0.88	0.00
Minority	0.00	16.08	0.00 ****
Nonminority female	37.83	21.94	
DBE total	37.83	38.02	99.50
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.40	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.49	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	0.00	11.19	0.00 ****
DBE total	0.00	23.28	0.00 ****
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	2.14	2.33	92.23
Minority	2.14	18.60	11.53 ****
Nonminority female	0.00	9.30	0.00
DBE total	2.14	27.91	7.69 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.52	0.00
Asian	0.00	3.84	0.00
Native American	0.00	0.00	
Minority	0.00	29.73	0.00 ****
Nonminority female	0.00	9.09	0.00
DBE total	0.00	38.82	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00
Hispanic	0.00	8.06	0.00
Asian	0.00	6.39	0.00
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00
DBE total	0.00	51.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	9.94	0.00
Native American	0.00	0.63	0.00
Minority	0.00	21.50	0.00 ****
Nonminority female	92.88	21.99	
DBE total	92.88	43.49	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00 ****
Consumer Goods Rental (NAICS 5322)			
African American	50.86	12.48	
Hispanic	0.00	3.42	0.00
Asian	0.00	5.19	0.00
Native American	0.00	0.00	
Minority	50.86	21.09	
Nonminority female	0.00	20.28	0.00 ****
DBE total	50.86	41.36	
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.59	0.00 ****
Hispanic	0.00	2.08	0.00
Asian	0.00	5.67	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.48	0.00 ****
Nonminority female	0.00	32.97	0.00 ****
DBE total	0.00	53.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Information Services (NAICS 5191)			
African American	0.00	11.33	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	6.68	0.00
Native American	0.00	0.00	
Minority	0.00	19.13	0.00
Nonminority female	0.00	29.25	0.00
DBE total	0.00	48.38	0.00
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	2.75	5.58	49.28
Hispanic	0.00	0.69	0.00
Asian	0.00	7.91	0.00 ****
Native American	45.63	0.80	
Minority	48.38	14.98	
Nonminority female	23.07	24.70	93.38
DBE total	71.45	39.68	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.86	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.56	0.00 ****
DBE total	0.00	37.00	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00
Nonminority female	0.00	18.77	0.00
DBE total	0.00	56.96	0.00 ****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00
DBE total	0.00	33.29	0.00
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00
DBE total	100.00	52.64	
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00
Nonminority female	0.00	12.94	0.00
DBE total	0.00	37.27	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	3.36	11.50	29.21
DBE total	3.36	29.12	11.53 *

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	13.25	0.00
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00
Nonminority female	0.00	39.07	0.00
DBE total	0.00	59.97	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	49.15	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	49.15	21.41	
Nonminority female	0.00	30.78	0.00 ****
DBE total	49.15	52.19	94.18
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00
DBE total	0.00	47.85	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	6.52	1.12	
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	6.52	16.41	39.73
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.52	36.93	17.65
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00
Nonminority female	0.00	17.64	0.00
DBE total	0.00	31.05	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

Source and Notes: See Table 5.5.

**Table C.19. Industry Group Utilization, Availability, and Disparity Results for MTA Services Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.09	8.30	1.10
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.09	19.43	0.48
Nonminority female	0.02	12.12	0.17 **
DBE total	0.11	31.55	0.36
<b>Other Transit and Ground Passenger Transportation (NAICS 4859)</b>			
African American	0.01	31.83	0.04 *
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.01	44.78	0.03 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.01	56.00	0.02 ****
<b>Urban Transit Systems (NAICS 4851)</b>			
African American	0.32	42.76	0.75 **
Hispanic	0.00	5.94	0.00
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	0.32	53.17	0.60 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.32	61.96	0.52 ****
<b>Charter Bus Industry (NAICS 4855)</b>			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.00	0.00 ****
Hispanic	0.00	6.66	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.79	0.10
DBE total	0.01	36.31	0.03 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.92	8.62	33.88 *
Hispanic	1.01	4.27	23.62 *
Asian	6.66	11.92	55.91
Native American	0.00	0.41	0.00 ****
Minority	10.59	25.21	42.01 ****
Nonminority female	39.97	13.32	
DBE total	50.56	38.53	
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.24	16.72	13.37 ****
Hispanic	0.00	2.41	0.00 ****
Asian	2.23	7.33	30.37
Native American	0.00	0.33	0.00
Minority	4.46	26.80	16.65 ****
Nonminority female	5.42	26.93	20.12 ****
DBE total	9.88	53.73	18.39 ****
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	98.11	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	98.11	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	98.11	29.90	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00 ****
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	13.18	19.86	66.36
Hispanic	86.82	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.44	0.00 ****
Hispanic	0.00	5.02	0.00 ****
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.00	14.29	0.00 ****
Nonminority female	0.00	10.46	0.00 ****
DBE total	0.00	24.75	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.43	0.00 ****
Hispanic	0.00	3.81	0.00 *
Asian	0.00	17.40	0.00 ****
Native American	0.00	0.46	0.00
Minority	0.00	33.09	0.00 ****
Nonminority female	1.74	13.85	12.59
DBE total	1.74	46.95	3.71 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	2.94	11.27	26.11
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	2.94	17.15	17.16 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	2.94	45.24	6.50 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	90.72	25.34	
Hispanic	0.00	5.67	0.00 ****
Asian	0.00	6.58	0.00 ****
Native American	0.00	0.13	0.00
Minority	90.72	37.72	
Nonminority female	0.00	13.03	0.00 ****
DBE total	90.72	50.75	
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00
DBE total	100.00	52.64	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	11.57	0.00 ****
Hispanic	0.00	2.17	0.00 ****
Asian	0.00	7.01	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	20.83	0.00 ****
Nonminority female	33.26	26.71	
DBE total	33.26	47.54	69.96
Employment Services (NAICS 5613)			
African American	12.11	19.49	62.11
Hispanic	0.00	6.09	0.00
Asian	0.00	6.38	0.00
Native American	0.00	0.43	0.00
Minority	12.11	32.38	37.39
Nonminority female	85.55	18.80	
DBE total	97.66	51.19	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	14.54	15.75	92.32
Hispanic	0.00	6.64	0.00 ****
Asian	0.00	4.60	0.00 ****
Native American	0.00	0.18	0.00
Minority	14.54	27.17	53.52
Nonminority female	0.00	12.45	0.00 ****
DBE total	14.54	39.63	36.70
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00
DBE total	100.00	47.80	
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.39	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.58	0.00 ****
Native American	0.00	0.90	0.00
Minority	0.00	16.15	0.00 ****
Nonminority female	12.57	21.91	57.39
DBE total	12.57	38.06	33.04

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.74	0.00 ****
Hispanic	13.69	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	13.69	12.46	
Nonminority female	3.51	10.45	33.61
DBE total	17.20	22.91	75.07
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	95.93	10.12	
Hispanic	0.00	1.78	0.00
Asian	0.00	9.01	0.00
Native American	0.00	0.25	0.00
Minority	95.93	21.17	
Nonminority female	0.00	26.64	0.00 ****
DBE total	95.93	47.81	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.52	0.00
Asian	0.00	3.84	0.00
Native American	0.00	0.00	
Minority	0.00	29.73	0.00 ****
Nonminority female	0.00	9.09	0.00
DBE total	0.00	38.82	0.00 ****
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	
Consumer Goods Rental (NAICS 5322)			
African American	73.40	11.62	
Hispanic	0.00	2.07	0.00
Asian	0.00	5.43	0.00
Native American	0.00	0.00	
Minority	73.40	19.11	
Nonminority female	0.00	23.25	0.00 ****
DBE total	73.40	42.36	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.59	0.00 ****
Hispanic	0.00	2.08	0.00
Asian	0.00	5.67	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.48	0.00 ****
Nonminority female	0.00	32.97	0.00 ****
DBE total	0.00	53.44	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Information Services (NAICS 5191)			
African American	0.00	11.33	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	6.68	0.00
Native American	0.00	0.00	
Minority	0.00	19.13	0.00
Nonminority female	0.00	29.25	0.00
DBE total	0.00	48.38	0.00
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.37	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.53	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.10	0.00 ****
Nonminority female	0.00	11.10	0.00 ****
DBE total	0.00	23.20	0.00 ****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	3.97	5.55	71.49
Hispanic	0.00	0.68	0.00
Asian	0.00	7.92	0.00 ****
Native American	24.68	0.78	
Minority	28.65	14.93	
Nonminority female	31.87	24.70	
DBE total	60.52	39.62	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00
Nonminority female	0.00	18.77	0.00
DBE total	0.00	56.96	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00
Hispanic	0.00	8.06	0.00
Asian	0.00	6.39	0.00
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00
DBE total	0.00	51.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	9.95	0.00
Native American	0.00	0.63	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	92.75	21.99	
DBE total	92.75	43.50	
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00
Nonminority female	0.00	12.94	0.00
DBE total	0.00	37.27	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.86	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00
Nonminority female	0.00	17.56	0.00
DBE total	0.00	37.00	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	13.25	0.00
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00
Nonminority female	0.00	39.07	0.00
DBE total	0.00	59.97	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	49.16	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	49.16	21.41	
Nonminority female	0.00	30.78	0.00 ****
DBE total	49.16	52.19	94.18 ****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00
DBE total	0.00	33.29	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	23.54	2.33	
Minority	23.54	18.60	
Nonminority female	0.00	9.30	0.00
DBE total	23.54	27.91	84.37
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00
DBE total	0.00	47.85	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	6.36	11.50	55.31
DBE total	6.36	29.12	21.84

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	6.51	1.12	
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	6.51	16.41	39.70
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.51	36.93	17.64

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
<b>Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)</b>			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
<b>Foundries (NAICS 3315)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00 ****
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	17.64	0.00 ****
DBE total	0.00	31.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Spring and Wire Product Manufacturing (NAICS 3326)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00

Source and Notes: See Table 5.5.

**Table C.20. Industry Group Utilization, Availability, and Disparity Results for MTA Services Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.16	8.30	1.97
Hispanic	0.00	2.79	0.06
Asian	0.00	8.34	0.00 ****
Native American	0.00	0.00	
Minority	0.17	19.43	0.85
Nonminority female	0.03	12.12	0.27 *
DBE total	0.20	31.55	0.63
<b>Urban Transit Systems (NAICS 4851)</b>			
African American	0.13	42.76	0.30 ***
Hispanic	0.00	5.94	0.00
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	0.13	53.17	0.24 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	0.13	61.96	0.21 ****
<b>Charter Bus Industry (NAICS 4855)</b>			
African American	0.00	27.19	0.00 ****
Hispanic	0.00	7.25	0.00
Asian	0.00	7.69	0.00
Native American	0.00	0.05	0.00
Minority	0.00	42.18	0.00 ****
Nonminority female	0.00	11.71	0.00
DBE total	0.00	53.89	0.00 ****
<b>Other Transit and Ground Passenger Transportation (NAICS 4859)</b>			
African American	0.02	31.83	0.06 ****
Hispanic	0.00	7.15	0.00 ****
Asian	0.00	5.69	0.00
Native American	0.00	0.12	0.00
Minority	0.02	44.78	0.04 ****
Nonminority female	0.00	11.21	0.00 ****
DBE total	0.02	56.00	0.03 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	0.00	11.29	0.00
Hispanic	0.00	2.48	0.00
Asian	0.00	7.07	0.00
Native American	0.00	0.00	
Minority	0.00	20.84	0.00 ****
Nonminority female	0.00	21.93	0.00 ****
DBE total	0.00	42.77	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.67	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.52	0.00 ****
Nonminority female	0.01	11.78	0.05
DBE total	0.01	36.31	0.02 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00 ****
Nonminority female	0.00	16.42	0.00 ****
DBE total	0.00	30.57	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.18	8.68	13.61 ***
Hispanic	2.00	4.28	46.72
Asian	12.09	12.10	99.89
Native American	0.00	0.44	0.00
Minority	15.27	25.49	59.88
Nonminority female	30.21	13.10	
DBE total	45.48	38.60	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.16	16.89	0.92 ****
Hispanic	0.00	2.48	0.00 *
Asian	2.13	7.34	29.05
Native American	0.00	0.34	0.00
Minority	2.29	27.04	8.46 ****
Nonminority female	1.88	26.72	7.02 ****
DBE total	4.16	53.76	7.75 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	11.20	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	5.35	0.00
Native American	0.00	0.00	
Minority	0.00	16.57	0.00
Nonminority female	0.00	24.39	0.00
DBE total	0.00	40.96	0.00
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.52	0.00 ****
Hispanic	0.00	5.25	0.00 ****
Asian	0.00	2.69	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	14.52	0.00 ****
Nonminority female	0.00	10.37	0.00 ****
DBE total	0.00	24.89	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.31	0.00 ****
Hispanic	0.00	3.80	0.00 *
Asian	0.00	17.46	0.00 ****
Native American	0.00	0.46	0.00
Minority	0.00	33.02	0.00 ****
Nonminority female	1.52	13.85	10.96
DBE total	1.52	46.87	3.24 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	100.00	15.00	
DBE total	100.00	41.47	
Taxi and Limousine Service (NAICS 4853)			
African American	24.65	19.86	
Hispanic	75.35	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	97.71	5.89	
Hispanic	0.00	0.15	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.73	0.00
Minority	97.71	14.83	
Nonminority female	0.00	15.07	0.00 ****
DBE total	97.71	29.90	
Traveler Accommodation (NAICS 7211)			
African American	0.00	14.23	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	10.11	0.00
Native American	0.00	0.07	0.00
Minority	0.00	27.03	0.00
Nonminority female	0.00	16.24	0.00
DBE total	0.00	43.27	0.00
Services to Buildings and Dwellings (NAICS 5617)			
African American	30.89	16.71	
Hispanic	0.00	6.85	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.18	0.00
Minority	30.89	28.54	
Nonminority female	0.00	13.23	0.00 ****
DBE total	30.89	41.77	73.95

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.30	0.00
Asian	0.00	3.81	0.00
Native American	0.00	0.80	0.00
Minority	0.00	16.23	0.00
Nonminority female	0.00	32.40	0.00 ****
DBE total	0.00	48.63	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.65	11.27	50.15
Hispanic	0.00	0.64	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.00	
Minority	5.65	17.15	32.96 ****
Nonminority female	0.00	28.09	0.00 ****
DBE total	5.65	45.24	12.49 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	87.31	24.65	
Hispanic	0.00	5.49	0.00 ****
Asian	0.00	6.61	0.00 ****
Native American	0.00	0.18	0.00
Minority	87.31	36.93	
Nonminority female	0.00	12.95	0.00 ****
DBE total	87.31	49.88	
Employment Services (NAICS 5613)			
African American	19.63	19.24	
Hispanic	0.00	6.06	0.00
Asian	0.00	6.23	0.00
Native American	0.00	0.41	0.00
Minority	19.63	31.94	61.47
Nonminority female	76.21	18.76	
DBE total	95.84	50.70	
Direct Selling Establishments (NAICS 4543)			
African American	100.00	7.56	
Hispanic	0.00	2.45	0.00
Asian	0.00	15.18	0.00
Native American	0.00	1.21	0.00
Minority	100.00	26.41	
Nonminority female	0.00	21.39	0.00
DBE total	100.00	47.80	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Natural Gas Distribution (NAICS 2212)			
African American	0.00	4.71	0.00
Hispanic	0.00	2.53	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.23	0.00
Nonminority female	0.00	13.54	0.00
DBE total	0.00	20.77	0.00
Investigation and Security Services (NAICS 5616)			
African American	51.53	17.54	
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00
Native American	0.00	0.86	0.00
Minority	51.53	27.58	
Nonminority female	3.87	22.97	16.83
DBE total	55.40	50.55	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	9.34	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.34	0.00
Minority	0.00	19.77	0.00 ****
Nonminority female	0.00	18.30	0.00 ****
DBE total	0.00	38.08	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.95	31.89	2.97
DBE total	0.95	41.95	2.26

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	100.00	24.09	
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	100.00	38.28	
Nonminority female	0.00	9.84	0.00
DBE total	100.00	48.12	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	6.83	0.00 ****
Hispanic	16.98	2.79	
Asian	0.00	2.77	0.00 ****
Native American	0.00	0.15	0.00
Minority	16.98	12.55	
Nonminority female	2.51	10.50	23.90
DBE total	19.48	23.05	84.52
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	7.12	0.00
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	0.00	19.81	0.00
Nonminority female	0.00	14.10	0.00
DBE total	0.00	33.91	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 *
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	12.18	0.00 ****
Hispanic	0.00	1.75	0.00
Asian	0.00	6.72	0.00 ***
Native American	0.00	0.04	0.00
Minority	0.00	20.69	0.00 ****
Nonminority female	18.26	27.90	65.42
DBE total	18.26	48.60	37.56 *
Couriers and Express Delivery Services (NAICS 4921)			
African American	0.00	15.57	0.00 ****
Hispanic	0.00	3.94	0.00
Asian	0.00	8.93	0.00
Native American	0.00	0.00	
Minority	0.00	28.44	0.00 ****
Nonminority female	0.00	13.73	0.00 ****
DBE total	0.00	42.17	0.00 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	5.24	0.00
Hispanic	0.00	0.92	0.00
Asian	4.20	8.10	51.90
Native American	0.00	0.69	0.00
Minority	4.20	14.94	28.12
Nonminority female	0.00	17.89	0.00 ****
DBE total	4.20	32.83	12.80
Lessors of Real Estate (NAICS 5311)			
African American	100.00	14.10	
Hispanic	0.00	5.36	0.00
Asian	0.00	4.21	0.00
Native American	0.00	0.00	
Minority	100.00	23.66	
Nonminority female	0.00	11.44	0.00
DBE total	100.00	35.10	
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.33	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.60	0.00 ****
Native American	0.00	0.88	0.00
Minority	0.00	16.08	0.00 ****
Nonminority female	37.83	21.94	
DBE total	37.83	38.02	99.50
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.40	0.00 ****
Hispanic	0.00	3.05	0.00 ****
Asian	0.00	2.49	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	12.09	0.00 ****
Nonminority female	0.00	11.19	0.00 ****
DBE total	0.00	23.28	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	94.34	10.10	
Hispanic	0.00	1.81	0.00
Asian	0.00	9.03	0.00
Native American	0.00	0.25	0.00
Minority	94.34	21.19	
Nonminority female	0.00	26.52	0.00
DBE total	94.34	47.70	
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	18.37	0.00 ****
Hispanic	0.00	7.52	0.00
Asian	0.00	3.84	0.00
Native American	0.00	0.00	
Minority	0.00	29.73	0.00 ****
Nonminority female	0.00	9.09	0.00
DBE total	0.00	38.82	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	8.35	0.00 ****
Native American	0.00	0.84	0.00
Minority	0.00	15.14	0.00 ****
Nonminority female	0.00	19.34	0.00 ****
DBE total	0.00	34.47	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	0.00	24.60	0.00
Hispanic	0.00	8.06	0.00
Asian	0.00	6.39	0.00
Native American	0.00	0.12	0.00
Minority	0.00	39.17	0.00 ****
Nonminority female	0.00	12.38	0.00
DBE total	0.00	51.55	0.00 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	8.23	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	9.94	0.00
Native American	0.00	0.63	0.00
Minority	0.00	21.50	0.00 ****
Nonminority female	92.88	21.99	
DBE total	92.88	43.49	
Business Support Services (NAICS 5614)			
African American	0.00	13.44	0.00 ****
Hispanic	0.00	0.73	0.00
Asian	0.00	5.83	0.00
Native American	0.00	0.06	0.00
Minority	0.00	20.06	0.00 ****
Nonminority female	0.00	26.76	0.00 ****
DBE total	0.00	46.82	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	50.86	12.48	
Hispanic	0.00	3.42	0.00
Asian	0.00	5.19	0.00
Native American	0.00	0.00	
Minority	50.86	21.09	
Nonminority female	0.00	20.28	0.00 ****
DBE total	50.86	41.36	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	0.00	12.80	0.00 ****
DBE total	0.00	38.85	0.00 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	14.35	0.00
Hispanic	0.00	6.06	0.00
Asian	0.00	4.73	0.00
Native American	0.00	0.40	0.00
Minority	0.00	25.54	0.00
Nonminority female	0.00	9.32	0.00
DBE total	0.00	34.86	0.00
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.59	0.00 ****
Hispanic	0.00	2.08	0.00
Asian	0.00	5.67	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.48	0.00 ****
Nonminority female	0.00	32.97	0.00 ****
DBE total	0.00	53.44	0.00 ****
Other Information Services (NAICS 5191)			
African American	0.00	11.33	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	6.68	0.00
Native American	0.00	0.00	
Minority	0.00	19.13	0.00
Nonminority female	0.00	29.25	0.00
DBE total	0.00	48.38	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	2.75	5.58	49.28
Hispanic	0.00	0.69	0.00
Asian	0.00	7.91	0.00 ****
Native American	45.63	0.80	
Minority	48.38	14.98	
Nonminority female	23.07	24.70	93.38
DBE total	71.45	39.68	
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.60	0.00 ****
Hispanic	0.00	0.83	0.00
Asian	0.00	8.02	0.00 ****
Native American	0.00	0.68	0.00
Minority	0.00	15.13	0.00 ****
Nonminority female	0.00	17.97	0.00 ****
DBE total	0.00	33.10	0.00 ****
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)			
African American	0.00	7.91	0.00
Hispanic	0.00	0.43	0.00
Asian	0.00	7.89	0.00
Native American	0.00	2.52	0.00
Minority	0.00	18.75	0.00
Nonminority female	0.00	32.46	0.00 ****
DBE total	0.00	51.20	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	9.30	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.86	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.43	0.00 ****
Nonminority female	0.00	17.56	0.00 ****
DBE total	0.00	37.00	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	22.34	11.10	
Hispanic	0.00	0.85	0.00
Asian	0.00	6.86	0.00 ****
Native American	0.00	0.03	0.00
Minority	22.34	18.84	
Nonminority female	0.00	28.62	0.00 ****
DBE total	22.34	47.46	47.07 *
Other Personal Services (NAICS 8129)			
African American	0.00	24.02	0.00
Hispanic	0.00	5.78	0.00
Asian	0.00	8.05	0.00
Native American	0.00	0.33	0.00
Minority	0.00	38.19	0.00
Nonminority female	0.00	18.77	0.00
DBE total	0.00	56.96	0.00 ****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	6.48	0.00
Hispanic	0.00	0.00	
Asian	0.00	13.74	0.00
Native American	0.00	3.18	0.00
Minority	0.00	23.40	0.00
Nonminority female	0.00	8.64	0.00
DBE total	0.00	32.04	0.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.00	5.77	0.00
Hispanic	0.00	0.38	0.00
Asian	0.00	7.04	0.00
Native American	0.00	0.68	0.00
Minority	0.00	13.88	0.00
Nonminority female	0.00	19.41	0.00
DBE total	0.00	33.29	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	9.68	0.00
Hispanic	0.00	0.48	0.00
Asian	100.00	4.01	
Native American	0.00	0.50	0.00
Minority	100.00	14.68	
Nonminority female	0.00	37.97	0.00
DBE total	100.00	52.64	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	23.54	2.33	
Minority	23.54	18.60	
Nonminority female	0.00	9.30	0.00
DBE total	23.54	27.91	84.36
Nonscheduled Air Transportation (NAICS 4812)			
African American	0.00	10.40	0.00
Hispanic	0.00	5.12	0.00
Asian	0.00	8.77	0.00
Native American	0.00	0.04	0.00
Minority	0.00	24.33	0.00
Nonminority female	0.00	12.94	0.00
DBE total	0.00	37.27	0.00 ****
Commercial & Industrial Machinery & Equipment (exc. Automotive & Electronic) Repair & Maintenance (NAICS 8113)			
African American	0.00	7.84	0.00
Hispanic	0.00	1.39	0.00
Asian	0.00	7.18	0.00
Native American	0.00	1.22	0.00
Minority	0.00	17.62	0.00 ****
Nonminority female	3.36	11.50	29.21
DBE total	3.36	29.12	11.53 *

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.67	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.51	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	11.92	0.00 ****
Nonminority female	0.00	18.48	0.00 ****
DBE total	0.00	30.40	0.00 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	5.97	0.00
Hispanic	0.00	1.23	0.00
Asian	0.00	10.19	0.00
Native American	0.00	2.51	0.00
Minority	0.00	19.90	0.00
Nonminority female	0.00	17.95	0.00
DBE total	0.00	37.85	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	13.25	0.00
Hispanic	0.00	2.28	0.00
Asian	0.00	5.24	0.00
Native American	0.00	0.14	0.00
Minority	0.00	20.90	0.00
Nonminority female	0.00	39.07	0.00
DBE total	0.00	59.97	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	49.15	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	49.15	21.41	
Nonminority female	0.00	30.78	0.00 ****
DBE total	49.15	52.19	94.18
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	6.28	0.00
Hispanic	0.00	2.68	0.00
Asian	0.00	16.08	0.00
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00 ****
Nonminority female	0.00	22.52	0.00
DBE total	0.00	47.85	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	7.70	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	9.41	0.00 ****
Native American	0.00	2.79	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	15.41	0.00 ****
DBE total	0.00	35.32	0.00 ****
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	12.15	0.00
Hispanic	0.00	0.30	0.00
Asian	0.00	5.62	0.00
Native American	0.00	0.00	
Minority	0.00	18.08	0.00
Nonminority female	0.00	25.85	0.00
DBE total	0.00	43.94	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	6.52	1.12	
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	6.52	16.41	39.73
Nonminority female	0.00	20.53	0.00 ****
DBE total	6.52	36.93	17.65
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	7.49	0.00
Hispanic	0.00	0.31	0.00
Asian	0.00	8.83	0.00
Native American	0.00	2.41	0.00
Minority	0.00	19.04	0.00
Nonminority female	0.00	15.62	0.00
DBE total	0.00	34.66	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
Other Financial Investment Activities (NAICS 5239)			
African American	100.00	13.18	
Hispanic	0.00	0.28	0.00
Asian	0.00	5.44	0.00
Native American	0.00	0.00	
Minority	100.00	18.90	
Nonminority female	0.00	24.49	0.00
DBE total	100.00	43.39	
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****
Foundries (NAICS 3315)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	9.97	0.00
Hispanic	0.00	0.53	0.00
Asian	0.00	8.90	0.00
Native American	0.00	2.28	0.00
Minority	0.00	21.69	0.00 ****
Nonminority female	0.00	11.24	0.00
DBE total	0.00	32.93	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.30	0.00
Hispanic	0.00	0.15	0.00
Asian	0.00	8.17	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.41	0.00
Nonminority female	0.00	17.64	0.00
DBE total	0.00	31.05	0.00 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.43	0.00 ****
Hispanic	0.00	1.43	0.00
Asian	0.00	9.34	0.00 ****
Native American	0.00	2.01	0.00
Minority	0.00	23.21	0.00 ****
Nonminority female	0.00	16.66	0.00 ****
DBE total	0.00	39.86	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
Other Transportation Equipment Manufacturing (NAICS 3369)			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00
<b>Office Furniture (including Fixtures) Manufacturing (NAICS 3372)</b>			
African American	0.00	6.98	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.30	0.00
Native American	0.00	2.33	0.00
Minority	0.00	18.60	0.00
Nonminority female	0.00	9.30	0.00
DBE total	0.00	27.91	0.00 ****

Source and Notes: See Table 5.5.

**Table C.21. Industry Group Utilization, Availability, and Disparity Results for MTA CSE Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Clothing Stores (NAICS 4481)</b>			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	47.09	12.33	
Native American	0.00	0.42	0.00 ****
Minority	47.09	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	47.09	38.52	
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00
<b>Other Transportation Equipment Manufacturing (NAICS 3369)</b>			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.84	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.59	0.00
Native American	0.00	1.83	0.00
Minority	0.00	17.43	0.00 ****
Nonminority female	0.00	13.53	0.00 ****
DBE total	0.00	30.95	0.00 ****
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00 ****
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00
DBE total	0.00	46.32	0.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****

Source and Notes: See Table 5.5.

**Table C.22. Industry Group Utilization, Availability, and Disparity Results for MTA CSE Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Clothing Stores (NAICS 4481)</b>			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	47.09	12.33	
Native American	0.00	0.42	0.00
Minority	47.09	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	47.09	38.52	
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00
<b>Other Transportation Equipment Manufacturing (NAICS 3369)</b>			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	6.84	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	8.59	0.00
Native American	0.00	1.83	0.00
Minority	0.00	17.43	0.00 ****
Nonminority female	0.00	13.53	0.00 ****
DBE total	0.00	30.95	0.00 ****
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00 ****
Hispanic	0.00	6.68	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.53	0.00 ****
Nonminority female	0.00	11.77	0.00 ****
DBE total	0.00	36.30	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	16.49	0.00 ****
Hispanic	0.00	1.31	0.00
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	24.86	0.00 ****
Nonminority female	0.00	26.53	0.00 ****
DBE total	0.00	51.39	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00
DBE total	0.00	46.32	0.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****

Source and Notes: See Table 5.5.

**Table C.23. Industry Group Utilization, Availability, and Disparity Results for MTA CSE Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Clothing Stores (NAICS 4481)</b>			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****
<b>Other Transportation Equipment Manufacturing (NAICS 3369)</b>			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00 ****
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	7.38	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.32	0.00
Native American	0.00	2.48	0.00
Minority	0.00	19.34	0.00 ****
Nonminority female	0.00	11.84	0.00
DBE total	0.00	31.18	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00
DBE total	0.00	46.32	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****

Source and Notes: See Table 5.5.

**Table C.24. Industry Group Utilization, Availability, and Disparity Results for MTA CSE Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	15.72	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	8.32	0.00 ****
Native American	0.00	2.08	0.00
Minority	0.00	26.12	0.00 ****
Nonminority female	0.00	8.32	0.00 ****
DBE total	0.00	34.44	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	3.00	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	6.46	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	10.06	0.00 ****
Nonminority female	0.00	31.89	0.00 ****
DBE total	0.00	41.95	0.00 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	9.16	0.00
Hispanic	0.00	2.90	0.00
Asian	0.00	4.55	0.00
Native American	0.00	0.91	0.00
Minority	0.00	17.53	0.00 ****
Nonminority female	0.00	19.59	0.00 ****
DBE total	0.00	37.11	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00 ****
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00 ****
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00 ****
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Clothing Stores (NAICS 4481)</b>			
African American	0.00	10.56	0.00
Hispanic	0.00	2.65	0.00
Asian	0.00	6.53	0.00
Native American	0.00	0.90	0.00
Minority	0.00	20.64	0.00
Nonminority female	0.00	27.06	0.00
DBE total	0.00	47.70	0.00
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	8.39	0.00
Hispanic	0.00	0.94	0.00
Asian	0.00	8.66	0.00
Native American	0.00	2.21	0.00
Minority	0.00	20.20	0.00
Nonminority female	0.00	10.03	0.00
DBE total	0.00	30.23	0.00
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****
<b>Other Transportation Equipment Manufacturing (NAICS 3369)</b>			
African American	0.00	6.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.26	0.00
Native American	0.00	2.22	0.00
Minority	0.00	16.73	0.00 ****
Nonminority female	0.00	19.78	0.00 ****
DBE total	0.00	36.51	0.00 ****
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	100.00	12.33	
Native American	0.00	0.42	0.00
Minority	100.00	25.77	
Nonminority female	0.00	12.75	0.00 ****
DBE total	100.00	38.52	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	9.57	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	10.42	0.00
Native American	0.00	2.31	0.00
Minority	0.00	23.23	0.00
Nonminority female	0.00	12.14	0.00
DBE total	0.00	35.37	0.00
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	6.75	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	8.97	0.00
Native American	0.00	2.32	0.00
Minority	0.00	18.64	0.00 ****
Nonminority female	0.00	11.55	0.00
DBE total	0.00	30.18	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	7.38	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	9.32	0.00
Native American	0.00	2.48	0.00
Minority	0.00	19.34	0.00 ****
Nonminority female	0.00	11.84	0.00
DBE total	0.00	31.18	0.00 ****
Other Telecommunications (NAICS 5179)			
African American	0.00	13.09	0.00
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	0.00	19.52	0.00
Nonminority female	0.00	26.80	0.00
DBE total	0.00	46.32	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.00	15.63	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.10	0.00
Native American	0.00	2.18	0.00
Minority	0.00	25.90	0.00 ****
Nonminority female	0.00	19.78	0.00
DBE total	0.00	45.69	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	0.00	22.02	0.00 ****
DBE total	0.00	37.93	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.90	0.00
Hispanic	0.00	0.37	0.00
Asian	0.00	8.33	0.00
Native American	0.00	0.67	0.00
Minority	0.00	17.26	0.00 ****
Nonminority female	0.00	16.86	0.00 ****
DBE total	0.00	34.13	0.00 ****

Source and Notes: See Table 5.5.

**Table D.1. Industry Group Utilization, Availability, and Disparity Results for MAA Construction Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.11	8.85	1.22
Hispanic	0.25	3.72	6.63
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.35	14.02	2.53
Nonminority female	0.06	9.88	0.63 **
DBE total	0.42	23.91	1.74 ***
Building Equipment Contractors (NAICS 2382)			
African American	7.68	7.70	99.73
Hispanic	0.18	2.84	6.35
Asian	0.00	2.77	0.00 **
Native American	0.00	0.18	0.00
Minority	7.86	13.49	58.25
Nonminority female	0.00	11.07	0.00 ****
DBE total	7.86	24.56	32.00 *
Nonresidential Building Construction (NAICS 2362)			
African American	33.05	12.09	
Hispanic	0.00	5.63	0.00 ****
Asian	0.69	3.80	18.21
Native American	0.00	1.03	0.00
Minority	33.74	22.56	
Nonminority female	0.33	12.16	2.74 ****
DBE total	34.07	34.72	98.13
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00
Nonminority female	0.00	19.44	0.00
DBE total	0.00	49.44	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.56	0.00 ****
Hispanic	71.32	5.19	
Asian	4.29	2.65	
Native American	0.00	0.06	0.00
Minority	75.62	14.46	
Nonminority female	11.04	10.39	
DBE total	86.66	24.85	
Residential Building Construction (NAICS 2361)			
African American	0.00	4.12	0.00
Hispanic	0.00	3.55	0.00
Asian	0.00	0.33	0.00
Native American	0.00	0.16	0.00
Minority	0.00	8.16	0.00
Nonminority female	0.00	13.62	0.00 ****
DBE total	0.00	21.78	0.00 ****
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00 ****
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00 ****
Nonminority female	83.72	10.13	
DBE total	83.72	19.55	
Other Specialty Trade Contractors (NAICS 2389)			
African American	43.24	6.36	
Hispanic	0.00	3.04	0.00 ****
Asian	0.00	2.54	0.00
Native American	0.00	0.15	0.00
Minority	43.24	12.10	
Nonminority female	0.00	11.08	0.00 ****
DBE total	43.24	23.18	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.65	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	12.17	0.00 ****
Native American	0.00	0.42	0.00 ***
Minority	0.00	25.52	0.00 ****
Nonminority female	4.35	12.80	33.95
DBE total	4.35	38.32	11.34 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	6.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.46	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.49	0.00 ****
Nonminority female	0.00	14.22	0.00 ****
DBE total	0.00	28.71	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	3.01	5.71	52.73
Hispanic	0.00	3.62	0.00 ****
Asian	0.00	2.47	0.00
Native American	0.00	0.16	0.00
Minority	3.01	11.96	25.19
Nonminority female	77.72	10.93	
DBE total	80.73	22.89	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	79.21	16.41	
Hispanic	11.49	2.33	
Asian	0.00	7.43	0.00 ****
Native American	0.00	0.34	0.00
Minority	90.70	26.51	
Nonminority female	0.00	27.12	0.00 ****
DBE total	90.70	53.63	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	62.98	23.65	
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	62.98	39.38	
Nonminority female	35.90	10.58	
DBE total	98.88	49.96	
Other Support Services (NAICS 5619)			
African American	100.00	12.16	
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	100.00	18.68	
Nonminority female	0.00	33.75	0.00
DBE total	100.00	52.43	
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	5.63	0.00
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00
Nonminority female	0.00	18.44	0.00
DBE total	0.00	33.12	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.70	0.00 ****
Nonminority female	0.88	17.36	5.10 *
DBE total	0.88	32.06	2.76 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	8.00	0.00
Hispanic	0.00	0.02	0.00
Asian	1.31	6.98	18.70
Native American	0.00	0.68	0.00
Minority	1.31	15.69	8.33
Nonminority female	0.00	16.91	0.00 ****
DBE total	1.31	32.60	4.01 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	16.03	0.00
Hispanic	0.00	10.81	0.00
Asian	0.00	9.25	0.00
Native American	0.00	1.33	0.00
Minority	0.00	37.42	0.00 ****
Nonminority female	0.00	19.00	0.00
DBE total	0.00	56.42	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	100.00	29.98	
Hispanic	0.00	8.64	0.00
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	100.00	44.08	
Nonminority female	0.00	11.07	0.00
DBE total	100.00	55.15	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.65	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.60	0.00 ****
Nonminority female	36.38	11.55	
DBE total	36.38	37.15	97.93
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00
DBE total	0.00	17.95	0.00
Home Furnishings Stores (NAICS 4422)			
African American	0.00	7.47	0.00
Hispanic	0.00	2.72	0.00
Asian	0.00	13.88	0.00
Native American	0.00	0.86	0.00
Minority	0.00	24.92	0.00 ****
Nonminority female	61.30	29.76	
DBE total	61.30	54.68	
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	21.56	22.97	93.83
DBE total	21.56	50.55	42.64
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00
Nonminority female	0.00	20.60	0.00
DBE total	0.00	38.42	0.00 ****
Specialized Design Services (NAICS 5414)			
African American	0.00	11.07	0.00
Hispanic	0.00	2.61	0.00
Asian	0.00	3.20	0.00
Native American	0.00	0.00	
Minority	0.00	16.88	0.00 ****
Nonminority female	100.00	46.97	
DBE total	100.00	63.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	10.94	5.22	
Hispanic	0.00	0.00	
Asian	0.00	8.69	0.00
Native American	0.00	0.94	0.00
Minority	10.94	14.85	73.69
Nonminority female	0.00	17.02	0.00 ****
DBE total	10.94	31.87	34.33
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00
Nonminority female	0.00	15.80	0.00
DBE total	0.00	36.04	0.00
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00 ****
Nonminority female	100.00	12.80	
DBE total	100.00	38.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00 ***
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00 ***
Nonminority female	100.00	26.77	
DBE total	100.00	46.76	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	0.00	13.98	0.00 ****
DBE total	0.00	49.55	0.00 ****

Source and Notes: See Table 5.5.

**Table D.2. Industry Group Utilization, Availability, and Disparity Results for MAA Construction Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.09	8.85	0.99 *
Hispanic	0.25	3.72	6.68
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.34	14.02	2.40 *
Nonminority female	0.07	9.88	0.66 **
DBE total	0.40	23.91	1.68 ***
Building Equipment Contractors (NAICS 2382)			
African American	8.68	7.68	
Hispanic	0.20	2.84	7.16
Asian	0.00	2.77	0.00 **
Native American	0.00	0.18	0.00
Minority	8.89	13.47	65.95
Nonminority female	0.00	11.08	0.00 ****
DBE total	8.89	24.55	36.19
Nonresidential Building Construction (NAICS 2362)			
African American	24.13	12.09	
Hispanic	0.00	5.63	0.00 ****
Asian	0.65	3.80	17.15
Native American	0.00	1.03	0.00
Minority	24.78	22.56	
Nonminority female	0.32	12.16	2.62 ****
DBE total	25.10	34.72	72.28
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	15.48	0.00
Hispanic	0.00	6.45	0.00
Asian	0.00	7.77	0.00
Native American	0.00	0.30	0.00
Minority	0.00	30.00	0.00
Nonminority female	0.00	19.44	0.00
DBE total	0.00	49.44	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.57	0.00 **
Hispanic	74.53	5.24	
Asian	3.30	2.64	
Native American	0.00	0.06	0.00
Minority	77.84	14.51	
Nonminority female	10.32	10.37	99.53
DBE total	88.16	24.88	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	84.35	10.13	
DBE total	84.35	19.55	
Other Specialty Trade Contractors (NAICS 2389)			
African American	41.06	6.36	
Hispanic	0.00	3.04	0.00 **
Asian	0.00	2.54	0.00
Native American	0.00	0.15	0.00
Minority	41.06	12.10	
Nonminority female	0.00	11.07	0.00 ****
DBE total	41.06	23.16	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.64	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	12.15	0.00 ****
Native American	0.00	0.41	0.00
Minority	0.00	25.50	0.00 ****
Nonminority female	4.66	12.80	36.43
DBE total	4.66	38.30	12.18 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	6.28	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.46	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.49	0.00 ****
Nonminority female	0.00	14.22	0.00 ****
DBE total	0.00	28.71	0.00 ****
<b>Residential Building Construction (NAICS 2361)</b>			
African American	0.00	4.13	0.00
Hispanic	0.00	3.55	0.00
Asian	0.00	0.33	0.00
Native American	0.00	0.16	0.00
Minority	0.00	8.17	0.00
Nonminority female	0.00	13.62	0.00 ****
DBE total	0.00	21.79	0.00 ****
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	70.42	16.19	
Hispanic	10.76	2.24	
Asian	0.00	7.43	0.00 ****
Native American	0.00	0.34	0.00
Minority	81.18	26.20	
Nonminority female	0.00	27.40	0.00 ****
DBE total	81.18	53.60	
<b>Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)</b>			
African American	0.00	13.83	0.00
Hispanic	0.00	3.03	0.00
Asian	0.00	7.20	0.00
Native American	0.00	0.81	0.00
Minority	0.00	24.86	0.00
Nonminority female	0.00	13.82	0.00
DBE total	0.00	38.68	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	3.47	5.70	60.90
Hispanic	0.00	3.63	0.00 ****
Asian	0.00	2.46	0.00
Native American	0.00	0.17	0.00
Minority	3.47	11.96	29.04
Nonminority female	74.31	10.89	
DBE total	77.78	22.85	
<b>General Freight Trucking (NAICS 4841)</b>			
African American	86.05	23.65	
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	86.05	39.38	
Nonminority female	12.62	10.58	
DBE total	98.67	49.96	
<b>Other Support Services (NAICS 5619)</b>			
African American	100.00	12.16	
Hispanic	0.00	1.34	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.17	0.00
Minority	100.00	18.68	
Nonminority female	0.00	33.75	0.00
DBE total	100.00	52.43	
<b>Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.00	5.63	0.00
Hispanic	0.00	0.41	0.00
Asian	0.00	7.79	0.00
Native American	0.00	0.85	0.00
Minority	0.00	14.68	0.00
Nonminority female	0.00	18.44	0.00
DBE total	0.00	33.12	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	24.09	0.00
Hispanic	0.00	7.98	0.00
Asian	0.00	6.08	0.00
Native American	0.00	0.13	0.00
Minority	0.00	38.28	0.00
Nonminority female	100.00	9.84	
DBE total	100.00	48.12	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.70	0.00 ****
Nonminority female	1.23	17.37	7.09 *
DBE total	1.23	32.07	3.84 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	8.03	0.00
Hispanic	0.00	0.01	0.00
Asian	1.32	6.97	18.99
Native American	0.00	0.68	0.00
Minority	1.32	15.70	8.44
Nonminority female	0.00	16.92	0.00 ****
DBE total	1.32	32.62	4.06 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	5.89	0.00
Hispanic	0.00	0.00	
Asian	0.00	11.07	0.00
Native American	0.00	3.03	0.00
Minority	0.00	19.99	0.00
Nonminority female	100.00	21.52	
DBE total	100.00	41.51	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Remediation and Other Waste Management Services (NAICS 5629)</b>			
African American	0.00	16.03	0.00
Hispanic	0.00	10.81	0.00
Asian	0.00	9.25	0.00
Native American	0.00	1.33	0.00
Minority	0.00	37.42	0.00 ****
Nonminority female	0.00	19.00	0.00
DBE total	0.00	56.42	0.00 ****
<b>Nonmetallic Mineral Mining and Quarrying (NAICS 2123)</b>			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00
DBE total	0.00	17.95	0.00
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	0.00	14.66	0.00 ****
Hispanic	0.00	6.39	0.00 *
Asian	0.00	4.37	0.00 *
Native American	0.00	0.19	0.00
Minority	0.00	25.60	0.00 ****
Nonminority female	22.99	11.56	
DBE total	22.99	37.16	61.87
<b>Home Furnishings Stores (NAICS 4422)</b>			
African American	0.00	7.47	0.00
Hispanic	0.00	2.72	0.00
Asian	0.00	13.88	0.00
Native American	0.00	0.86	0.00
Minority	0.00	24.92	0.00 ****
Nonminority female	61.30	29.76	
DBE total	61.30	54.68	
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	6.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.04	0.00
Native American	0.00	1.54	0.00
Minority	0.00	17.70	0.00
Nonminority female	0.00	14.71	0.00
DBE total	0.00	32.41	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	21.56	22.97	93.83
DBE total	21.56	50.55	42.64
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	5.23	0.00
Hispanic	0.00	0.73	0.00
Asian	0.00	8.70	0.00
Native American	0.00	0.67	0.00
Minority	0.00	15.33	0.00
Nonminority female	0.00	17.71	0.00
DBE total	0.00	33.04	0.00
Specialized Freight Trucking (NAICS 4842)			
African American	100.00	29.98	
Hispanic	0.00	8.64	0.00
Asian	0.00	5.06	0.00
Native American	0.00	0.40	0.00
Minority	100.00	44.08	
Nonminority female	0.00	11.07	0.00
DBE total	100.00	55.15	
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	9.32	0.00
Hispanic	0.00	2.64	0.00
Asian	0.00	4.92	0.00
Native American	0.00	0.94	0.00
Minority	0.00	17.82	0.00
Nonminority female	0.00	20.60	0.00
DBE total	0.00	38.42	0.00 ****
Specialized Design Services (NAICS 5414)			
African American	0.00	11.07	0.00
Hispanic	0.00	2.61	0.00
Asian	0.00	3.20	0.00
Native American	0.00	0.00	
Minority	0.00	16.88	0.00 ****
Nonminority female	100.00	46.97	
DBE total	100.00	63.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	10.94	5.22	
Hispanic	0.00	0.00	
Asian	0.00	8.69	0.00
Native American	0.00	0.94	0.00
Minority	10.94	14.85	73.69
Nonminority female	0.00	17.02	0.00 ****
DBE total	10.94	31.87	34.33
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	7.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.03	0.00
Native American	0.00	2.66	0.00
Minority	0.00	20.23	0.00
Nonminority female	0.00	15.80	0.00
DBE total	0.00	36.04	0.00
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.30	0.00
Hispanic	0.00	0.10	0.00
Asian	0.00	7.66	0.00
Native American	0.00	0.79	0.00
Minority	0.00	13.85	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	34.41	0.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	14.90	0.00
Hispanic	0.00	3.32	0.00
Asian	0.00	7.01	0.00
Native American	0.00	0.82	0.00
Minority	0.00	26.05	0.00
Nonminority female	100.00	12.80	
DBE total	100.00	38.85	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	13.36	0.00
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	0.00	19.99	0.00
Nonminority female	100.00	26.77	
DBE total	100.00	46.76	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	0.00	13.98	0.00 ****
DBE total	0.00	49.55	0.00 ****
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	5.44	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.59	0.00
Native American	0.00	0.71	0.00
Minority	0.00	14.74	0.00
Nonminority female	0.00	17.15	0.00
DBE total	0.00	31.89	0.00

Source and Notes: See Table 5.5.

**Table D.3. Industry Group Utilization, Availability, and Disparity Results for MAA Construction Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.23	7.90	2.97 **
Hispanic	0.00	2.82	0.00 **
Asian	0.00	2.77	0.00 **
Native American	0.00	0.20	0.00
Minority	0.23	13.69	1.72 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.23	24.71	0.95 ****
Residential Building Construction (NAICS 2361)			
African American	0.00	4.12	0.00
Hispanic	0.00	3.55	0.00
Asian	0.00	0.33	0.00
Native American	0.00	0.16	0.00
Minority	0.00	8.16	0.00
Nonminority female	0.00	13.62	0.00 ****
DBE total	0.00	21.78	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.62	0.00 ****
Hispanic	97.54	5.52	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	97.54	14.79	
Nonminority female	0.00	10.27	0.00 ****
DBE total	97.54	25.06	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00 ****
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00 ****
Nonminority female	100.00	10.13	
DBE total	100.00	19.55	
General Freight Trucking (NAICS 4841)			
African American	39.13	23.65	
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	39.13	39.38	99.37
Nonminority female	60.87	10.58	
DBE total	100.00	49.96	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.73	0.00 ****
Hispanic	0.00	3.44	0.00
Asian	0.00	2.54	0.00
Native American	0.00	0.03	0.00
Minority	0.00	11.73	0.00 ****
Nonminority female	51.12	11.14	
DBE total	51.12	22.87	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	8.22	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.71	0.00 ****
Nonminority female	0.00	17.34	0.00 ****
DBE total	0.00	32.05	0.00 ****
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 ****
Asian	0.00	4.37	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	84.52	11.55	
DBE total	84.52	37.13	
<b>Home Furnishings Stores (NAICS 4422)</b>			
African American	0.00	6.72	0.00
Hispanic	0.00	2.45	0.00
Asian	0.00	14.45	0.00
Native American	0.00	0.68	0.00
Minority	0.00	24.30	0.00 ****
Nonminority female	0.00	27.63	0.00 ****
DBE total	0.00	51.94	0.00 ****
<b>Other Specialty Trade Contractors (NAICS 2389)</b>			
African American	0.00	6.25	0.00 ****
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	2.69	0.00
Native American	0.00	0.14	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	0.00	10.74	0.00 ****
DBE total	0.00	22.85	0.00 ****
<b>Architectural, Engineering, and Related Services (NAICS 5413)</b>			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	12.33	0.00 ****
Native American	0.00	0.42	0.00 ***
Minority	0.00	25.77	0.00 ****
Nonminority female	0.00	12.75	0.00 ****
DBE total	0.00	38.52	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00
Hispanic	0.00	0.40	0.00
Asian	100.00	7.73	
Native American	0.00	0.71	0.00
Minority	100.00	14.75	
Nonminority female	0.00	15.98	0.00 ****
DBE total	100.00	30.74	

Source and Notes: See Table 5.5.

**Table D.4. Industry Group Utilization, Availability, and Disparity Results for MAA Construction Contracting (Federally-Assisted) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.23	7.90	2.89 **
Hispanic	0.00	2.82	0.00 **
Asian	0.00	2.77	0.00 **
Native American	0.00	0.20	0.00
Minority	0.23	13.69	1.67 ****
Nonminority female	0.00	11.02	0.00 ****
DBE total	0.23	24.71	0.92 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.62	0.00 ****
Hispanic	97.76	5.52	
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	97.76	14.79	
Nonminority female	0.00	10.27	0.00 ****
DBE total	97.76	25.06	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	100.00	10.13	
DBE total	100.00	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Nonresidential Building Construction (NAICS 2362)</b>			
African American	100.00	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	100.00	22.58	
Nonminority female	0.00	12.16	0.00 ****
DBE total	100.00	34.74	
<b>Residential Building Construction (NAICS 2361)</b>			
African American	0.00	4.12	0.00
Hispanic	0.00	3.55	0.00
Asian	0.00	0.33	0.00
Native American	0.00	0.16	0.00
Minority	0.00	8.16	0.00
Nonminority female	0.00	13.62	0.00 ****
DBE total	0.00	21.78	0.00 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.91	0.00 ****
Nonminority female	0.00	18.20	0.00 ****
DBE total	0.00	33.11	0.00 ****
<b>General Freight Trucking (NAICS 4841)</b>			
African American	68.88	23.65	
Hispanic	0.00	9.66	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	68.88	39.38	
Nonminority female	31.12	10.58	
DBE total	100.00	49.96	
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.41	0.00
Asian	0.00	8.22	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.71	0.00 ****
Nonminority female	0.00	17.34	0.00 ****
DBE total	0.00	32.05	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Finishing Contractors (NAICS 2383)			
African American	0.00	5.68	0.00 ****
Hispanic	0.00	3.40	0.00
Asian	0.00	2.52	0.00
Native American	0.00	0.03	0.00
Minority	0.00	11.62	0.00 ****
Nonminority female	23.64	11.04	
DBE total	23.64	22.66	
Home Furnishings Stores (NAICS 4422)			
African American	0.00	6.72	0.00
Hispanic	0.00	2.45	0.00
Asian	0.00	14.45	0.00
Native American	0.00	0.68	0.00
Minority	0.00	24.30	0.00 ****
Nonminority female	0.00	27.63	0.00 ****
DBE total	0.00	51.94	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.25	0.00 **
Hispanic	0.00	3.02	0.00 **
Asian	0.00	2.69	0.00
Native American	0.00	0.14	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	0.00	10.74	0.00 ****
DBE total	0.00	22.85	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	14.64	0.00 ****
Hispanic	0.00	6.39	0.00 *
Asian	0.00	4.37	0.00 *
Native American	0.00	0.19	0.00
Minority	0.00	25.58	0.00 ****
Nonminority female	100.00	11.55	
DBE total	100.00	37.13	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	12.33	0.00 ****
Native American	0.00	0.42	0.00
Minority	0.00	25.77	0.00 ****
Nonminority female	0.00	12.75	0.00 ****
DBE total	0.00	38.52	0.00 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	5.92	0.00
Hispanic	0.00	0.40	0.00
Asian	100.00	7.73	
Native American	0.00	0.71	0.00
Minority	100.00	14.75	
Nonminority female	0.00	15.98	0.00 ****
DBE total	100.00	30.74	

Source and Notes: See Table 5.5.

**Table D.5. Industry Group Utilization, Availability, and Disparity Results for MAA AE-CRS Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.35	8.64	4.09 ****
Hispanic	5.03	4.25	
Asian	2.58	11.97	21.56
Native American	0.00	0.39	0.00 ***
Minority	7.96	25.25	31.53 **
Nonminority female	3.25	13.22	24.61
DBE total	11.22	38.47	29.16 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.23	15.05	14.84 ***
Hispanic	0.00	1.50	0.00 ****
Asian	2.67	6.76	39.45
Native American	0.00	0.29	0.00
Minority	4.90	23.59	20.77 ***
Nonminority female	9.54	28.12	33.92 **
DBE total	14.44	51.71	27.92 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.28	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.57	0.00 ****
Nonminority female	0.27	13.98	1.94
DBE total	0.27	49.55	0.55 ****
Business Support Services (NAICS 5614)			
African American	94.56	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	94.56	19.99	
Nonminority female	5.44	26.77	20.31
DBE total	100.00	46.76	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	83.89	22.02	
DBE total	83.89	37.93	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	9.61	0.00 ****
Hispanic	0.00	3.57	0.00
Asian	0.00	7.63	0.00 ****
Native American	0.00	0.22	0.00
Minority	0.00	21.03	0.00 ****
Nonminority female	100.00	23.57	
DBE total	100.00	44.60	
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	15.23	0.00
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.39	0.00
Hispanic	0.00	0.63	0.00
Asian	0.00	5.15	0.00
Native American	0.00	0.00	
Minority	0.00	18.18	0.00
Nonminority female	0.00	28.60	0.00
DBE total	0.00	46.78	0.00 ****
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	0.00	15.00	0.00
DBE total	0.00	41.47	0.00
Investigation and Security Services (NAICS 5616)			
African American	2.43	17.56	13.82
Hispanic	0.00	3.27	0.00
Asian	0.00	5.97	0.00 ****
Native American	0.00	0.84	0.00
Minority	2.43	27.64	8.78
Nonminority female	0.00	22.75	0.00 ****
DBE total	2.43	50.39	4.82 ***
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.03	0.00
Hispanic	0.00	0.74	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.00	
Minority	0.00	16.61	0.00
Nonminority female	100.00	30.26	
DBE total	100.00	46.87	
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.31	0.00 ****
Hispanic	0.00	3.03	0.00 ****
Asian	0.00	2.61	0.00
Native American	0.00	0.15	0.00
Minority	0.00	12.10	0.00 ****
Nonminority female	26.00	10.92	
DBE total	26.00	23.02	
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00
DBE total	0.00	46.28	0.00
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	100.00	7.12	
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	100.00	19.81	
Nonminority female	0.00	14.10	0.00
DBE total	100.00	33.91	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00
Nonminority female	0.00	18.26	0.00
DBE total	0.00	24.86	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Consumer Goods Rental (NAICS 5322)			
African American	0.00	14.42	0.00
Hispanic	0.00	6.47	0.00
Asian	0.00	4.66	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	0.00	13.57	0.00
DBE total	0.00	39.12	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00
DBE total	0.00	33.44	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00
Nonminority female	0.00	26.46	0.00
DBE total	0.00	56.94	0.00

Source and Notes: See Table 5.5.

**Table D.6. Industry Group Utilization, Availability, and Disparity Results for MAA AE-CRS Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.08	8.64	0.95 ****
Hispanic	4.08	4.26	95.79
Asian	1.62	12.00	13.51 **
Native American	0.00	0.39	0.00
Minority	5.78	25.29	22.86 ***
Nonminority female	3.20	13.18	24.31
DBE total	8.98	38.47	23.36 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.00	14.38	13.87 ***
Hispanic	0.00	1.28	0.00
Asian	3.35	6.51	51.36
Native American	0.00	0.32	0.00
Minority	5.34	22.49	23.75 **
Nonminority female	10.70	28.33	37.77
DBE total	16.04	50.82	31.56 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.51	0.00 ****
Hispanic	0.00	4.16	0.00 ****
Asian	0.00	15.29	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	35.58	0.00 ****
Nonminority female	0.61	13.98	4.34
DBE total	0.61	49.56	1.22 ****
Business Support Services (NAICS 5614)			
African American	100.00	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	100.00	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	100.00	46.76	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	100.00	19.55	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	10.47	0.00
Hispanic	0.00	3.05	0.00
Asian	0.00	6.91	0.00
Native American	0.00	0.17	0.00
Minority	0.00	20.60	0.00
Nonminority female	100.00	25.95	
DBE total	100.00	46.55	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	50.70	22.02	
DBE total	50.70	37.93	
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	13.71	0.00
Hispanic	0.00	3.81	0.00
Asian	0.00	8.94	0.00
Native American	0.00	0.00	
Minority	0.00	26.46	0.00
Nonminority female	0.00	15.00	0.00
DBE total	0.00	41.47	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	2.43	17.56	13.82
Hispanic	0.00	3.27	0.00
Asian	0.00	5.97	0.00 ****
Native American	0.00	0.84	0.00
Minority	2.43	27.64	8.78
Nonminority female	0.00	22.75	0.00 ****
DBE total	2.43	50.39	4.82 ****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	5.96	0.00 ****
Hispanic	0.00	2.77	0.00 **
Asian	0.00	2.78	0.00 **
Native American	0.00	0.12	0.00
Minority	0.00	11.63	0.00 ****
Nonminority female	0.00	10.07	0.00 ****
DBE total	0.00	21.70	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	8.79	0.00
Hispanic	0.00	2.98	0.00
Asian	0.00	16.48	0.00
Native American	0.00	0.74	0.00
Minority	0.00	28.99	0.00
Nonminority female	0.00	21.54	0.00
DBE total	0.00	50.52	0.00 ****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.13	0.00 ****
Hispanic	0.00	0.68	0.00
Asian	0.00	5.10	0.00
Native American	0.00	0.00	
Minority	0.00	17.91	0.00 ****
Nonminority female	0.00	29.04	0.00 ****
DBE total	0.00	46.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	8.45	0.00
Hispanic	0.00	0.51	0.00
Asian	0.00	5.26	0.00
Native American	0.00	0.23	0.00
Minority	0.00	14.44	0.00
Nonminority female	0.00	31.84	0.00
DBE total	0.00	46.28	0.00
Software Publishers (NAICS 5112)			
African American	0.00	14.20	0.00
Hispanic	0.00	6.26	0.00
Asian	0.00	8.86	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.51	0.00
Nonminority female	0.00	12.35	0.00
DBE total	0.00	41.86	0.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.25	0.00 **
Hispanic	0.00	3.02	0.00 **
Asian	0.00	2.69	0.00
Native American	0.00	0.14	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	0.00	10.74	0.00 ****
DBE total	0.00	22.85	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	100.00	7.12	
Hispanic	0.00	3.92	0.00
Asian	0.00	8.67	0.00
Native American	0.00	0.11	0.00
Minority	100.00	19.81	
Nonminority female	0.00	14.10	0.00
DBE total	100.00	33.91	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	10.19	0.00
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	0.00	21.12	0.00 ****
Nonminority female	0.00	26.97	0.00 ****
DBE total	0.00	48.08	0.00 ****
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.03	0.00
Hispanic	0.00	0.74	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.00	
Minority	0.00	16.61	0.00
Nonminority female	100.00	30.26	
DBE total	100.00	46.87	
Support Activities for Crop Production (NAICS 1151)			
African American	0.00	3.98	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.60	0.00
Nonminority female	0.00	18.26	0.00
DBE total	0.00	24.86	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Educational Support Services (NAICS 6117)			
African American	0.00	19.59	0.00
Hispanic	0.00	2.99	0.00
Asian	0.00	7.32	0.00
Native American	0.00	0.57	0.00
Minority	0.00	30.48	0.00 ****
Nonminority female	0.00	26.46	0.00 ****
DBE total	0.00	56.94	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	10.70	0.00
Native American	0.00	2.26	0.00
Minority	0.00	20.59	0.00 ****
Nonminority female	0.00	12.85	0.00
DBE total	0.00	33.44	0.00 ****
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

Source and Notes: See Table 5.5.

**Table D.7. Industry Group Utilization, Availability, and Disparity Results for MAA AE-CRS Contracting (Federally-Assisted) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.24	8.64	2.77 ****
Hispanic	4.49	4.26	
Asian	2.67	12.02	22.25
Native American	0.00	0.39	0.00 ***
Minority	7.40	25.31	29.25 **
Nonminority female	2.80	13.16	21.25 *
DBE total	10.20	38.47	26.52 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.51	16.35	15.34 ***
Hispanic	0.00	1.86	0.00 ****
Asian	0.00	7.24	0.00 ****
Native American	0.00	0.21	0.00
Minority	2.51	25.66	9.78 ****
Nonminority female	9.62	27.20	35.36 **
DBE total	12.13	52.87	22.94 ****
Business Support Services (NAICS 5614)			
African American	100.00	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	100.00	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	100.00	46.76	
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00 ****
DBE total	100.00	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Printing and Related Support Activities (NAICS 3231)</b>			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	9.40	0.00 ****
Hispanic	0.00	3.70	0.00
Asian	0.00	7.81	0.00 ****
Native American	0.00	0.23	0.00
Minority	0.00	21.14	0.00 ****
Nonminority female	100.00	22.97	
DBE total	100.00	44.11	
<b>Personal and Household Goods Repair and Maintenance (NAICS 8114)</b>			
African American	0.00	15.23	0.00
Hispanic	0.00	3.49	0.00
Asian	0.00	7.60	0.00
Native American	0.00	0.68	0.00
Minority	0.00	27.00	0.00 ****
Nonminority female	0.00	17.12	0.00 ****
DBE total	0.00	44.11	0.00 ****
<b>Investigation and Security Services (NAICS 5616)</b>			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.48	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.37	0.00
Native American	0.00	0.17	0.00
Minority	0.00	12.08	0.00 ****
Nonminority female	100.00	11.43	
DBE total	100.00	23.51	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00
Nonminority female	0.00	28.20	0.00
DBE total	0.00	46.63	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.81	0.00 ****
Hispanic	0.00	3.89	0.00 ****
Asian	0.00	16.39	0.00 ****
Native American	0.00	0.67	0.00
Minority	0.00	36.76	0.00 ****
Nonminority female	100.00	13.98	
DBE total	100.00	50.75	

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	16.29	0.00
Hispanic	0.00	2.88	0.00
Asian	0.00	7.51	0.00
Native American	0.00	0.18	0.00
Minority	0.00	26.86	0.00
Nonminority female	100.00	31.83	
DBE total	100.00	58.69	

Source and Notes: See Table 5.5.

**Table D.8. Industry Group Utilization, Availability, and Disparity Results for MAA AE-CRS Contracting (Federally-Assisted) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.05	8.67	0.62 ****
Hispanic	4.45	4.26	
Asian	1.28	12.11	10.59 ***
Native American	0.00	0.40	0.00
Minority	5.79	25.45	22.73 ***
Nonminority female	2.87	13.04	22.05
DBE total	8.66	38.49	22.50 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	4.21	16.24	25.93
Hispanic	0.00	1.71	0.00
Asian	0.00	7.22	0.00 ****
Native American	0.00	0.17	0.00
Minority	4.21	25.34	16.62 ****
Nonminority female	10.22	27.20	37.56 *
DBE total	14.43	52.54	27.46 ****
Business Support Services (NAICS 5614)			
African American	100.00	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	100.00	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	100.00	46.76	
Utility System Construction (NAICS 2371)			
African American	100.00	6.54	
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	100.00	9.43	
Nonminority female	0.00	10.13	0.00
DBE total	100.00	19.55	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	10.06	0.00
Hispanic	0.00	3.30	0.00
Asian	0.00	7.25	0.00
Native American	0.00	0.19	0.00
Minority	0.00	20.80	0.00
Nonminority female	100.00	24.82	
DBE total	100.00	45.62	
Investigation and Security Services (NAICS 5616)			
African American	0.00	17.54	0.00 ****
Hispanic	0.00	3.16	0.00
Asian	0.00	6.01	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	27.58	0.00 ****
Nonminority female	0.00	22.97	0.00 ****
DBE total	0.00	50.55	0.00 ****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	4.45	0.00
Hispanic	0.00	0.00	
Asian	0.00	8.97	0.00
Native American	0.00	0.74	0.00
Minority	0.00	14.16	0.00
Nonminority female	100.00	15.86	
DBE total	100.00	30.01	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	5.17	0.00
Hispanic	0.00	0.27	0.00
Asian	0.00	9.65	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	15.91	0.00 ****
Nonminority female	100.00	22.02	
DBE total	100.00	37.93	

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	12.63	0.00 ****
Hispanic	0.00	0.59	0.00
Asian	0.00	5.21	0.00
Native American	0.00	0.00	
Minority	0.00	18.43	0.00 ****
Nonminority female	0.00	28.20	0.00 ****
DBE total	0.00	46.63	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	15.81	0.00 ****
Hispanic	0.00	3.89	0.00 ****
Asian	0.00	16.39	0.00 ****
Native American	0.00	0.67	0.00
Minority	0.00	36.76	0.00 ****
Nonminority female	100.00	13.98	
DBE total	100.00	50.75	

Source and Notes: See Table 5.5.

**Table D.9. Industry Group Utilization, Availability, and Disparity Results for MAA Maintenance Contracting (All Funds) (Dollars Awarded)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.03	19.87	0.13 ***
Hispanic	0.00	7.06	0.00 ****
Asian	0.00	5.54	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.03	32.66	0.08 ****
Nonminority female	0.00	17.46	0.00 ****
DBE total	0.03	50.12	0.05 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00
DBE total	0.00	17.95	0.00
Nonresidential Building Construction (NAICS 2362)			
African American	1.55	12.10	12.84
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	1.55	22.58	6.88 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	1.55	34.74	4.47 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	18.39	0.00 ****
Hispanic	0.00	2.04	0.00 ****
Asian	0.00	5.82	0.00 ****
Native American	0.00	0.25	0.00
Minority	0.00	26.50	0.00 ****
Nonminority female	0.00	31.44	0.00 ****
DBE total	0.00	57.95	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	8.17	0.00
Hispanic	0.00	2.81	0.00
Asian	0.00	8.30	0.00
Native American	0.00	0.00	
Minority	0.00	19.28	0.00
Nonminority female	0.00	14.57	0.00
DBE total	0.00	33.85	0.00
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	8.02	18.37	43.63
Hispanic	0.00	7.65	0.00
Asian	0.00	3.65	0.00
Native American	0.00	0.00	
Minority	8.02	29.68	27.01
Nonminority female	0.00	8.24	0.00
DBE total	8.02	37.91	21.14
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.48	0.00 ****
Hispanic	0.00	3.06	0.00 ****
Asian	0.00	2.37	0.00
Native American	0.00	0.17	0.00
Minority	0.00	12.08	0.00 ****
Nonminority female	0.00	11.43	0.00 ****
DBE total	0.00	23.51	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	27.21	19.24	
Hispanic	0.00	3.88	0.00
Asian	0.00	5.89	0.00 ****
Native American	0.00	0.76	0.00
Minority	27.21	29.77	91.39
Nonminority female	0.00	21.40	0.00 ****
DBE total	27.21	51.17	53.17
Office Administrative Services (NAICS 5611)			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00
Building Equipment Contractors (NAICS 2382)			
African American	21.63	7.50	
Hispanic	0.00	2.81	0.00 **
Asian	0.00	2.77	0.00 **
Native American	0.00	0.18	0.00
Minority	21.63	13.26	
Nonminority female	78.21	10.82	
DBE total	99.83	24.09	
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	98.38	23.54	
Hispanic	0.00	9.19	0.00 ****
Asian	0.00	5.86	0.00 ****
Native American	0.00	0.23	0.00
Minority	98.38	38.82	
Nonminority female	0.00	11.39	0.00 ****
DBE total	98.38	50.21	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	10.71	8.51	
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	11.89	0.00 ****
Native American	0.00	0.40	0.00 ***
Minority	10.71	25.10	42.67
Nonminority female	0.00	12.87	0.00 ****
DBE total	10.71	37.97	28.20 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.39	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.92	0.00 ****
Nonminority female	0.00	18.19	0.00 ****
DBE total	0.00	33.11	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	100.00	11.00	
Hispanic	0.00	3.77	0.00
Asian	0.00	17.61	0.00 ****
Native American	0.00	0.45	0.00
Minority	100.00	32.84	
Nonminority female	0.00	13.84	0.00 ****
DBE total	100.00	46.68	
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00 ****
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00 ****
Nonminority female	100.00	10.13	
DBE total	100.00	19.55	
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00
DBE total	0.00	46.14	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.70	0.00
Hispanic	0.00	6.29	0.00
Asian	0.00	4.56	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	100.00	12.26	
DBE total	100.00	37.82	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	0.00	5.56	0.00 ****
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	14.82	0.00 ****
Nonminority female	0.00	10.24	0.00 ****
DBE total	0.00	25.06	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00
DBE total	0.00	27.72	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****

Source and Notes: See Table 5.5.

**Table D.10. Industry Group Utilization, Availability, and Disparity Results for MAA Maintenance Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.03	20.05	0.17 ***
Hispanic	0.00	6.94	0.00 *
Asian	0.00	5.60	0.00 *
Native American	0.00	0.20	0.00
Minority	0.03	32.80	0.11 ****
Nonminority female	0.00	18.10	0.00 ****
DBE total	0.03	50.89	0.07 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	2.56	0.00
Hispanic	0.00	2.56	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.13	0.00
Nonminority female	0.00	12.82	0.00
DBE total	0.00	17.95	0.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	18.45	0.00 ****
Hispanic	0.00	2.06	0.00
Asian	0.00	5.79	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	26.55	0.00 ****
Nonminority female	0.00	31.53	0.00 ****
DBE total	0.00	58.08	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	9.35	18.37	50.91
Hispanic	0.00	7.65	0.00
Asian	0.00	3.65	0.00
Native American	0.00	0.00	
Minority	9.35	29.68	31.51
Nonminority female	0.00	8.24	0.00
DBE total	9.35	37.91	24.67

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	8.17	0.00
Hispanic	0.00	2.81	0.00
Asian	0.00	8.30	0.00
Native American	0.00	0.00	
Minority	0.00	19.28	0.00
Nonminority female	0.00	14.57	0.00
DBE total	0.00	33.85	0.00
Building Equipment Contractors (NAICS 2382)			
African American	24.23	7.45	
Hispanic	0.00	2.81	0.00 **
Asian	0.00	2.77	0.00 **
Native American	0.00	0.18	0.00
Minority	24.23	13.21	
Nonminority female	75.70	10.80	
DBE total	99.93	24.01	
Office Administrative Services (NAICS 5611)			
African American	0.00	17.66	0.00
Hispanic	0.00	5.97	0.00
Asian	0.00	5.56	0.00
Native American	0.00	0.19	0.00
Minority	0.00	29.38	0.00
Nonminority female	0.00	13.57	0.00
DBE total	0.00	42.95	0.00
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.48	0.00 **
Hispanic	0.00	3.06	0.00 **
Asian	0.00	2.37	0.00
Native American	0.00	0.17	0.00
Minority	0.00	12.08	0.00 ****
Nonminority female	0.00	11.43	0.00 ****
DBE total	0.00	23.51	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	65.59	21.65	
Hispanic	0.00	4.89	0.00
Asian	0.00	5.72	0.00 ****
Native American	0.00	0.62	0.00
Minority	65.59	32.87	
Nonminority female	0.00	19.18	0.00 ****
DBE total	65.59	52.05	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.62	8.70	7.11 ***
Hispanic	0.00	4.29	0.00 ****
Asian	0.00	12.27	0.00 ****
Native American	0.00	0.42	0.00
Minority	0.62	25.67	2.41 ****
Nonminority female	0.00	12.77	0.00 ****
DBE total	0.62	38.44	1.61 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.74	0.00 ****
Hispanic	0.00	0.39	0.00
Asian	0.00	8.10	0.00 ****
Native American	0.00	0.69	0.00
Minority	0.00	14.92	0.00 ****
Nonminority female	0.00	18.19	0.00 ****
DBE total	0.00	33.11	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	13.44	12.10	
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	13.44	22.58	59.51
Nonminority female	0.00	12.16	0.00 ****
DBE total	13.44	34.74	38.68

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	3.72	0.00 ****
Asian	0.00	1.06	0.00
Native American	0.00	0.39	0.00
Minority	0.00	14.02	0.00 ****
Nonminority female	0.00	9.88	0.00 ****
DBE total	0.00	23.91	0.00 ****
General Freight Trucking (NAICS 4841)			
African American	91.56	23.42	
Hispanic	0.00	8.71	0.00 ****
Asian	0.00	5.90	0.00 ****
Native American	0.00	0.22	0.00
Minority	91.56	38.25	
Nonminority female	0.00	12.22	0.00 ****
DBE total	91.56	50.48	
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	11.22	0.00
Hispanic	0.00	0.61	0.00
Asian	0.00	3.71	0.00
Native American	0.00	0.35	0.00
Minority	0.00	15.88	0.00
Nonminority female	0.00	30.25	0.00
DBE total	0.00	46.14	0.00
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	28.05	0.00
Hispanic	0.00	5.24	0.00
Asian	0.00	8.45	0.00
Native American	0.00	0.00	
Minority	0.00	41.74	0.00
Nonminority female	0.00	15.20	0.00
DBE total	0.00	56.95	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	6.54	0.00
Hispanic	0.00	2.14	0.00
Asian	0.00	0.24	0.00
Native American	0.00	0.52	0.00
Minority	0.00	9.43	0.00
Nonminority female	100.00	10.13	
DBE total	100.00	19.55	
Computer Systems Design and Related Services (NAICS 5415)			
African American	100.00	11.00	
Hispanic	0.00	3.77	0.00
Asian	0.00	17.61	0.00 ****
Native American	0.00	0.45	0.00
Minority	100.00	32.84	
Nonminority female	0.00	13.84	0.00 ****
DBE total	100.00	46.68	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	14.70	0.00
Hispanic	0.00	6.29	0.00
Asian	0.00	4.56	0.00
Native American	0.00	0.00	
Minority	0.00	25.55	0.00 ****
Nonminority female	100.00	12.26	
DBE total	100.00	37.82	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	0.00	6.63	0.00 ****
Hispanic	0.00	5.56	0.00 ****
Asian	0.00	2.59	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	14.82	0.00 ****
Nonminority female	0.00	10.24	0.00 ****
DBE total	0.00	25.06	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.08	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00
DBE total	0.00	27.72	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	7.45	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	2.66	0.00
Native American	0.00	0.18	0.00
Minority	0.00	13.86	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
DBE total	0.00	24.90	0.00 ****

Source and Notes: See Table 5.5.

**Table D.17. Industry Group Utilization, Availability, and Disparity Results for MAA Services Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Urban Transit Systems (NAICS 4851)			
African American	18.94	42.77	44.29
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	18.94	53.17	35.62 ****
Nonminority female	0.00	8.79	0.00 ****
DBE total	18.94	61.96	30.57 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.85	0.00 ****
Hispanic	0.00	4.04	0.00
Asian	0.00	8.28	0.00 ****
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	0.17	21.43	0.77 ****
DBE total	0.17	42.86	0.39 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	19.86	0.00
Hispanic	100.00	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	1.47	16.49	8.89 ****
Hispanic	0.00	1.50	0.00 ****
Asian	1.17	7.12	16.45
Native American	0.00	0.06	0.00
Minority	2.64	25.17	10.48 ****
Nonminority female	1.91	26.65	7.15 ****
DBE total	4.54	51.82	8.77 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	11.53	0.00 ****
Hispanic	0.00	3.82	0.00
Asian	84.78	17.34	
Native American	0.00	0.47	0.00
Minority	84.78	33.16	
Nonminority female	0.00	13.86	0.00 ****
DBE total	84.78	47.02	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.63	0.00 ****
Hispanic	76.29	4.26	
Asian	0.00	12.01	0.00 ****
Native American	0.00	0.39	0.00 ***
Minority	76.29	25.30	
Nonminority female	15.48	13.16	
DBE total	91.77	38.46	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00
Hispanic	0.00	6.68	0.00
Asian	0.00	3.85	0.00
Native American	0.00	0.00	
Minority	0.00	24.53	0.00
Nonminority female	0.00	11.77	0.00
DBE total	0.00	36.30	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Gasoline Stations (NAICS 4471)</b>			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
<b>Offices of Other Health Practitioners (NAICS 6213)</b>			
African American	0.00	8.21	0.00
Hispanic	100.00	0.54	
Asian	0.00	3.67	0.00
Native American	0.00	0.47	0.00
Minority	100.00	12.89	
Nonminority female	0.00	38.56	0.00 ****
DBE total	100.00	51.45	
<b>Business Support Services (NAICS 5614)</b>			
African American	21.57	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	21.57	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	21.57	46.76	46.12
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	100.00	10.19	
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	100.00	21.12	
Nonminority female	0.00	26.97	0.00 ****
DBE total	100.00	48.08	
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	7.08	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00
DBE total	0.00	27.72	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Motion Picture and Video Industries (NAICS 5121)</b>			
African American	41.71	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	41.71	21.41	
Nonminority female	58.29	30.78	
DBE total	100.00	52.19	
<b>Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)</b>			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
<b>Wired Telecommunications Carriers (NAICS 5171)</b>			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****
<b>Colleges, Universities, and Professional Schools (NAICS 6113)</b>			
African American	0.00	14.80	0.00
Hispanic	0.00	2.44	0.00
Asian	0.00	7.30	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	14.70	0.00
DBE total	0.00	39.23	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00
Nonminority female	0.00	23.24	0.00
DBE total	0.00	48.98	0.00
Specialized Design Services (NAICS 5414)			
African American	94.58	13.07	
Hispanic	0.00	2.18	0.00
Asian	0.00	5.38	0.00
Native American	0.00	0.13	0.00
Minority	94.58	20.76	
Nonminority female	0.00	38.51	0.00 ****
DBE total	94.58	59.27	
Other Telecommunications (NAICS 5179)			
African American	100.00	13.09	
Hispanic	0.00	0.83	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.07	0.00
Minority	100.00	19.52	
Nonminority female	0.00	26.80	0.00
DBE total	100.00	46.32	
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.12	0.00
Hispanic	0.00	3.45	0.00
Asian	0.00	7.48	0.00
Native American	0.00	0.25	0.00
Minority	0.00	29.30	0.00
Nonminority female	100.00	21.50	
DBE total	100.00	50.80	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	10.57	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.06	0.00
Native American	0.00	2.38	0.00
Minority	0.00	20.01	0.00 ****
Nonminority female	0.00	26.60	0.00 ****
DBE total	0.00	46.61	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00
Nonminority female	0.00	24.69	0.00
DBE total	0.00	39.56	0.00
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	8.55	0.00
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	0.00	20.57	0.00
Nonminority female	0.00	17.49	0.00
DBE total	0.00	38.07	0.00 ****

Source and Notes: See Table 5.5.

**Table D.18. Industry Group Utilization, Availability, and Disparity Results for MAA Services Contracting (All Funds) (Dollars Paid)**

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	16.51	42.77	38.60
Hispanic	0.00	5.94	0.00 ****
Asian	0.00	4.39	0.00
Native American	0.00	0.08	0.00
Minority	16.51	53.17	31.04 **
Nonminority female	0.00	8.79	0.00 ****
DBE total	16.51	61.96	26.64 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	19.86	0.00
Hispanic	100.00	8.92	
Asian	0.00	6.31	0.00
Native American	0.00	0.06	0.00
Minority	100.00	35.14	
Nonminority female	0.00	10.85	0.00
DBE total	100.00	46.00	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	7.36	0.00 ****
Hispanic	0.00	3.68	0.00 ****
Asian	0.00	1.88	0.00 ****
Native American	0.00	0.52	0.00
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	14.94	0.00 ****
DBE total	0.00	28.38	0.00 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	12.87	0.00 ****
Hispanic	0.00	3.93	0.00 ****
Asian	46.53	16.65	
Native American	0.00	0.51	0.00
Minority	46.53	33.97	
Nonminority female	0.00	13.90	0.00 ****
DBE total	46.53	47.86	97.22

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	14.01	0.00
Hispanic	0.00	6.68	0.00
Asian	0.00	3.85	0.00
Native American	0.00	0.00	
Minority	0.00	24.53	0.00
Nonminority female	0.00	11.77	0.00
DBE total	0.00	36.30	0.00
Gasoline Stations (NAICS 4471)			
African American	0.00	5.65	0.00
Hispanic	0.00	2.70	0.00
Asian	0.00	17.60	0.00 ****
Native American	0.00	0.19	0.00
Minority	0.00	26.14	0.00 ****
Nonminority female	0.00	20.43	0.00 ****
DBE total	0.00	46.57	0.00 ****
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	8.21	0.00
Hispanic	100.00	0.54	
Asian	0.00	3.67	0.00
Native American	0.00	0.47	0.00
Minority	100.00	12.89	
Nonminority female	0.00	38.56	0.00 ****
DBE total	100.00	51.45	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	8.62	0.00 ****
Hispanic	68.82	4.26	
Asian	0.00	11.97	0.00 ****
Native American	0.00	0.38	0.00
Minority	68.82	25.24	
Nonminority female	17.30	13.21	
DBE total	86.12	38.45	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	12.19	16.56	73.61
Hispanic	0.00	2.23	0.00
Asian	9.73	7.32	
Native American	0.00	0.30	0.00
Minority	21.92	26.41	83.01
Nonminority female	2.46	27.14	9.04 ****
DBE total	24.37	53.55	45.51 ***
<b>Business Support Services (NAICS 5614)</b>			
African American	32.55	13.36	
Hispanic	0.00	0.74	0.00
Asian	0.00	5.84	0.00
Native American	0.00	0.06	0.00
Minority	32.55	19.99	
Nonminority female	0.00	26.77	0.00 ****
DBE total	32.55	46.76	69.61
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.00	7.08	0.00
Hispanic	0.00	0.81	0.00
Asian	0.00	7.45	0.00
Native American	0.00	1.39	0.00
Minority	0.00	16.72	0.00 ****
Nonminority female	0.00	11.00	0.00
DBE total	0.00	27.72	0.00 ****
<b>Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)</b>			
African American	0.00	25.17	0.00
Hispanic	0.00	6.20	0.00
Asian	0.00	6.29	0.00
Native American	0.00	0.00	
Minority	0.00	37.67	0.00
Nonminority female	0.00	12.68	0.00
DBE total	0.00	50.35	0.00 ****
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	100.00	10.19	
Hispanic	0.00	1.72	0.00
Asian	0.00	8.96	0.00
Native American	0.00	0.25	0.00
Minority	100.00	21.12	
Nonminority female	0.00	26.97	0.00 ****
DBE total	100.00	48.08	

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motion Picture and Video Industries (NAICS 5121)			
African American	26.01	13.87	
Hispanic	0.00	1.78	0.00
Asian	0.00	5.53	0.00
Native American	0.00	0.24	0.00
Minority	26.01	21.41	
Nonminority female	73.99	30.78	
DBE total	100.00	52.19	
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.44	0.00
Hispanic	0.00	5.46	0.00
Asian	0.00	5.65	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	16.93	0.00
DBE total	0.00	41.48	0.00 ****
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	14.80	0.00
Hispanic	0.00	2.44	0.00
Asian	0.00	7.30	0.00
Native American	0.00	0.00	
Minority	0.00	24.54	0.00
Nonminority female	0.00	14.70	0.00
DBE total	0.00	39.23	0.00 ****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	7.28	0.00
Hispanic	0.00	2.54	0.00
Asian	0.00	15.40	0.00
Native American	0.00	0.51	0.00
Minority	0.00	25.74	0.00
Nonminority female	0.00	23.24	0.00
DBE total	0.00	48.98	0.00

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	8.84	0.00
Hispanic	0.00	4.04	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.26	0.00
Minority	0.00	21.43	0.00 ****
Nonminority female	0.00	21.41	0.00
DBE total	0.00	42.84	0.00 ****
Specialized Design Services (NAICS 5414)			
African American	94.58	13.07	
Hispanic	0.00	2.18	0.00
Asian	0.00	5.38	0.00
Native American	0.00	0.13	0.00
Minority	94.58	20.76	
Nonminority female	0.00	38.51	0.00 ****
DBE total	94.58	59.27	
Performing Arts Companies (NAICS 7111)			
African American	0.00	18.12	0.00
Hispanic	0.00	3.45	0.00
Asian	0.00	7.48	0.00
Native American	0.00	0.25	0.00
Minority	0.00	29.30	0.00
Nonminority female	100.00	21.50	
DBE total	100.00	50.80	
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	10.22	0.00 ****
Hispanic	0.00	0.02	0.00
Asian	0.00	7.23	0.00
Native American	0.00	2.27	0.00
Minority	0.00	19.74	0.00 ****
Nonminority female	0.00	26.30	0.00 ****
DBE total	0.00	46.04	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.51	0.00
Hispanic	0.00	0.67	0.00
Asian	0.00	7.93	0.00
Native American	0.00	0.77	0.00
Minority	0.00	14.87	0.00
Nonminority female	0.00	24.69	0.00
DBE total	0.00	39.56	0.00

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	8.55	0.00
Hispanic	0.00	3.82	0.00
Asian	0.00	7.95	0.00
Native American	0.00	0.26	0.00
Minority	0.00	20.57	0.00 ****
Nonminority female	0.00	17.49	0.00 ****
DBE total	0.00	38.07	0.00 ****

Source and Notes: See Table 5.5.

**Table D.21. Industry Group Utilization, Availability, and Disparity Results for MAA CSE Contracting (All Funds) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.88	0.00 ****
Hispanic	0.00	0.77	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	1.15	0.00
Minority	0.00	16.01	0.00 ****
Nonminority female	0.00	17.99	0.00 ****
DBE total	0.00	34.01	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	6.38	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	15.74	0.00
Native American	0.00	0.27	0.00
Minority	0.00	25.02	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	45.58	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)</b>			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00
<b>Other Fabricated Metal Product Manufacturing (NAICS 3329)</b>			
African American	0.00	5.40	0.00
Hispanic	0.00	0.00	
Asian	0.00	6.79	0.00
Native American	0.00	2.61	0.00
Minority	0.00	14.80	0.00
Nonminority female	0.00	35.88	0.00
DBE total	0.00	50.68	0.00 ****
<b>Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)</b>			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00
Nonminority female	0.00	16.42	0.00
DBE total	0.00	30.57	0.00
<b>Nonresidential Building Construction (NAICS 2362)</b>			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Scheduled Air Transportation (NAICS 4811)			
African American	0.00	9.65	0.00
Hispanic	0.00	2.82	0.00
Asian	0.00	8.47	0.00
Native American	0.00	0.00	
Minority	0.00	20.94	0.00
Nonminority female	0.00	11.29	0.00
DBE total	0.00	32.24	0.00
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	11.07	0.00
Hispanic	0.00	0.33	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.00	
Minority	0.00	16.90	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	41.84	0.00

Source and Notes: See Table 5.5.

**Table D.22. Industry Group Utilization, Availability, and Disparity Results for MAA CSE Contracting (All Funds) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.88	0.00 ****
Hispanic	0.00	0.77	0.00
Asian	0.00	8.21	0.00 ****
Native American	0.00	1.15	0.00
Minority	0.00	16.01	0.00 ****
Nonminority female	0.00	17.99	0.00 ****
DBE total	0.00	34.01	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	6.38	0.00
Hispanic	0.00	2.63	0.00
Asian	0.00	15.74	0.00
Native American	0.00	0.27	0.00
Minority	0.00	25.02	0.00
Nonminority female	0.00	20.56	0.00
DBE total	0.00	45.58	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	6.31	0.00
Hispanic	0.00	1.12	0.00
Asian	0.00	8.29	0.00
Native American	0.00	0.68	0.00
Minority	0.00	16.41	0.00
Nonminority female	0.00	20.53	0.00 ****
DBE total	0.00	36.93	0.00 ****

NAICS Industry Group / DBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	3.56	0.00
Hispanic	0.00	0.77	0.00
Asian	0.00	7.27	0.00
Native American	0.00	0.71	0.00
Minority	0.00	12.30	0.00
Nonminority female	0.00	17.47	0.00
DBE total	0.00	29.77	0.00
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	5.40	0.00
Hispanic	0.00	0.00	
Asian	0.00	6.79	0.00
Native American	0.00	2.61	0.00
Minority	0.00	14.80	0.00
Nonminority female	0.00	35.88	0.00
DBE total	0.00	50.68	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00
Nonminority female	0.00	16.42	0.00
DBE total	0.00	30.57	0.00
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Scheduled Air Transportation (NAICS 4811)			
African American	0.00	9.65	0.00
Hispanic	0.00	2.82	0.00
Asian	0.00	8.47	0.00
Native American	0.00	0.00	
Minority	0.00	20.94	0.00
Nonminority female	0.00	11.29	0.00
DBE total	0.00	32.24	0.00
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	11.07	0.00
Hispanic	0.00	0.33	0.00
Asian	0.00	5.49	0.00
Native American	0.00	0.00	
Minority	0.00	16.90	0.00
Nonminority female	0.00	24.95	0.00
DBE total	0.00	41.84	0.00

Source and Notes: See Table 5.5.

**Table D.23. Industry Group Utilization, Availability, and Disparity Results for MAA CSE Contracting (Federally-Assisted) (Dollars Awarded)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00
Nonminority female	0.00	16.42	0.00
DBE total	0.00	30.57	0.00
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****

Source and Notes: See Table 5.5.

**Table D.24. Industry Group Utilization, Availability, and Disparity Results for MAA CSE Contracting (Federally-Assisted) (Dollars Paid)**

<b>NAICS Industry Group / DBE Type</b>	<b>Utilization (%)</b>	<b>Availability (%)</b>	<b>Disparity Ratio</b>
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	7.42	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	9.29	0.00
Native American	0.00	0.98	0.00
Minority	0.00	19.38	0.00 ****
Nonminority female	0.00	17.60	0.00 ****
DBE total	0.00	36.98	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	5.93	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	7.34	0.00
Native American	0.00	0.73	0.00
Minority	0.00	14.15	0.00
Nonminority female	0.00	16.42	0.00
DBE total	0.00	30.57	0.00
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.10	0.00 ****
Hispanic	0.00	5.64	0.00 ****
Asian	0.00	3.81	0.00 ****
Native American	0.00	1.03	0.00
Minority	0.00	22.58	0.00 ****
Nonminority female	0.00	12.16	0.00 ****
DBE total	0.00	34.74	0.00 ****

Source and Notes: See Table 5.5.

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# Business Disparities in the Maryland Market Area

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## About the Project Team

**NERA Economic Consulting** is a global firm of experts dedicated to applying economic, finance and quantitative principles to complex business and legal challenges. For over half a century, NERA's economists have been creating strategies, studies, reports, expert testimony and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance and litigation.

NERA's clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world's largest economic consultancies. With its main office in New York City, NERA serves clients from more than 25 offices across North America, Europe and Asia Pacific.

NERA's employment and labor experts advise clients on a wide range of issues both inside and outside the courtroom. We have provided expert testimony on statistical issues both at the class certification phase (on issues of commonality and typicality) and at the liability phase (for class or pattern-and-practice cases). Our experts have extensive experience examining issues of statistical liability in discrimination and other wrongful termination claims. We also provide detailed statistical analyses of workforce composition to identify potential disparities in hiring, layoffs, promotions, pay, and performance assessments, and have conducted studies on labor union issues and on affirmative action programs for historically disadvantaged business enterprises.

NERA Managing Director Dr. Jon Wainwright led the NERA project team for this Study. Dr. Wainwright heads NERA's disparity study practice and is a nationally recognized expert on business discrimination and affirmative action. He has authored books, papers, and numerous research studies on the subject, and has been repeatedly qualified to testify on these and other issues as an expert in state and federal courts. At NERA, Dr. Wainwright directs and conducts economic and statistical studies of discrimination for attorneys, corporations, governments and non-profit organizations. He also directs and conducts research and provides clients with advice on adverse impact and economic damage matters arising from their hiring, performance assessment, compensation, promotion, termination or contracting activities.

## About the Project Team

**SRB Communications** is a State of Maryland certified MBE/WBE led by Dr. Sheila Brooks. SRB, under the leadership of Dr. Sheila Brooks, is an award winning full-service strategic communications agency specializing in multicultural advertising, public relations, media relations and broadcast production. SRB helps clients develop brand identity, positioning and strategies in marketing, outreach, public education and public relations campaigns through integrated media formats in video production, print and digital media. On this project, the SRB team held responsibility for all of the stakeholder and community outreach functions.

**CR Dynamics & Associates, Inc.** is a City of Baltimore and State of Maryland certified MBE owned by Charles and Patricia Ramos. CR Dynamics is one of the top contact/call centers in the United States, providing services to private industry and government agencies. Over the past ten years, their perceptiveness in delivering critical program management supported with high-tech solutions has become invaluable to their clients. CRD provides a variety of services, including provision of help desk services, inbound travel counseling, order taking, reservations and outbound market research survey work. On this project, CRD provided CATI survey services for both the race/gender misclassification survey and the mail survey non-respondent survey.

**1<sup>st</sup> Choice LLC** is a State of Maryland certified MBE/WBE led by Michelle Bell. 1<sup>st</sup> Choice is an award-winning consulting agency with over 13 years of experience providing administrative support to diverse clients from the public, non-profit and private sectors. 1<sup>st</sup> Choice is a nationwide leader in providing high quality administrative labor services that are evaluated and cross-referenced with each project's Statement of Work. 1<sup>st</sup> Choice employees are highly proficient in industry standard information tools and software, and have core competencies across multiple industries. On this project, 1<sup>st</sup> Choice had responsibility for providing temporary personnel to supplement NERA staff for the data collection and processing tasks in the Disparity Study.

**Law Office of Don O'Bannon, P.C.** Attorney Don O'Bannon is a principal in the Law Office of Don T. O'Bannon in Dallas, Texas. He is the former Vice President of Business Diversity and Development for DFW International Airport and past chairman of the Airport Minority Advisory Council. Mr. O'Bannon is a past recipient of the M/WBE Advocate of the Year award from the Fort Worth Metropolitan Chamber of Commerce, the Business Advocate of the Year award from the Dallas-Fort Worth Hispanic Contractors' Association, and the Chairman's Award from the Dallas-Fort Worth Black Contractors' Association. On this project, Mr. O'Bannon provided a review of case law, conducted interviews with public sector personnel and with local business owners and co-drafted selected study recommendations.

**CVV Transcripts, LLC** is a Veterans Administration-verified Service-Disabled-Veteran Owned, and SBA Economically-Disadvantaged-Woman Owned Small Business based in Mesa, Arizona and led by founder Jennifer MacGregor. CVV provides court reporting and transcription of meetings, hearings, conference sessions, interviews, interrogations, depositions and court proceedings for a variety

of government agencies, commercial businesses, small businesses and non-profit organizations. On this project, CVV provided transcription services for all of the business owner and public sector personnel interviews.

**J&D Data Services** is a small business owned by Mr. Joe Deegan and based in Plano, Texas. After a long career with ScanTron, Mr. Deegan started his own business to offer a solid and proven alternative to the time consuming and expensive job of key data entry long associated with mail surveys. The firm helps its clients conserve their surveying resources by designing and delivering survey instruments that can be electronically and automatically scanned upon return and sent directly to electronic format. J&D Data Services has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this assignment, they provided printing, postage, mail-out and mail-back service for the contract and subcontract data collection, the mail survey and the business owner interviews.

## **Report Qualifications/Assumptions and Limiting Conditions**

This report is for the exclusive use of the State of Maryland (“the State”). There are no third-party beneficiaries with respect to this report, and NERA Economic Consulting does not accept any liability to any third party.

Information furnished by others, upon which all or portions of this report is based, is believed to be reliable but has not been independently verified, unless otherwise expressly indicated. Public information and industry and statistical data, including contracting, subcontracting and procurement data, are from sources we deem to be reliable; however, we make no representation as to the accuracy or completeness of such information.

The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligation is assumed to revise this report to reflect changes, events or conditions that occur subsequent to the date hereof.

All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the client.

In portions of this report, NERA has commented on legal issues. NERA’s comments are based on its understanding of relevant law and industry best practice, as informed by legal counsel retained by NERA. However, NERA’s comments are not, and should not be construed as, legal advice to the State. NERA recommends that the State seek and obtain advice from its own legal counsel in connection with its affirmative action programs and with this report.

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## Executive Summary

### A. Introduction

The State of Maryland and the Maryland Department of Transportation commissioned this Study to evaluate whether minority-owned and women-owned business enterprises (“M/WBEs”) in the State’s geographic and product market area have full and fair opportunities to compete for its prime contracts, purchases and associated subcontracts.

To ensure compliance with constitutional mandates and evaluate M/WBE program best practices, the State of Maryland commissioned NERA Economic Consulting to examine the past and current status of M/WBEs in its market area for contracting and procurement. The results of the Study provide the evidentiary record necessary for the State’s consideration of whether to implement M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to compete on a fair basis in the State’s contracting and procurement activity.

This Study finds statistical evidence consistent with the presence of business discrimination against M/WBEs in the private sector of the State of Maryland market area. These findings are presented in Chapters IV and V. Statistical analyses of the State’s own contracting and purchasing, which also document evidence consistent with business discrimination, are contained in Chapters II, III and VI. As a check on our statistical findings, we surveyed the contracting experiences of M/WBEs and non-M/WBEs in the market area and also conducted a series of in-depth personal interviews with business enterprises throughout the market area, both M/WBE and non-M/WBE. Those results, documented in Chapter VII as well are consistent with the presence of business discrimination against M/WBEs in the State of Maryland market area.

### B. Legal Standards for Government Affirmative Action Contracting Programs

To be legally defensible, a race-based program must meet the judicial test of constitutional strict scrutiny. Strict scrutiny is the highest level of judicial review and consists of two elements:

- The government must establish its “compelling interest”<sup>1</sup> in remedying race discrimination by showing “a strong basis in evidence”<sup>2</sup> of the persistence of discrimination. Such evidence may consist of demonstrating that the entity is a ‘passive participant’ in a system of racial exclusion....”<sup>3</sup>

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<sup>1</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 492 (1989) (“*Croson*”).

<sup>2</sup> *Id.* at 500 (citing *Wygant v. Jackson Board of Education, et al.*, 476 U.S. 267, 277 (1986)).

<sup>3</sup> *Id.* at 492.

- Any remedies adopted must be narrowly tailored to that discrimination; that is, “the means chosen to accomplish the government’s asserted purpose are specifically and narrowly framed to accomplish that purpose.”<sup>4</sup>

The compelling interest prong has been met through two types of proof:

- Statistical evidence of “identified discrimination in [the relevant] industry,”<sup>5</sup> typically established by showing the underutilization of minority-owned firms relative to their availability in the jurisdiction’s market area known as disparity indexes or disparity ratios.<sup>6</sup>
- Anecdotal evidence of race-based barriers to the full and fair participation of minority-owned firms in the market area and in seeking contract opportunities with the government entity.<sup>7</sup>

The narrow tailoring prong has been met through the assessment of several factors:

- Consideration of alternative, race-neutral means to increase M/WBE participation;<sup>8</sup>
- The flexibility of the program requirements, including the availability of waiver provisions;<sup>9</sup>
- The duration of the proposed relief;<sup>10</sup>
- The relationship of numerical participation goals to the availability of M/WBEs in the relevant market;<sup>11</sup>

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<sup>4</sup> *Sherbrooke Turf, Inc. v. Minnesota Dept. of Transp.*, 345 F.3d 964 at 971 (citing *Grutter v. Bollinger*, 539 U.S. 306, 333 (2003)), *cert. denied*, 541 U.S. 1041 (2004).

<sup>5</sup> *Croson*, 488 U.S. at 505.

<sup>6</sup> See Wainwright and Holt (2010), pp. 5-6.

<sup>7</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1520 (10<sup>th</sup> Cir. 1994) (“*Concrete Works II*”) (“Personal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a municipality’s institutional practices that exacerbate discriminatory market conditions are often particularly probative. Therefore, the government may include anecdotal evidence in its evidentiary mosaic of past or present discrimination.”). See also *Adarand Constructors, Inc. v. Rodney Slater*, 228 F.3d 1147, 1166 (10<sup>th</sup> Cir. 2000), *cert. granted*, 532 U.S. 941, *dismissed as improvidently granted*, 534 U.S. 103 (2001) (“*Adarand VII*”) (“Both statistical and anecdotal evidence are appropriate in the strict scrutiny calculus, although anecdotal evidence by itself is not.”).

<sup>8</sup> *Croson*, 488 U.S. at 507, citing *United States v. Paradise*, 480 U.S. 149, 171 (1987). See also *Adarand Constructors, Inc. v. Federico Peña*, 515 U.S. 200, 237-238 (1995) (“*Adarand III*”).

<sup>9</sup> *Croson*, 488 U.S. at 507-508 and *Paradise*, 480 U.S. at 171. See also *Adarand VII*.

<sup>10</sup> *Croson*, 488 U.S. at 498, 509-510. See also *Paradise*, 480 U.S. at 171.

<sup>11</sup> *Paradise*, 480 U.S. at 171.

- The impact of the relief on third parties;<sup>12</sup> and
- The overinclusiveness or underinclusiveness of the racial classifications.<sup>13</sup>

In *Adarand Constructors v. Federico Peña*, the Court extended the analysis of strict scrutiny to race-based federal enactments such as the federal (“DBE”) Program. Just as in the state and local government context, the national government must have a compelling interest for the use of race, and the remedies adopted must be narrowly tailored to meet that interest.<sup>14</sup>

Appendix B provides an overview of constitutional standards and case law and outlines our understanding of the legal and program development issues for the State of Maryland’s consideration in evaluating its MBE Program, with emphasis on critical issues and evidentiary concerns.

### C. Defining the Relevant Markets

Chapter II describes how the relevant geographic and product markets were defined for this Study. These definitions were derived empirically, based on the Master Contract/Subcontract Database assembled for the Study. The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

The Master Contract/Subcontract Database contains information on 16,931 prime contracts or purchase orders and 35,675 associated subcontracts active during state fiscal years 2010-2014.<sup>15</sup> These contracts and purchases had a total award value of \$22.27 billion and a total paid value of \$13.4 billion (*See* Table 2.1).<sup>16</sup> Contracts and subcontracts in the database were catalogued according to state fiscal year and whether they were for Construction; Architecture & Engineering and Other Construction-Related Services (“AE-CRS”); Maintenance; Information Technology (“IT”); Services; or Commodities, Supplies & Equipment (“CSE”). The firms performing these contracts and subcontracts were catalogued according to geographic location, primary industry, race, and gender.

The Master Contract/Subcontract Database was analyzed to determine the geographic radius around the State of Maryland that accounts for approximately 75 percent of aggregate contract and subcontract spending. The State’s relevant geographic market area was determined to include the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area (*See* Tables 2.5 and 2.6).

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<sup>12</sup> *Id.*

<sup>13</sup> *Croson*, 488 U.S. at 506.

<sup>14</sup> *Adarand III*, 515 U.S. at 235.

<sup>15</sup> The state fiscal year runs from July 1<sup>st</sup> through June 30<sup>th</sup>.

<sup>16</sup> Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals.

The Master Contract/Subcontract Database was also analyzed to determine those detailed industry categories that account for at least 99 percent of contract and subcontract spending by the State of Maryland. Overall, we determined that the State of Maryland's relevant product market includes firms in 259 different North American Industrial Classification System ("NAICS") Industry Groups and 695 different NAICS Industries (*See* Tables 2.7 through 2.12).

#### **D. M/WBE Availability in the State of Maryland Market Area**

Chapter III estimates the percentage of establishments in the State of Maryland's relevant market area that are owned by minorities or women. For each industry category, M/WBE availability was defined as the number of M/WBEs divided by the total number of business establishments in the relevant contracting market area, weighted by the dollars attributable to each detailed industry. Determining the total number of establishments in the relevant market is more straightforward than determining the number of M/WBE establishments in those markets. The latter task has three main parts: (1) identifying all listed M/WBEs in the relevant market; (2) verifying the ownership status of listed M/WBEs; and (3) estimating the number of unlisted M/WBEs in the relevant market. Table A1 below provides an executive level summary of the current M/WBE availability estimates derived in the Study. Availability estimates for more detailed industries within the major procurement categories appear in Tables 3.16 through 3.21.

**Table A1. Overall Estimated M/WBE Availability Percentages in the State of Maryland Market Area**

	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Minority</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
<b>OVERALL</b>								
<b>AWARD DOLLARS</b>	11.61	3.59	5.41	1.04	21.64	14.24	35.89	64.11
<b>PAID DOLLARS</b>	11.18	3.84	4.65	1.03	20.70	14.04	34.75	65.25
<b>CONSTRUCTION</b>								
<b>AWARD DOLLARS</b>	10.66	4.91	2.65	0.77	18.99	13.94	32.93	67.07
<b>PAID DOLLARS</b>	10.26	5.10	2.68	0.79	18.83	13.65	32.48	67.52
<b>AE-CRS</b>								
<b>AWARD DOLLARS</b>	8.61	2.22	4.82	1.22	16.87	12.16	29.02	70.98
<b>PAID DOLLARS</b>	8.46	2.21	4.83	1.23	16.73	11.93	28.66	71.34
<b>MAINTENANCE</b>								
<b>AWARD DOLLARS</b>	13.87	4.78	3.48	1.87	23.99	12.44	36.44	63.56
<b>PAID DOLLARS</b>	16.16	5.42	3.52	2.22	27.33	13.49	40.82	59.18

	African American	Hispanic	Asian	Native American	Minority	Non-minority Female	M/WBE	Non-M/WBE
<b>IT</b>								
AWARD DOLLARS	15.55	3.53	13.01	1.20	33.29	13.26	46.55	53.45
PAID DOLLARS	15.54	3.55	12.67	1.19	32.95	13.43	46.37	53.63
<b>SERVICES</b>								
AWARD DOLLARS	13.52	3.08	5.53	1.06	23.19	17.67	40.86	59.14
PAID DOLLARS	13.92	2.91	4.82	1.15	22.79	18.18	40.97	59.03
<b>CSE</b>								
AWARD DOLLARS	10.50	3.24	6.10	0.85	20.70	13.02	33.71	66.29
PAID DOLLARS	10.78	3.15	6.33	0.83	21.09	13.20	34.29	65.71

Source: Table 3.15.

Notes: (1) “Award” indicates that the availability measures are weighted according to dollars awarded; (2) “Paid” indicates that the availability measures are weighted according to dollars paid; (3) For this Study, “Black” or “African American” refers to an individual having origins in any of the black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to an individual having origins in the Far East, Southeast Asia, or the Indian subcontinent; “Native American” or “American Indian” refers to an individual having origins in any of the original peoples of North America but does not include individuals of Eskimo or Aleutian origin. *See* Md. Code Ann., State Fin. & Proc. §14-301(k)(1).

## **E. Statistical Disparities in Business Formation and Business Owner Earnings**

### **1. Census Bureau’s American Community Survey**

Chapter III demonstrates that current M/WBE availability levels in the State of Maryland’s market area are substantially lower in most instances than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner and that these levels are statistically significant.<sup>17</sup> In other words, minorities and women are substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics, including age, education, geographic location and industry. We find that these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males, whether they work as employees or entrepreneurs.

<sup>17</sup> Typically, for a given disparity statistic to be considered “statistically significant” there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn. 77.*

For example, we found that overall annual average wages for African Americans in 2010-2014 were 37.0 percent lower in the State of Maryland market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age and education (*See* Table 4.1). This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics (29.5 percent lower), Asians (25.1 percent lower), Native Americans (36.9 percent lower), persons reporting two or more races (29.8 percent lower) and nonminority women (32.8 percent lower). These disparities are consistent with the presence of market-wide discrimination. Comparable results were observed when the analysis was restricted to Construction, AE-CRS, Maintenance, IT, Services, or CSE. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for nonminority women throughout the State of Maryland market area.

This analysis demonstrates that minorities and women earn substantially and significantly less than their nonminority male counterparts in the State of Maryland market area. Such disparities are consistent with race and gender discrimination in the labor force that, in addition to its direct effect on workers, also reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere “societal discrimination”<sup>18</sup> because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business owner earnings. We found, for example, that overall annual earnings for self-employed African Americans in 2010–2014 were 41.8 percent lower in the State of Maryland market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age and education (*See* Table 4.8). This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics (23.4 percent lower), Asians (8.1 percent lower), Native Americans (43.8 percent lower), persons reporting two or more races (37.1 percent lower) and nonminority women (39.1 percent lower). These disparities are consistent with the presence of market-wide discrimination. Similar results were observed when the analysis was restricted to the Construction, AE-CRS, Maintenance, IT, Services, or CSE sectors.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of nonminority males, growth rates will slow, business failure rates will increase, and business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral market area.

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<sup>18</sup> *Croson*, 488 U.S. at 485.

Next, we analyzed race and gender disparities in business formation (*See* Tables 4.15 to 4.23). As with earnings, in most cases we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, and in the Construction, AE-CRS, Maintenance, IT, Services, or CSE sectors. In the overall economy (*See* Table 4.17), business formation rates for African Americans were 2.4 percentage points lower than for comparable nonminority males. Large, adverse, and statistically significant reductions in business formation were also observed for Hispanics (1.4 percentage points lower), Native Americans (2.8 percentage points lower), persons reporting two or more races (1.4 percentage points lower) and nonminority women (1.2 percentage points lower).

## **2. Census Bureau’s Survey of Business Owners**

As a further check on the statistical findings in this chapter, we examined evidence from the Census Bureau’s *Survey of Business Owners and Self-Employed Persons* (SBO) (*See* Tables 4.25 to 4.30). The size of the disparities facing minority-owned and women-owned firms in the State of Maryland market area is very large. For example, although 19.5 percent of all firms in the market area are owned by African Americans, these firms earned less than 4.1 percent of all sales and receipts. Hispanic-owned firms are 8.4 percent of all firms in the market area, yet they earned only 3.0 percent of all sales and receipts. Asian-owned firms are 10.0 percent of all firms in the market area, but earned only 8.3 percent of sales and receipts. Native American-owned firms are 0.1 percent of all firms in the market area, but earned only 0.02 percent of sales and receipts. Women-owned firms are 39.2 percent of all firms in the market area, but these firms earned only 13.9 percent of sales and receipts. Overall, these data show large, adverse, and statistically significant disparities between M/WBEs’ share of overall revenues and their share of overall firms in both the U.S. as a whole, and in the State of Maryland market area in particular.

## **F. Statistical Disparities in Credit/Capital Markets**

In Chapter V, we analyzed the most recent as well as earlier data from the Survey of Small Business Finances (“SSBF”) conducted by the Federal Reserve Board and the U.S. Small Business Administration. We also analyzed data from nine customized matching mail surveys NERA conducted throughout the nation since 1999. Additionally, we reviewed the most current research being conducted in this area, using data from the Kauffman Firm Survey, audit studies, and other sources. These data, in general, examine whether discrimination exists in the small business credit market.

Credit market discrimination can have an important effect on the likelihood that M/WBEs will succeed. Moreover, discrimination in the credit market might even prevent such businesses from opening in the first place. This analysis has been held by some courts to be probative of a public entity’s compelling interest in remedying discrimination.<sup>19</sup> We provide qualitative and quantitative evidence supporting the view that M/WBE firms, and most acutely African American-owned firms, suffer discrimination in this market.

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<sup>19</sup> *See, e.g., Northern Contracting, Inc. v. Illinois Department of Transportation*, No. 00-C-4515, 2005 WL 2230195 (N.D. Ill. Sept. 8, 2005); *Concrete Works of Colorado v. City and County of Denver*, 321 F.3d 950, *cert. denied*, (10<sup>th</sup> Cir. 2003).

The analyses in Chapter V employ data from a variety of sources. First and foremost are data from the Federal Reserve Board for the key years of 1993, 1998 and 2003, as these are the primary years of availability for this most important data source of small business finance by race and gender. Next, in addition to the 1993, 1998 and 2003 Federal Reserve data, Chapter V also analyzes similar datasets collected through NERA's own surveys conducted in 1999 and 2007 and mirroring the relevant sections of the earlier Federal Reserve Board surveys. Results from the NERA credit surveys are consistent with the results obtained from the 1993-2003 Federal Reserve Board data. Finally, Chapter V provides an overview of the most recent available research on commercial credit market discrimination, spanning the time period from 2008 forward. Most of this review focuses on analyses using data from the Kauffman Firm Survey, the largest and longest longitudinal survey of new businesses in the world. Analyses of the Kauffman data are consistent with those obtained from the 1993-2003 Federal Reserve Board data and the 1999-2007 NERA credit survey data.

Taken as a whole, these data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms, are substantially and statistically significantly more likely to be denied credit than are nonminority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied (*see* Tables 5.15, 5.22, 5.29);
- When minority-owned firms applied for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history (*see* Tables 5.8, 5.9, 5.18, 5.19, 5.25, 5.26);
- When minority-owned firms *did* receive a loan, they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (*see* Tables 5.13, 5.14, 5.21, 5.27);
- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern (*see* Tables 5.3, 5.4, 5.5, 5.6, 5.7, 5.17, 5.24);
- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year (*see* Tables 5.5, 5.6);

- There is no evidence that discrimination in the market for credit is significantly different in the South Atlantic census division<sup>20</sup> or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole (Chapter V, various tables);
- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003 (Chapter V, various tables);
- Evidence from NERA's own 1999-2007 credit surveys, which contained questions similar to the relevant portions of the SSBF, is fully consistent with the findings drawn from the earlier SSBF data (Tables 5.30, 5.31); and
- Post-2007 evidence from non-SSBF sources, particularly the Kauffman Firm Survey, yield results that are fully consistent with those drawn from the earlier SSBF data (*see* Chapter V, Section L).

We conclude that there is evidence of discrimination against M/WBEs in the State of Maryland market area in the small business credit market. This discrimination is particularly acute for African American-owned small businesses where, even after adjusting for differences in assets, liabilities, and creditworthiness, the loan denial rates remain substantially higher than for nonminority male-owned small businesses.

## **G. Public Sector Utilization vs. Availability in State of Maryland Contracting and Purchasing Markets**

Chapter VI analyzes the extent to which M/WBEs were utilized on contracts active at the State of Maryland during state fiscal years 2010-2014 and compares this utilization rate to the availability of M/WBEs in the relevant market area. Tables B1 and B2 provide an executive summary of the utilization findings for the Study by industry category and M/WBE type. Table B1 shows M/WBE and non-M/WBE utilization measured by dollars awarded for all contracts and purchases examined during the study period. Table B2 shows comparable M/WBE and non-M/WBE utilization measured by dollars paid.

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<sup>20</sup> This division includes Maryland as well as Delaware, Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia and the District of Columbia.

**Table B1. M/WBE Utilization in Contracting at the State of Maryland—All Contracts (Dollars Awarded)**

M/WBE Type	Procurement Category						
	Construction (%)	AE-CRS (%)	Maintenance (%)	IT (%)	Services (%)	CSE (%)	Overall (%)
African American	5.20	4.59	4.53	5.12	6.93	0.91	5.14
Hispanic	4.33	1.51	1.48	6.45	0.71	0.83	2.74
Asian	2.60	14.91	0.80	16.71	0.79	2.40	4.65
Native American	0.43	0.06	0.05	0.10	0.01	0.04	0.19
Minority Total	12.55	21.07	6.86	28.39	8.44	4.18	12.72
Nonminority female	7.43	7.51	7.91	6.08	3.31	2.94	5.85
M/WBE Total	19.98	28.58	14.78	34.47	11.75	7.12	18.57
Non-M/WBE Total	80.02	71.42	85.22	65.53	88.25	92.88	81.43
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	8,422,190,102	2,544,538,584	1,427,160,377	1,977,040,832	5,853,224,032	2,048,499,182	22,272,653,109
Prime Contracts	1,900	691	1,456	1,291	2,154	9,439	16,931
Subcontracts	25,030	2,539	2,246	690	3,761	1,409	35,675

Source and Notes: Table 6.1.

**Table B2. M/WBE Utilization in Contracting at the State of Maryland—All Contracts (Dollars Paid)**

M/WBE Type	Procurement Category						
	Construction (%)	AE-CRS (%)	Maintenance (%)	IT (%)	Services (%)	CSE (%)	Overall (%)
African American	5.05	4.53	6.81	6.54	7.10	0.99	4.99
Hispanic	3.79	1.47	3.00	9.97	1.25	1.00	3.02
Asian	2.44	15.55	1.34	20.52	0.34	2.44	4.45
Native American	0.38	0.06	0.03	0.00	0.02	0.05	0.21
Minority Total	11.66	21.61	11.18	37.03	8.70	4.47	12.66
Nonminority female	7.49	7.38	7.15	4.64	2.49	2.79	5.84
M/WBE Total	19.15	28.99	18.33	41.67	11.19	7.26	18.51
Non-M/WBE Total	80.85	71.01	81.67	58.33	88.81	92.74	81.49
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	6,767,135,431	1,536,406,206	356,061,208	682,925,936	2,440,087,984	1,631,017,251	13,413,634,017
Prime Contracts	1,666	691	1,324	1,191	1,971	9,439	16,282
Subcontracts	22,064	2,539	1,271	410	2,310	1,409	30,003

Source: Table 6.2.

Additionally, we compared the utilization of M/WBEs on contracts with M/WBE goals to contracts where no M/WBE goals were established. We found that when all procurement categories are combined, M/WBE utilization is greater on contracts for which M/WBE goals were established. This is true for African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group. These differences are statistically significant as well, meaning that it is unlikely the differences can be attributed to chance variation alone. With only a few exceptions, this phenomenon was observed in each procurement category as well (*See Table 6.3*).

Finally, in Chapter VI, we compared the use of M/WBEs on all State of Maryland contracts and subcontracts from the study period to our measure of M/WBE availability in the relevant market area. If M/WBE utilization is lower than measured availability in a given category, we report this result as a disparity.

Table C1, on the following page, provides a top-level summary of our disparity findings for the Study for each major procurement category using dollars awarded. Table C2 provides comparable results using dollars paid.

**Table C1. Utilization, Availability and Disparity Results for State of Maryland Contracting, Overall and by Contracting Category–All Contracts (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	5.14	11.61	44.3 ****
Hispanic	2.74	3.59	76.2
Asian	4.65	5.41	86.0
Native American	0.19	1.04	18.2 ****
Minority-owned	12.72	21.64	58.8 ****
Nonminority female	5.85	14.24	41.1 ****
M/WBE total	18.57	35.89	51.7 ****
CONSTRUCTION			
African American	5.20	10.66	48.7 ****
Hispanic	4.33	4.91	88.2
Asian	2.60	2.65	97.9
Native American	0.43	0.77	56.0
Minority-owned	12.55	18.99	66.1 ****
Nonminority female	7.43	13.94	53.3 ****
M/WBE total	19.98	32.93	60.7 ****
AE-CRS			
African American	4.59	8.61	53.3 ****
Hispanic	1.51	2.22	68.0
Asian	14.91	4.82	
Native American	0.06	1.22	4.8 ****
Minority-owned	21.07	16.87	
Nonminority female	7.51	12.16	61.8 ****
M/WBE total	28.58	29.02	98.5

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
<b>MAINTENANCE</b>			
African American	4.53	13.87	32.7 ****
Hispanic	1.48	4.78	31.0 ****
Asian	0.80	3.48	23.0 ****
Native American	0.05	1.87	2.6 ****
Minority-owned	6.86	23.99	28.6 ****
Nonminority female	7.91	12.44	63.6 ****
M/WBE total	14.78	36.44	40.6 ****
<b>IT</b>			
African American	5.12	15.55	32.9 ****
Hispanic	6.45	3.53	
Asian	16.71	13.01	
Native American	0.10	1.20	8.6 ****
Minority-owned	28.39	33.29	85.3 **
Nonminority female	6.08	13.26	45.9 ****
M/WBE total	34.47	46.55	74.0 ****
<b>SERVICES</b>			
African American	6.93	13.52	51.3 ****
Hispanic	0.71	3.08	23.1 ****
Asian	0.79	5.53	14.3 ****
Native American	0.01	1.06	1.0 ****
Minority-owned	8.44	23.19	36.4 ****
Nonminority female	3.31	17.67	18.7 ****
M/WBE total	11.75	40.86	28.7 ****
<b>CSE</b>			
African American	0.91	10.50	8.7 ****
Hispanic	0.83	3.24	25.6 ****
Asian	2.40	6.10	39.4 ****
Native American	0.04	0.85	4.3 ****
Minority-owned	4.18	20.70	20.2 ****
Nonminority female	2.94	13.02	22.6 ****
M/WBE total	7.12	33.71	21.1 ****

Source: Table 6.4.

Notes: (1) “\*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “\*\*” indicates an adverse disparity that is statistically significant at the 10% level or better (90% confidence). “\*\*\*” indicates the disparity is significant at a 5% level or better (95% confidence). “\*\*\*\*” indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

**Table C2. Utilization, Availability and Disparity Results for State of Maryland Contracting, Overall and by Contracting Category–All Contracts (Dollars Paid)**

<b>Contracting Category &amp; M/WBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
<b>OVERALL</b>			
African American	4.99	11.18	44.6 *****
Hispanic	3.02	3.84	78.5
Asian	4.45	4.65	95.6
Native American	0.21	1.03	20.5 *****
Minority-owned	12.66	20.70	61.2 *****
Nonminority female	5.84	14.04	41.6 *****
M/WBE total	18.51	34.75	53.3 *****
<b>CONSTRUCTION</b>			
African American	5.05	10.26	49.2 *****
Hispanic	3.79	5.10	74.3 **
Asian	2.44	2.68	90.7
Native American	0.38	0.79	48.8 ***
Minority-owned	11.66	18.83	61.9 *****
Nonminority female	7.49	13.65	54.9 *****
M/WBE total	19.15	32.48	59.0 *****
<b>AE-CRS</b>			
African American	4.53	8.46	53.5 *****
Hispanic	1.47	2.21	66.5 *
Asian	15.55	4.83	
Native American	0.06	1.23	4.7 *****
Minority-owned	21.61	16.73	
Nonminority female	7.38	11.93	61.9 *****
M/WBE total	28.99	28.66	
<b>MAINTENANCE</b>			
African American	6.81	16.16	42.1 *****
Hispanic	3.00	5.42	55.4 *****
Asian	1.34	3.52	37.9 *****
Native American	0.03	2.22	1.4 *****
Minority-owned	11.18	27.33	40.9 *****
Nonminority female	7.15	13.49	53.0 *****
M/WBE total	18.33	40.82	44.9 *****
<b>IT</b>			
African American	6.54	15.54	42.1 *****
Hispanic	9.97	3.55	
Asian	20.52	12.67	
Native American	0.00	1.19	0.0 *****
Minority-owned	37.03	32.95	
Nonminority female	4.64	13.43	34.5 *****
M/WBE total	41.67	46.37	89.8 **

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
SERVICES			
African American	7.10	13.92	51.0 ****
Hispanic	1.25	2.91	42.9 ****
Asian	0.34	4.82	7.0 ****
Native American	0.02	1.15	1.5 ****
Minority-owned	8.70	22.79	38.2 ****
Nonminority female	2.49	18.18	13.7 ****
M/WBE total	11.19	40.97	27.3 ****
CSE			
African American	0.99	10.78	9.2 ****
Hispanic	1.00	3.15	31.7 ****
Asian	2.44	6.33	38.5 ****
Native American	0.05	0.83	5.5 ****
Minority-owned	4.47	21.09	21.2 ****
Nonminority female	2.79	13.20	21.1 ****
M/WBE total	7.26	34.29	21.2 ****

Source: Table 6.5.

## H. Anecdotal Evidence

Chapter VII presents the results of a large-scale mail survey we conducted of M/WBEs and non-M/WBEs about their experiences and difficulties in obtaining contracts. The survey quantified and compared anecdotal evidence on the experiences of M/WBEs and non-M/WBEs as a method to examine whether any differences might be consistent with past or present discrimination.

We found that M/WBEs that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, moreover, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the State of Maryland and other public entities in the market area show that business discrimination continues to fetter M/WBE business opportunities in the relevant markets (*See* Tables 7.9 and 7.10).

We found that M/WBEs in the relevant market area report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. Moreover, we found that these differences remain statistically significant even when firm size and other “capacity”-related owner characteristics are held constant. Large disparities were observed in every category, including applying for surety bonds, applying for commercial loans, obtaining price quotes from suppliers, hiring workers from union hiring halls, having to do inappropriate or extra work not required of comparable non-M/WBEs, applying for commercial or professional insurance, working or attempting to work on private sector prime contracts, working or attempting to work on private sector subcontracts, functioning without hindrance or harassment on the work site, joining or dealing with trade associations, working or attempting to work on public sector subcontracts and prime contracts, and receiving timely payment for work

performed. The incidence of reported disparate treatment for M/WBEs in these cases ranged between 200 percent and 2300 percent higher than for non-M/WBEs. (*See* Tables 7.3–7.6).

We also found that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder or impossible for them to conduct business, and less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct business. In particular, bonding requirements, insurance requirements, previous experience requirements, the cost of bidding or proposing, large project sizes, the price of supplies or materials, late notice of bid/proposal deadlines, and prior dealings with project owners were all found to be statistically significantly more problematic for M/WBEs than non-M/WBEs—even when holding firm size and other “capacity”-related owner characteristics constant (*See* Tables 7.7 and 7.8).

Chapter VII also presents the results from a series of in-depth personal interviews conducted with almost 200 M/WBE and non-M/WBE business owners and representatives from the State of Maryland’s market area. Similar to the survey responses, the interviews strongly suggest that minorities and women continue to suffer discriminatory barriers to full and fair access to State of Maryland, other public sector, and private sector contracts. Participants reported negative perceptions of M/WBE competence and qualifications; being held to higher performance standards than for non-M/WBEs; harassment at the workplace/jobsite; abuses by primes of the payment process, and in the compliance process; exclusion from industry networks; discrimination in access to commercial loans, surety bonds, and commercial/professional insurance; difficulties in obtaining work on public sector projects; and difficulties obtaining work on private sector or “non-goals” projects.

We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination. The results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study’s extensive statistical evidence, the courts have found to be highly probative of whether, without affirmative interventions, the State of Maryland would be a passive participant in a discriminatory local market area.

### **I. The State of Maryland’s Minority Business Enterprise Program: Overview and Feedback Interviews**

Chapter VIII provides an overview of the State of Maryland’s current MBE Program, an overview of its wide variety of race- and gender-neutral policies and practices, and a summary of business owner experiences with the Program that we obtained from our interviews. We interviewed almost 200 business owners and representatives, as well as 31 State MBE Liaisons senior procurement officers, and personnel from the Office of Minority Business Enterprise and from the Governor’s Office of Minority Affairs to solicit their feedback regarding the State’s policies in this area. Our interviews covered the following subjects:

- The Significance of the State of Maryland MBE Program;

- eMaryland Marketplace;
- Certification Standards and Processes;
- Pre-award Processes: Meeting M/WBE goals;
- Pre-award Processes: Contract Solicitations;
- Contract Performance: Monitoring;
- Contract Performance: Payment;
- Contract Performance: Liquidated Damages;
- Contract Performance: Small Business Reserve;
- Contract Performance: Retainage; and
- Contract Performance: Front companies and Pass Throughs.

## **J. Suggested Best Practices for The State of Maryland MBE Program**

Finally, in Chapter IX we present our suggestions for revised contracting policies and procedures based upon the Study's results and findings and upon our views on best practices for contracting diversity programs.

### **1. Continuing and Augmenting Race- and Gender-Neutral Initiatives**

- Expanding Small Business Programs;
- Increasing Contract Unbundling;
- Reviewing Surety Bonding, Insurance, and Experience Requirements;
- Ensuring Prompt Payments;
- Collecting Bid Data and Pricing Information for Subcontractor Quotations;
- Utilizing Technology; and
- Facilitating Increased Access to Capital.

### **2. Implementing Race- and Gender-Conscious Remedies**

- Increasing Certification Outreach;
- Setting Overall, Aspirational MBE Goals for Annual State Spending;

- Setting Contract-Specific Goals;
- Counting MBE Prime Contractor Participation Towards Meeting Contract Goals
- Counting Lower Tier MBE Utilization;
- Using Control Contracts;
- Reviewing Contract Award Procedures: Scrutinizing MBEs' Commercially Useful Function;
- Reviewing Contract Award Procedures: Standardizing and Disseminating Good Faith Efforts Policies and Procedures;
- Reviewing Contract Award Procedures: Developing Standard Contractual Terms and Conditions for Program Enforcement;
- Monitoring Contract Performance;
- Enhancing Program Administration;
- Implementing a Mentor-Protégé Program;
- Developing Performance Measures for Program Success;
- Releasing Retainage; and
- Periodically Reviewing the Program.

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## I. Introduction

The State of Maryland and the Maryland Department of Transportation commissioned this Study to evaluate whether minority-owned and women-owned business enterprises (“M/WBEs”) in the State’s geographic and product market area have full and fair opportunities to compete for its prime contracts, purchases and associated subcontracts. To ensure compliance with constitutional mandates and evaluate M/WBE program best practices, the State commissioned NERA Economic Consulting to examine the past and current status of M/WBEs in its market area for contracting and procurement.

This Study finds statistical evidence consistent with the presence of business discrimination against M/WBEs in the private sector of the State of Maryland market area. These findings are presented in Chapters IV and V. Statistical analyses of the State’s own contracting and purchasing, which also document evidence consistent with business discrimination, are contained in Chapters II, III and VI. As a check on our statistical findings, documented in Chapter VII, we surveyed the contracting experiences of M/WBEs and non-M/WBEs in the market area and also conducted a series of in-depth personal interviews with business enterprises throughout the market area, both M/WBE and non-M/WBE. The results as well are consistent with the presence of business discrimination against M/WBEs in the State of Maryland market area.

As will be documented in this Study, during state fiscal years 2010-2014 the State of Maryland has been a significant source of demand in the regional economy for the products and services provided by M/WBEs—demand that, in general, is found to be lacking in the private sector of the Maryland economy and the surrounding region.

As documented below in Chapter VI, the State’s prior efforts have produced positive results—MBEs earned almost 19 percent of the State’s overall contracting and subcontracting payments on contracts active during the study period. Strict scrutiny requires a “strong basis in evidence”<sup>21</sup> for concluding that discrimination persists and “narrowly tailored”<sup>22</sup> measures to address that discrimination. These principles guide and inform our work for the State of Maryland in this Study.

The results of the Study provide the evidentiary record necessary for the State’s consideration of whether to implement M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to compete on a fair basis in the State’s contracting and procurement activity.

The Study is presented in nine chapters, and is designed to answer the following questions:

### Chapter I: Introduction

<sup>21</sup> *Croson* at 500 (citing *Wygant v. Jackson Board of Education*, 476 U.S. 267, 277 (1986)).

<sup>22</sup> *Id.* at 506-508. *See also*, *Wygant*, 476 U.S. at 274.

- Chapter II: What is the relevant geographic market for the State of Maryland and how is it defined? What are the relevant product markets for the State of Maryland and how are they defined?
- Chapter III: What percentage of all businesses in the State of Maryland's market area are owned by minorities and/or women? How are these availability estimates constructed?
- Chapter IV: Do minority and/or female wage and salary earners earn less than similarly situated nonminority males? Do minority and/or female business owners earn less from their businesses than similarly situated nonminority males? Are minorities and/or women in the State of Maryland's market area less likely to be self-employed than similarly situated nonminority males? How do the findings in the State of Maryland's market area differ from the national findings on these questions? How have these findings changed over time?
- Chapter V: Do minorities and/or women face discrimination in the market for commercial capital and credit compared to similarly situated nonminority males? How, if at all, do findings locally differ from findings nationally?
- Chapter VI: To what extent have MBEs been utilized by the State of Maryland on contracts and purchases active during the study period, and how does this utilization compare to the availability of M/WBEs in the relevant market area?
- Chapter VII: How many MBEs experienced disparate treatment in the study period? What types of discriminatory experiences are most frequently encountered by M/WBEs? How do the experiences of M/WBEs differ from those of similar non-M/WBEs regarding difficulties in obtaining prime contracts and subcontracts?
- Chapter VIII: What general policies and procedures govern the State of Maryland's MBE Program? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning the State's contracting affirmative action programs?

In assessing these questions, we present in Chapters II through VII a series of quantitative and qualitative analyses that compare minority and/or female outcomes to nonminority male outcomes in all of these business-related areas. The Executive Summary, above, provides a brief overview of our key findings and conclusions. Finally, Chapter IX contains our findings regarding MBE program best practices applicable to the State of Maryland.

## II. Defining the Relevant Markets

### A. Preparing the Master Contract/Subcontract Database

#### 1. Overview

In the *Croson* decision, the Supreme Court indicated that the *national* findings by Congress of minority business discrimination in construction and related industries were not specific or exacting enough, standing alone, to support an MBE program in the City of Richmond. For this reason, the first step in our evaluation of M/WBE availability and participation for the State of Maryland is to define the relevant market area for its contracting and procurement activity. Markets have both a geographic dimension and a product, or industry, dimension.<sup>23</sup> Both aspects of market definition are considered in this chapter. For this Study, we define the relevant geographic market area based on the State of Maryland's historical contracting and subcontracting records. This market dimension is determined empirically by examining the zip code distribution of utilized contractors and subcontractors.

It is also important to be exacting in determining product markets. The extent of disparity may differ from industry to industry just as it does among geographic locations.<sup>24</sup> Documenting the specific industries that comprise the State of Maryland's contracting activities and the relative importance of each to contract and subcontract spending is important because it allows for: (1) implementation of precise availability estimation methods, (2) more narrowly tailored contract-level goal-setting, and (3) overall M/WBE availability estimates that are a weighted average of underlying industry-level availability estimates, rather than a simple average, resulting in more narrowly tailored annual goals. The weights used are the proportion of dollars awarded or paid within each industry and allow the overall availability measure to be influenced more heavily by availability in those industries where more contracting dollars are spent, and less heavily by availability in those industries where relatively fewer contracting dollars are spent.

We define the product market dimension by estimating which North American Industrial Classification System (NAICS) codes best describe each identifiable contractor, subcontractor, subconsultant, or supplier in those records.<sup>25</sup> In both cases, the definitions are weighted according to how many dollars were spent with firms from each zip code or NAICS code, respectively, so that locations and industries, respectively, receiving relatively more contracting dollars receive relatively more weight in the estimation of M/WBE availability. Once the geographic and industry parameters of the State of Maryland's market area have been defined, we can restrict our subsequent analyses to business enterprises and other phenomena within this

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<sup>23</sup> See, e.g., Areeda, P., L. Kaplow, and A. Edlin (2013).

<sup>24</sup> See Wainwright (2000), documenting that, in general, the similarities in the amount of discrimination present in different industries and geographic locations significantly outweigh the differences.

<sup>25</sup> Executive Office of the President, Office of Management and Budget (2012).

market area. Restricting our analyses in this manner narrowly tailors our findings to the State of Maryland's specific market area and contracting circumstances.

## 2. State of Maryland Contracting and Purchasing

More than 80 state agencies, public universities and colleges are subject to the State of Maryland's MBE provisions.<sup>26</sup> These units of government vary greatly, however, in the overall size of their annual contract and procurement spending. With assistance from the State, NERA identified the 27 largest units that, collectively, account for approximately 95 percent of all relevant State contract and procurement spending<sup>27</sup> for inclusion in the Study.<sup>28</sup> These agencies are:

- Maryland Department of Transportation – State Highway Administration
- Maryland Department of Transportation – Maryland Transit Administration
- Maryland Department of Transportation – Maryland Aviation Administration
- Maryland Department of Transportation – Motor Vehicle Administration
- Maryland Department of Transportation – Maryland Port Administration
- Maryland Department of Transportation – The Secretary's Office
- Maryland Transportation Authority
- Department of Health & Mental Hygiene
- University System of Maryland – Towson University
- University System of Maryland – University of Baltimore
- University System of Maryland – University of Maryland, Baltimore
- University System of Maryland – University of Maryland, Baltimore County
- University System of Maryland – University of Maryland, College Park
- University System of Maryland – University of Maryland, University College
- Department of Human Resources
- Public School Construction Program
- The Department of Public Safety & Correctional Services
- Department of Juvenile Services
- Department of Information Technology
- Maryland State Department of Education
- Department of General Services
- Department of the Environment
- Maryland Environmental Service
- Maryland State Lottery Agency
- Department of State Police
- Morgan State University
- Department of Budget & Management

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<sup>26</sup> Appendix C provides a list of all active state agencies, public universities and colleges that are subject to Title 14, Subtitle 3 of the State Finance and Procurement Article. Certain agencies are exempt from State procurement laws for specific purchases or specific situations. A comprehensive list of these exemptions can be found in Maryland Department of Legislative Services, Office of Policy Analysis (2014), pp. 16-20.

<sup>27</sup> We examined spending in State of Maryland Expenditure Object Codes 07 (Motor Vehicle Operation and Maintenance), 08 (Contractual Services), 09 (Supplies and Materials), 10 (Equipment Replacement), 11 (Equipment Additional), and 14 (Land, Building & Structures).

<sup>28</sup> In identifying these units, we examined spending for state fiscal years 2011-2013. Data for 2014 had not yet been released when this determination was made.

The State then provided NERA with prime contract and purchase order award and payment records (“prime contracts”) for these 27 agencies, covering state fiscal years 2010-2014.<sup>29</sup> These data were retrieved, in most cases, from the State’s Financial Management Information System (“FMIS”). The Maryland Department of Transportation (“MDOT”) has its own version of FMIS that was used to retrieve MDOT’s prime contracts. Similarly, prime contracts for the University System of Maryland entities were extracted from their own internal financial management information systems. In the case of the Interagency Committee on Public School Construction (“IACPSC”), data was also retrieved from the financial management information systems of the County Public Schools that received funding through the IACPSC.<sup>30</sup>

For each prime contract active during the study period, the data included: the business name and address of the prime contractor, a description of the contract or purchase, the associated agency for which the work was performed, the contract or purchase order number, start date, total award amount, and the total current paid amount. In some instances, the data also indicated the race and gender of the prime contractor and whether or not an MBE goal had been established for the contract. We also cross-referenced business names and addresses with the State’s Certified MBE Directory and other directories (*See* Chapter III) to obtain additional contractor race and gender information.

Using information from work categories, contract descriptions, and industry classifications, each prime contract was then classified by NERA into one of the State’s six major procurement categories: Construction; Architecture-Engineering and Other Construction-Related Professional Services (“AE-CRS”),<sup>31</sup> Maintenance; Information Technology (“IT”); Services; and Commodities, Supplies, and Equipment (“CSE”). Additionally, we focused our research on contracts that were classified as “large” purchases, with a value exceeding \$25,000.<sup>32</sup>

In this manner, a total of 26,666 prime contracts were identified from State records as comprising the contract universe.<sup>33</sup> According to State records, these 26,666 prime contracts had a cumulative award value of \$27.23 billion and a cumulative paid value (as of the time the data were collected) of \$15.23 billion.

Not all prime contracts have significant subcontract opportunities, however. In particular, contracts valued at \$50,000 or less in Construction, AE-CRS, Maintenance, IT and Services do

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<sup>29</sup> The State’s fiscal year runs from July 1<sup>st</sup> through June 30<sup>th</sup>.

<sup>30</sup> The two smallest County Public Schools in the State—Kent and Somerset—were unable to provide the requested prime contract data for this Study.

<sup>31</sup> Construction-related professional services includes engineering services, architectural services, construction management services, testing services, environmental consulting services, and other construction-related consulting services.

<sup>32</sup> \$25,000 is the Category III Small Procurement threshold pursuant to COMAR 21.05.07.04.

<sup>33</sup> Excluded from the universe were contracts not subject to the State’s MBE Statute per State Finance and Procurement Article §14-302(a)(1)(i)1-2 and per COMAR 21.01.03.01.A. We also excluded contracts with foreign companies, as it was not practical to collect data from overseas. Contracts with foreign companies accounted for less than 0.3% of all contract dollars.

not frequently have such opportunities. The same is true in the CSE category for contracts under \$1 million. Of the 26,666 prime contracts in the contract universe, 13,103 were deemed to have significant subcontract opportunities (leaving 13,563 smaller contracts without such opportunities). These 13,103 prime contracts had a cumulative award value of \$26.07 billion, or 96 percent of all award dollars in the contract universe, and a cumulative paid value of \$14.37 billion, or 94 percent of all paid dollars in the contract universe.

We drew a random sample of 3,684 prime contracts from this base of 13,103 prime contracts, or 28 percent of all prime contracts with significant subcontract opportunities. The sample was stratified according to procurement category and state agency.<sup>34</sup> These 3,684 sampled contracts had cumulative award value of \$20.56 billion, or 79 percent of all award dollars in the sample universe, and a cumulative paid value of \$11.01 billion, or 77 percent of all paid dollars in the sample universe.

We conducted a careful review of the available subcontract data for these 3,684 prime contract records, and determined that the available subcontract information was incomplete. In consultation with the State, NERA developed a plan to directly contact the prime contractors and vendors that performed these contracts in order to verify the existing data and to supplement it with additional subcontract records where appropriate. As noted above, prime contracts valued at \$50,000 or greater in Construction, AE-CRS, Maintenance, IT and Services were included in this data collection effort, as were prime contracts in CSE valued at \$1M or greater. Prime contracts in Construction, AE-CRS, Maintenance, IT and Services that were under \$50,000 and prime contracts in CSE that were under \$1M were not included in the data collection effort. Those prime contracts did, however, remain in the overall study universe for subsequent analysis.

After an intensive data collection effort and with assistance from the State, we were able to obtain relevant information for 3,368 prime contracts, or 91 percent of all prime contracts sampled, and 35,675 associated subcontracts. The total award dollar value of the 3,368 prime contracts, according to State records, was \$19.52 billion, or 95 percent of all awarded dollars in our sample, and the total paid dollar value was \$10.41 billion, or 95 percent of all paid dollars in our sample. These percentages are sufficiently large to be well representative of the entire universe of State of Maryland contracts and subcontracts being examined for this Study.

Dollar values reported by prime contractors did not always match State of Maryland records exactly.<sup>35</sup> According to prime-reported amounts, the total awarded dollar value of the 3,368 prime contracts obtained was \$21.11 billion and the total paid dollar value was \$15.29 billion. In order to achieve consistency with the subcontract dollar values we collected, we use prime reported dollar amounts for the remainder of the relevant analyses in this report.

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<sup>34</sup> The largest contracts in each stratum were sampled with certainty and the remainder were sampled with replacement.

<sup>35</sup> For award dollars, the difference is primarily due to change orders, renewals, and extensions that occurred after collection of the initial records by the State but prior to NERA receiving the requested information from the prime contractor. For paid dollars, it is primarily due to the passage of time between collection of the initial records from the State and receipt of the requested information from the prime contractor.

In all, therefore, a total of 3,368 prime contracts and 35,675 associated subcontracts were collected from prime contractors, with a total awarded value of approximately \$21.11 billion and a total paid value of \$15.29 billion. These 3,368 prime contracts and 35,675 associated subcontracts were then combined with the 13,563 prime contracts without significant subcontracting opportunities to obtain an overall sample of 16,931 prime contracts and 35,756 associated subcontracts. Additionally, we then removed, from the paid dollar column only, contracts that were not substantially complete at the time we performed the data collection for this Study. We made this adjustment so as not to skew the picture of subcontract activity presented in the Study. Certain contracts require a different mix of subcontract industries in the early phases of a project than in the latter phases. By removing contracts that are not substantially complete from the paid dollar totals, we minimize the possibility that not yet completed contracts can alter the distribution of industries from what we would see if all contracts analyzed were 100 percent complete.<sup>36</sup>

Together, as shown below in Tables 2.1 through 2.3, these prime contracts and subcontracts comprise the Master Contract/Subcontract Database compiled for this Study. Table 2.1 shows, for each major procurement category, the total number of prime contracts and associated subcontracts awarded, the total number of prime contracts and associated subcontracts substantially completed, total dollars awarded, and total dollars paid. Tables 2.2 and 2.3 show comparable information for dollars awarded and dollars paid, respectively, each year of the study period. Table 2.4 shows comparable information for each State agency.

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<sup>36</sup> For purposes of the Study, a contract was considered to be substantially complete if at least 75 percent of the total award amount had been paid and the procurement category was in Construction, Maintenance, IT or Services.

**Table 2.1. Summary of Master Contract/Subcontract Database: Contracts and Subcontracts by Procurement Category, State Fiscal Years 2010-2014**

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED (\$)	DOLLARS PAID (\$)
<b>CONSTRUCTION</b>			<b>8,422,190,102</b>	<b>6,767,135,431</b>
<i>Prime Contracts</i>	1,900	1,666	3,098,794,081	2,220,931,903
<i>Subcontracts</i>	25,030	22,064	5,323,396,021	4,546,203,529
<b>AE-CRS</b>			<b>2,544,538,584</b>	<b>1,536,406,206</b>
<i>Prime Contracts</i>	691	691	1,356,184,940	766,671,557
<i>Subcontracts</i>	2,539	2,539	1,188,353,644	769,734,648
<b>MAINTENANCE</b>			<b>1,427,160,377</b>	<b>356,061,208</b>
<i>Prime Contracts</i>	1,456	1,324	1,153,829,221	272,541,455
<i>Subcontracts</i>	2,246	1,271	273,331,156	83,519,753
<b>IT</b>			<b>1,977,040,832</b>	<b>682,925,936</b>
<i>Prime Contracts</i>	1,291	1,191	1,500,038,500	440,189,109
<i>Subcontracts</i>	690	410	477,002,332	242,736,827
<b>SERVICES</b>			<b>5,853,224,032</b>	<b>2,440,087,984</b>
<i>Prime Contracts</i>	2,154	1,971	5,099,003,635	2,022,528,967
<i>Subcontracts</i>	3,761	2,310	754,220,397	417,559,018
<b>CSE</b>			<b>2,048,499,182</b>	<b>1,631,017,251</b>
<i>Prime Contracts</i>	9,439	9,439	1,848,658,901	1,433,530,789
<i>Subcontracts</i>	1,409	1,409	199,840,281	197,486,462
<b>GRAND TOTAL</b>			<b>22,272,653,109</b>	<b>13,413,634,017</b>
<i>Prime Contracts</i>	16,931	16,282	14,056,509,278	7,156,393,779
<i>Subcontracts</i>	35,675	30,003	8,216,143,831	6,257,240,237

Source: NERA calculations from Master Contract/Subcontract Database, State Fiscal Years 2010-2014.

Notes: (1) Prime Contract dollar amounts are net of subcontract amounts; (2) Number of Paid Contracts and Dollars Paid exclude contracts that were not substantially complete.

Table 2.2 shows the total number of prime contracts awarded during each year of the Study period and total dollars awarded for those contracts, by major procurement category.

**Table 2.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Fiscal Year (Dollars Awarded)**

<b>PROCUREMENT CATEGORY &amp; YEAR</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS AWARDED (\$)</b>
<i>CONSTRUCTION</i>		
2010	328	1,891,952,930
2011	375	1,386,220,167
2012	344	1,811,831,649
2013	416	1,549,373,989
2014	437	1,782,811,355
<b>TOTAL</b>	<b>1,900</b>	<b>8,422,190,091</b>
<i>AE-CRS</i>		
2010	146	697,424,243
2011	136	696,013,118
2012	147	373,582,374
2013	90	254,271,670
2014	172	523,247,175
<b>TOTAL</b>	<b>691</b>	<b>2,544,538,580</b>
<i>MAINTENANCE</i>		
2010	241	158,023,692
2011	286	219,465,518
2012	303	124,312,144
2013	294	620,297,850
2014	332	305,061,172
<b>TOTAL</b>	<b>1,456</b>	<b>1,427,160,376</b>

**Table 2.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year (Dollars Awarded), cont'd**

<b>PROCUREMENT CATEGORY &amp; YEAR</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS AWARDED (\$)</b>
<i>IT</i>		
2010	209	391,547,237
2011	256	533,668,419
2012	248	402,456,507
2013	244	190,896,277
2014	334	458,472,389
TOTAL	1,291	1,977,040,829
<i>SERVICES</i>		
2010	450	1,759,949,983
2011	433	568,180,156
2012	431	1,293,478,546
2013	407	1,513,510,231
2014	433	718,105,123
TOTAL	2,154	5,853,224,038
<i>CSE</i>		
2010	1,933	421,698,578
2011	2,015	571,428,673
2012	2,045	389,963,861
2013	1,852	331,909,170
2014	1,594	333,498,902
TOTAL	9,439	2,048,499,184
<i>GRAND TOTAL</i>		
2010	3,307	5,320,596,663
2011	3,501	3,974,976,051
2012	3,518	4,395,625,082
2013	3,303	4,460,259,187
2014	3,302	4,121,196,117
TOTAL	16,931	22,272,653,099

Source: See Table 2.1.

Table 2.3 shows the total number of prime contracts awarded during each year of the Study period and total dollars paid for those contracts, by major procurement category.

**Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by Year (Dollars Paid)**

<b>PROCUREMENT CATEGORY &amp; YEAR</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS PAID (\$)</b>
<i>CONSTRUCTION</i>		
2010	320	1,860,997,666
2011	339	1,288,982,976
2012	323	1,586,676,652
2013	354	1,169,784,856
2014	330	860,693,285
<b>TOTAL</b>	<b>1,666</b>	<b>6,767,135,435</b>
<i>AE-CRS</i>		
2010	146	500,286,030
2011	136	529,201,792
2012	147	278,287,328
2013	90	93,736,947
2014	172	134,894,111
<b>TOTAL</b>	<b>691</b>	<b>1,536,406,209</b>
<i>MAINTENANCE</i>		
2010	224	106,798,533
2011	246	118,733,794
2012	281	41,770,839
2013	275	38,887,169
2014	298	49,870,873
<b>TOTAL</b>	<b>1,324</b>	<b>356,061,207</b>

**Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by Year (Dollars Paid), cont'd**

<b>PROCUREMENT CATEGORY &amp; YEAR</b>	<b>NUMBER OF PRIME CONTRACTS</b>	<b>DOLLARS PAID (\$)</b>
<i>IT</i>		
2010	200	316,590,273
2011	247	114,256,059
2012	229	117,150,712
2013	229	82,057,466
2014	286	52,871,425
TOTAL	1,191	682,925,935
<i>SERVICES</i>		
2010	417	1,231,699,907
2011	410	317,200,334
2012	393	535,586,293
2013	370	239,546,240
2014	381	116,055,212
TOTAL	1,971	2,440,087,986
<i>CSE</i>		
2010	1,933	328,206,076
2011	2,015	483,333,139
2012	2,045	303,031,855
2013	1,852	258,726,009
2014	1,594	257,720,174
TOTAL	9,439	1,631,017,254
<i>GRAND TOTAL</i>		
2010	3240	4,344,578,486
2011	3393	2,851,708,094
2012	3418	2,862,503,679
2013	3170	1,882,738,686
2014	3061	1,472,105,080
TOTAL	16282	13,413,634,025

Source: See Table 2.1.

Table 2.4 shows the total number of prime contracts awarded by each agency during each year of the Study period as well as dollars awarded and dollars paid for those contracts, by major procurement category.

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>CONSTRUCTION</b>	<b>1,900</b>	<b>8,422,190,102</b>	<b>1,666</b>	<b>6,767,135,431</b>
DGS	44	159,145,266	32	107,611,407
DPSCS	3	639,459	3	639,083
MDOT-MAA	26	418,259,869	18	275,213,620
MDOT-MPA	30	98,406,333	25	63,512,072
MDOT-MTA	49	266,399,238	40	146,861,907
MDOT-MVA	1	3,804,995	1	3,255,994
MDOT-SECRETARY	4	6,693,192	4	6,310,443
MDOT-SHA	720	2,126,153,801	574	1,491,112,201
MDTA	26	610,847,422	16	392,575,600
MES	33	74,183,197	32	69,897,549
MSU	13	145,655,480	13	145,117,344
PSC-ALLEGANY COUNTY	6	4,546,931	6	4,543,247
PSC-ANNE ARUNDEL COUNTY	65	203,669,534	55	128,098,986
PSC-BALTIMORE CITY	23	83,918,495	22	80,804,878
PSC-BALTIMORE COUNTY	45	276,865,126	41	250,157,669
PSC-CALVERT COUNTY	15	48,030,357	15	48,030,356
PSC-CAROLINE COUNTY	9	90,479,982	7	72,427,912
PSC-CARROLL COUNTY	18	55,030,003	17	50,440,835
PSC-CECIL COUNTY	12	25,250,036	12	21,766,788
PSC-CHARLES COUNTY	13	96,611,448	13	96,252,253
PSC-DORCHESTER COUNTY	26	2,698,234	26	2,689,157
PSC-FREDERICK COUNTY	57	117,625,062	57	117,440,573
PSC-GARRETT COUNTY	8	750,052	8	735,688
PSC-HARFORD COUNTY	23	72,660,489	18	51,265,742
PSC-HOWARD COUNTY	51	187,427,253	45	156,426,015

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>CONSTRUCTION</b>	<b>1,900</b>	<b>8,422,190,102</b>	<b>1,666</b>	<b>6,767,135,431</b>
PSC-MONTGOMERY COUNTY	60	726,531,014	60	701,980,083
PSC-PRINCE GEORGE'S COUNTY	30	255,078,727	29	250,842,940
PSC-QUEEN ANNE'S COUNTY	10	6,064,402	8	4,340,021
PSC-ST. MARY'S COUNTY	23	53,966,602	23	48,745,613
PSC-TALBOT COUNTY	6	2,404,334	6	2,388,608
PSC-WASHINGTON COUNTY	22	45,169,407	22	45,120,632
PSC-WICOMICO COUNTY	28	89,658,636	28	85,372,981
PSC-WORCESTER COUNTY	15	33,356,141	7	15,764,628
TOWSON UNIV	114	52,786,516	114	51,992,040
U OF M-BALT COUNTY	119	1,243,716,673	117	1,132,901,965
U OF M-BALTIMORE	33	46,386,537	33	46,266,474
U OF M-COLLG PARK	114	644,139,692	113	551,386,649
U OF M-UNIV COLL	6	47,180,168	6	46,845,480

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>AE-CRS</b>	<b>691</b>	<b>2,544,538,584</b>	<b>691</b>	<b>1,536,406,206</b>
DGS	123	54,017,834	123	44,479,962
DNR	1	2,405,698	1	2,405,698
DPSCS	3	114,941	3	114,935
EDUC	1	40,434	1	40,434
ENVI	1	1,062,913	1	1,062,913
MDOT-MAA	14	160,300,000	14	104,841,889
MDOT-MPA	12	39,449,985	12	23,851,825
MDOT-MTA	40	772,244,305	40	506,194,373
MDOT-MVA	1	182,750	1	0
MDOT-SECRETARY	3	4,000,000	3	908,770
MDOT-SHA	179	837,084,884	179	395,005,275
MDTA	42	456,340,001	42	280,467,851
MES	50	20,919,972	50	12,584,824
MSU	9	12,907,704	9	11,610,703
PSC-PRINCE GEORGE'S COUNTY	4	3,334,618	4	3,309,086
TOWSON UNIV	32	3,665,054	32	3,321,334
U OF M-BALT COUNTY	76	104,740,219	76	90,808,678
U OF M-BALTIMORE	33	5,523,779	33	4,847,450
U OF M-COLLG PARK	64	61,766,475	64	46,127,400
U OF M-UNIV COLL	3	4,437,019	3	4,422,803

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>MAINTENANCE</b>	<b>1,456</b>	<b>1,427,160,377</b>	<b>1,324</b>	<b>356,061,208</b>
DGS	280	458,041,615	242	74,991,506
DHMH	5	164,619	5	150,203
DHR	8	990,323	8	883,541
DJS	37	3,972,914	34	2,054,357
DNR	21	756,482	21	700,363
DPSCS	60	2,580,310	60	2,391,489
DSP	45	5,674,592	44	5,480,045
EDUC	1	28,088	1	28,088
MDOT-MAA	28	146,987,464	4	25,677,908
MDOT-MPA	4	2,301,947	3	60,071
MDOT-MTA	43	500,165,936	30	24,286,355
MDOT-MVA	2	1,970,543	1	1,770,558
MDOT-SECRETARY	40	3,514,425	35	1,055,794
MDOT-SHA	156	164,110,977	117	91,186,401
MDTA	4	3,643,830	2	29,021
MES	3	115,001	3	35,001
MSU	37	3,517,595	37	3,071,573
PSC-FREDERICK COUNTY	1	44,651	1	44,651
TOWSON UNIV	13	480,287	13	372,353
U OF M-BALT COUNTY	64	7,224,914	61	6,291,089
U OF M-BALTIMORE	69	29,881,500	69	29,800,955
U OF M-COLLG PARK	534	33,532,223	532	28,239,743
U OF M-UNIV COLL	1	57,460,143	1	57,460,143

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>IT</b>	<b>1,291</b>	<b>1,977,040,832</b>	<b>1,191</b>	<b>682,925,936</b>
DBM	3	3,764,872	3	3,396,064
DGS	8	1,680,123	8	1,649,398
DHMH	27	300,634,234	22	86,081,164
DHR	17	313,716,554	13	155,585,232
DJS	4	2,338,778	3	1,056,759
DNR	4	143,685	4	143,685
DOIT	48	695,726,535	33	74,923,263
DPSCS	41	46,863,376	35	17,961,499
DSP	16	12,494,204	13	3,876,032
EDUC	61	79,201,137	51	27,802,845
ENVI	6	2,628,900	3	1,293,490
LOTT	2	1,546,799	2	1,542,447
MDOT-MAA	46	29,777,363	43	11,762,248
MDOT-MPA	4	3,194,712	2	233,112
MDOT-MTA	21	16,794,066	14	3,319,898
MDOT-MVA	145	101,626,768	129	45,352,930
MDOT-SECRETARY	62	39,416,779	55	8,541,567
MDOT-SHA	99	112,389,606	87	46,911,446
MES	4	1,843,397	3	1,710,064
MSU	70	2,672,745	70	2,672,745
TOWSON UNIV	175	19,114,879	175	18,908,643
U OF M-BALT COUNTY	72	8,560,986	72	8,503,988
U OF M-BALTIMORE	137	25,116,726	137	25,086,429
U OF M-COLLG PARK	209	117,032,179	205	103,278,473
U OF M-UNIV COLL	10	38,761,431	9	31,332,516

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>SERVICES</b>	<b>2,154</b>	<b>5,853,224,032</b>	<b>1,971</b>	<b>2,440,087,984</b>
DBM	29	345,804,127	25	126,471,954
DGS	16	10,959,653	14	4,097,937
DHMH	130	748,969,900	111	424,725,632
DHR	72	999,020,045	59	830,022,838
DJS	45	103,978,581	38	17,320,991
DNR	33	32,729,516	31	26,885,144
DPSCS	57	904,330,067	51	83,327,227
DSP	58	17,441,894	56	10,096,449
EDUC	94	26,559,887	86	14,089,239
ENVI	25	15,165,369	22	1,307,283
LOTT	32	633,065,300	21	73,156,694
MDOT-MAA	32	83,209,589	29	23,202,317
MDOT-MPA	18	20,579,918	16	9,525,685
MDOT-MTA	143	1,049,183,491	116	356,730,841
MDOT-MVA	19	83,208,810	13	54,400,512
MDOT-SECRETARY	25	18,094,620	21	1,112,572
MDOT-SHA	107	41,734,944	92	17,188,769
MDTA	8	36,592,700	2	92,700
MES	58	11,910,718	52	4,749,205
MSU	122	20,479,205	118	15,539,715
TOWSON UNIV	87	78,762,277	80	71,006,951
U OF M-BALT COUNTY	439	161,571,900	426	84,521,919
U OF M-BALTIMORE	186	52,208,396	183	40,709,251
U OF M-COLLG PARK	311	38,688,749	304	33,716,427
U OF M-UNIV COLL	8	318,974,373	5	116,089,731

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>CSE</b>	<b>9,439</b>	<b>2,048,499,182</b>	<b>9,439</b>	<b>1,631,017,251</b>
DBM	1	43,599	1	16,495
DGS	1,521	599,246,642	1,521	370,998,639
DHMH	135	11,083,767	135	8,651,800
DHR	53	5,979,758	53	3,893,165
DJS	12	1,260,692	12	1,003,870
DNR	22	2,159,821	22	1,612,860
DOIT	46	68,866,901	46	33,004,947
DPSCS	837	74,189,900	837	37,396,973
DSP	119	8,723,735	119	8,031,119
EDUC	385	48,132,135	385	45,416,386
ENVI	30	1,201,408	30	371,740
LOTT	1	130,000	1	98,088
MDOT-MAA	155	52,645,519	155	38,610,341
MDOT-MPA	110	45,491,731	110	42,749,689
MDOT-MTA	947	315,669,895	947	282,094,875
MDOT-MVA	69	138,744,114	69	137,626,756
MDOT-SECRETARY	33	5,570,216	33	4,472,048
MDOT-SHA	383	59,269,474	383	57,259,331
MES	378	61,395,647	378	53,082,295
MSU	161	16,464,652	161	16,464,652
PSC-ANNE ARUNDEL COUNTY	2	1,843,641	2	1,828,876
PSC-CECIL COUNTY	1	93,860	1	93,860
PSC-DORCHESTER COUNTY	2	60,313	2	60,313
PSC-HARFORD COUNTY	10	566,104	10	566,104
TOWSON UNIV	210	13,868,269	210	12,302,080
U OF M-BALT COUNTY	1,306	151,126,912	1,306	143,341,651
U OF M-BALTIMORE	400	143,145,658	400	125,636,612
U OF M-COLLG PARK	2,097	220,057,166	2,097	203,029,790
U OF M-UNIV COLL	13	1,467,652	13	1,301,896

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>OVERALL</b>	<b>16,931</b>	<b>22,272,653,109</b>	<b>16,282</b>	<b>13,413,634,017</b>
DBM	33	349,612,597	29	129,884,512
DGS	1,992	1,283,091,133	1,940	603,828,849
DHMH	297	1,060,852,520	273	519,608,800
DHR	150	1,319,706,680	133	990,384,777
DJS	98	111,550,964	87	21,435,977
DNR	81	38,195,202	79	31,747,749
DOIT	94	764,593,436	79	107,928,209
DPSCS	1,001	1,028,718,052	989	141,831,207
DSP	238	44,334,425	232	27,483,644
EDUC	542	153,961,682	524	87,376,993
ENVI	62	20,058,590	56	4,035,426
LOTT	35	634,742,098	24	74,797,229
MDOT-MAA	301	891,179,803	263	479,308,323
MDOT-MPA	178	209,424,626	168	139,932,454
MDOT-MTA	1,243	2,920,456,931	1,187	1,319,488,247
MDOT-MVA	237	329,537,981	214	242,406,750
MDOT-SECRETARY	167	77,289,231	151	22,401,193
MDOT-SHA	1,644	3,340,743,687	1,432	2,098,663,424
MDTA	80	1,107,423,953	62	673,165,173
MES	526	170,367,932	518	142,058,938
MSU	412	201,697,383	408	194,476,734
PSC-ALLEGANY COUNTY	6	4,546,931	6	4,543,247
PSC-ANNE ARUNDEL COUNTY	67	205,513,175	57	129,927,862
PSC-BALTIMORE CITY	23	83,918,495	22	80,804,878
PSC-BALTIMORE COUNTY	45	276,865,126	41	250,157,669
PSC-CALVERT COUNTY	15	48,030,357	15	48,030,356
PSC-CAROLINE COUNTY	9	90,479,982	7	72,427,912
PSC-CARROLL COUNTY	18	55,030,003	17	50,440,835

**Table 2.4. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, State Fiscal Years 2010-2014, cont'd**

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED (\$)	NUMBER OF SUBSTANTIALLY COMPLETE PRIME CONTRACTS	DOLLARS PAID (\$)
<b>OVERALL</b>	<b>16,931</b>	<b>22,272,653,109</b>	<b>16,282</b>	<b>13,413,634,017</b>
PSC-CECIL COUNTY	13	25,343,896	13	21,860,648
PSC-CHARLES COUNTY	13	96,611,448	13	96,252,253
PSC-DORCHESTER COUNTY	28	2,758,547	28	2,749,470
PSC-FREDERICK COUNTY	58	117,669,713	58	117,485,224
PSC-GARRETT COUNTY	8	750,052	8	735,688
PSC-HARFORD COUNTY	33	73,226,593	28	51,831,846
PSC-HOWARD COUNTY	51	187,427,253	45	156,426,015
PSC-MONTGOMERY COUNTY	60	726,531,014	60	701,980,083
PSC-PRINCE GEORGE'S COUNTY	34	258,413,345	33	254,152,026
PSC-QUEEN ANNE'S COUNTY	10	6,064,402	8	4,340,021
PSC-ST. MARY'S COUNTY	23	53,966,602	23	48,745,613
PSC-TALBOT COUNTY	6	2,404,334	6	2,388,608
PSC-WASHINGTON COUNTY	22	45,169,407	22	45,120,632
PSC-WICOMICO COUNTY	28	89,658,636	28	85,372,981
PSC-WORCESTER COUNTY	15	33,356,141	7	15,764,628
TOWSON UNIV	631	168,677,283	624	157,903,403
U OF M-BALT COUNTY	2,076	1,676,941,603	2,058	1,466,369,290
U OF M-BALTIMORE	858	302,262,596	855	272,347,172
U OF M-COLLG PARK	3,329	1,115,216,483	3,315	965,778,484
U OF M-UNIV COLL	41	468,280,786	37	257,452,570

Source: See Table 2.1.

## **B. Geographic Market Definition for Contracting and Procurement**

To determine the geographic dimension of the State of Maryland's contracting and procurement markets, we used the Master Contract/Subcontract Database, as described in the previous section, to obtain the zip codes and thereby the county and state for each contractor and subcontractor establishment identified in the database. Using this location information, we then

calculated the percentage of State contract and subcontract dollars awarded to establishments by state and county during the study period. The geographic market area is defined as that region which accounts for approximately 75 percent of overall contracting and procurement spending by a given state or local government. Contractors and vendors with locations in the geographic market area account for the large majority of contracting and procurement expenditures by the State of Maryland during the study period.

**Table 2.5. Distribution of Contracting Dollars by Geographic Location, State Fiscal Years 2010-2014**

<b>Location</b>	<b>Con- struction (%)</b>	<b>AE- CRS (%)</b>	<b>Main- tenance (%)</b>	<b>IT (%)</b>	<b>Services (%)</b>	<b>CSE (%)</b>	<b>Total (%)</b>
<i><b>Dollars Awarded</b></i>							
Inside State of MD Market Area	89.4	92.5	72.9	84.2	77.8	59.3	82.4
Outside State of MD Market Area	10.6	7.5	27.1	15.8	22.2	40.7	17.6
<i><b>Dollars Paid</b></i>							
Inside State of MD Market Area	89.1	92.5	92.5	82.4	86.8	59.8	85.2
Outside State of MD Market Area	10.9	7.5	7.5	17.6	13.2	40.2	14.8
<i><b>Dollars Awarded</b></i>							
Inside Maryland	79.7	89.1	57.0	65.9	74.0	55.5	74.4
Outside Maryland	20.3	10.9	43.0	34.1	26.0	44.5	25.6
<i><b>Dollars Paid</b></i>							
Inside Maryland	79.4	89.2	67.0	60.5	82.2	59.8	76.8
Outside Maryland	20.6	10.3	33.0	39.5	17.8	40.2	23.2

Source: See Table 2.1.

Note: “State of MD Market Area” includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area. See below and fn. 39.

As shown in Table 2.5, the overall share of expenditures inside the geographic market area is 82.4 percent of dollars awarded and 85.2 percent of dollars paid. The share is 75.0 percent or greater in Construction, AE-CRS, IT, and Services regardless of whether dollars awarded or dollars paid is used as the metric. In Maintenance, it is slightly lower than 75 percent using award dollars as the metric, but over 92 percent using paid dollars. The average share (combining award and paid dollar figures) is highest in AE-CRS, followed by Construction, IT, Maintenance, Services, and finally CSE.<sup>37</sup> For purposes of this Study, therefore, the State’s

<sup>37</sup> For informational purposes, Table 2.5 also shows the share of awards and payments inside and outside the State of Maryland.

geographic market area is comprised of the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.<sup>38</sup>

Table 2.6 shows the geographic distribution of contract and procurement dollars across all procurement categories within the State of Maryland market area.

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<sup>38</sup> The Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area include, in Virginia, Arlington County, Clarke County, Culpeper County, Fairfax County, Fauquier County, Loudoun County, Prince William County, Rappahannock County, Spotsylvania County, Stafford County, Warren County, Alexandria city, Fairfax city, Falls Church city, Fredericksburg city, Manassas city, and Manassas Park city; and in West Virginia, Jefferson County.

**Table 2.6. Distribution of State of Maryland Contract Award Dollars by State and County, Inside the Market Area, State Fiscal Years 2010-2014**

STATE	COUNTY	AMOUNT (\$)	PERCENT	CUMULATIVE PERCENT
MD	BALTIMORE	3,760,879,188	20.49	20.49
MD	BALTIMORE CITY	3,022,850,655	16.47	36.95
MD	MONTGOMERY	1,954,518,606	10.65	47.60
MD	HOWARD	1,681,358,657	9.16	56.76
MD	ANNE ARUNDEL	1,577,464,865	8.59	65.35
MD	PRINCE GEORGES	1,513,159,191	8.24	73.59
MD	WASHINGTON	825,046,228	4.49	78.09
VA	FAIRFAX	634,656,204	3.46	81.55
MD	HARFORD	528,875,399	2.88	84.43
MD	FREDERICK	411,731,880	2.24	86.67
MD	ALLEGANY	382,579,880	2.08	88.75
DC	DISTRICT OF COLUMBIA	360,696,488	1.96	90.72
MD	CARROLL	246,268,366	1.34	92.06
VA	LOUDOUN	227,621,491	1.24	93.30
DE	NEW CASTLE	190,832,860	1.04	94.34
MD	WICOMICO	167,275,830	0.91	95.25
MD	CHARLES	141,057,465	0.77	96.02
VA	ARLINGTON	108,443,376	0.59	96.61
MD	KENT	93,019,729	0.51	97.12
VA	PRINCE WILLIAM	69,783,575	0.38	97.50
DE	SUSSEX	60,729,398	0.33	97.83
MD	CALVERT	47,589,360	0.26	98.09
MD	CAROLINE	44,510,300	0.24	98.33
VA	STAFFORD	40,375,496	0.22	98.55
VA	ALEXANDRIA CITY	35,740,474	0.19	98.74
MD	QUEEN ANNES	33,157,295	0.18	98.92
MD	TALBOT	25,421,905	0.14	99.06
MD	DORCHESTER	24,761,784	0.13	99.20
DE	KENT	24,005,366	0.13	99.33
MD	GARRETT	23,292,312	0.13	99.46

STATE	COUNTY	AMOUNT (\$)	PERCENT	CUMULATIVE PERCENT
MD	SAINT MARYS	19,927,720	0.11	99.56
MD	CECIL	17,993,453	0.10	99.66
MD	WORCESTER	14,775,442	0.08	99.74
VA	CLARKE	9,655,479	0.05	99.80
VA	FALLS CHURCH CITY	9,646,207	0.05	99.85
MD	SOMERSET	7,384,609	0.04	99.89
VA	MANASSAS CITY	6,460,859	0.04	99.92
VA	FAUQUIER	5,171,163	0.03	99.95
VA	WARREN	3,098,384	0.02	99.97
WV	JEFFERSON	1,432,146	0.01	99.98
VA	FREDERICKSBURG CITY	1,360,046	0.01	99.98
VA	SPOTSYLVANIA	1,265,330	0.01	99.99
VA	CULPEPER	706,238	0.00	99.99
VA	FAIRFAX CITY	639,592	0.00	100.00
VA	RAPPAHANNOCK	395,459	0.00	100.00
VA	MANASSAS PARK CITY	42,506	0.00	100.00

Source: See Table 2.1.

Outside the market area, counties with a significant amount of spending activity (defined by NERA as geographies that accounted for more than approximately 1.0 percent of total spending among three or more vendors) included:

#### CONSTRUCTION

YORK, PA  
 CHESTER, PA  
 ALLEGHENY, PA  
 LANCASTER, PA  
 LAWRENCE, PA  
 FRANKLIN, OH  
 MONTGOMERY, PA

#### CONSTRUCTION, CONT'D

FRANKLIN, PA  
 BERKS, PA  
 WASHINGTON, PA  
 WESTMORELAND, PA  
 RICHMOND CITY, VA  
 MECKLENBURG, NC  
 COOK, IL

CONSTRUCTION, CONT'D

CUYAHOGA, OH  
AMHERST, VA  
MARION, IN  
GLOUCESTER, NJ  
HARRISONBURG CITY, VA

AE-CRS

PHILADELPHIA, PA  
NEW YORK, NY  
ALLEGHENY, PA  
SUFFOLK, MA  
CUMBERLAND, PA  
HAMILTON, OH  
FULTON, GA  
DAUPHIN, PA  
DELAWARE, OH  
MIDDLESEX, MA  
ORANGE, CA  
MONTGOMERY, PA  
COOK, IL

MAINTENANCE

MIDDLESEX, MA  
DELAWARE, PA  
MORRIS, NJ  
DALLAS, TX  
ONTARIO PROVINCE, CANADA

IT

ALAMEDA, CA  
FULTON, GA

IT, CONT'D

GWINNETT, GA  
LOS ANGELES, CA  
SACRAMENTO, CA  
DALLAS, TX  
SAN DIEGO, CA  
NEW YORK, NY  
DENVER, CO  
VIRGINIA BEACH CITY, VA  
COOK, IL  
ORANGE, CA  
DUPAGE, IL  
DELAWARE, PA  
CHESTER, PA  
WASHINGTON, RI  
KING, WA  
MARION, IN

SERVICES

CLARK, NV  
DENVER, CO  
LOS ANGELES, CA  
MERCER, NJ  
ST. LOUIS, MO  
COOK, IL  
MONTGOMERY, PA  
MIDDLESEX, NJ  
PHILADELPHIA, PA  
SAN FRANCISCO, CA  
LUZERNE, PA  
KING, WA

SERVICES, CONT'D

FULTON, GA  
WILLIAMSON, TN  
NEW YORK, NY  
SUFFOLK, MA

CSE

BUCKS, PA  
COOK, IL  
HENRICO, VA  
MIDDLESEX, MA  
ALLEGHENY, PA

CSE, CONT'D

FULTON, GA  
LOS ANGELES, CA  
ST. LOUIS, MO  
CHESTER, PA  
PHILADELPHIA, PA  
FAIRFIELD, CT  
DUPAGE, IL  
SAN DIEGO, CA  
DALLAS, TX  
ORANGE, CA

### **C. Product Market Definition for Contracting and Procurement**

Using the major procurement categories for each prime contract and the primary NAICS codes assigned by NERA to each prime contractor and subcontractor in the Master Contract/Subcontract Database, we identified the most important Industry Groups within each contracting and procurement category, as measured by total dollars awarded. The relevant NAICS codes and their associated dollar weights appear below in Tables 2.7 through 2.12 for Construction, AE-CRS, Maintenance, IT, Services, and CSE, respectively.

Each Industry Group (four-digit NAICS) identified in Tables 2.7 through 2.12 consists of several more detailed Industries (four- and six-digit NAICS) and is also part of a more aggregated Industry Sub-sector (three-digit NAICS). Overall, State of Maryland contracting awards occur in 80 NAICS Industry Sub-sectors, 259 NAICS Industry Groups and 695 NAICS Industries. In Construction, contract spending occurs across 67 NAICS Industry Sub-sectors, 179 NAICS Industry Groups and 413 NAICS Industries. In Architecture & Engineering, spending occurs across 33 NAICS Industry Sub-sectors, 65 NAICS Industry Groups and 116 NAICS Industries. In Maintenance, spending occurs across 63 NAICS Industry Sub-sectors, 158 NAICS Industry Groups and 296 NAICS Industries. In IT, spending occurs across 47 NAICS Industry Sub-sectors, 98 NAICS Industry Groups and 167 NAICS Industries. In Services, spending occurs across 77 NAICS Industry Sub-sectors, 217 NAICS Industry Groups and 467 NAICS Industries. In CSE, spending occurs across 75 NAICS Industry Sub-sectors, 220 NAICS Industry Groups and 500 NAICS Industries.

Many industries are part of the State's contracting activities. However, Tables 2.7 through 2.12 demonstrate that actual contracting and subcontracting opportunities are not distributed evenly among these industries. The distribution of contract expenditures is, in fact, highly skewed. In

Construction, we see from Table 2.7 that just six Industry Groups alone (NAICS 2382, 2373, 2381, 2362, 2389 and 2383) account for over three-fourths of all award dollars, and just 15 Industry Groups account for over 90 percent, with the remainder distributed among another 164 additional Industry Groups.

**Table 2.7. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: Construction**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2382	Building Equipment Contractors	21.97	21.97
2373	Highway, Street, and Bridge Construction	18.46	40.44
2381	Foundation, Structure, and Building Exterior Contractors	15.05	55.48
2362	Nonresidential Building Construction	10.63	66.11
2389	Other Specialty Trade Contractors	4.91	71.02
2383	Building Finishing Contractors	4.34	75.36
3323	Architectural and Structural Metals Manufacturing	2.51	77.87
4233	Lumber and Other Construction Materials Merchant Wholesalers	2.32	80.19
4247	Petroleum and Petroleum Products Merchant Wholesalers	2.10	82.28
2371	Utility System Construction	2.08	84.36
2379	Other Heavy and Civil Engineering Construction	1.79	86.15
4842	Specialized Freight Trucking	1.45	87.59
5617	Services to Buildings and Dwellings	0.88	88.47
5413	Architectural, Engineering, and Related Services	0.87	89.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.80	90.15
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.78	90.93
3273	Cement and Concrete Product Manufacturing	0.75	91.68
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	0.72	92.40
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.61	93.01
3351	Electric Lighting Equipment Manufacturing	0.60	93.61
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	0.51	94.13
5619	Other Support Services	0.42	94.55
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	0.40	94.94
5616	Investigation and Security Services	0.38	95.33
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.33	95.65

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5415	Computer Systems Design and Related Services	0.28	95.93
3399	Other Miscellaneous Manufacturing	0.26	96.20
3219	Other Wood Product Manufacturing	0.26	96.46
5629	Remediation and Other Waste Management Services	0.25	96.70
4889	Other Support Activities for Transportation	0.21	96.92
2123	Nonmetallic Mineral Mining and Quarrying	0.17	97.09
3359	Other Electrical Equipment and Component Manufacturing	0.16	97.25
4422	Home Furnishings Stores	0.15	97.40
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.15	97.55
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.14	97.68
5613	Employment Services	0.13	97.81
4441	Building Material and Supplies Dealers	0.11	97.92
3311	Iron and Steel Mills and Ferroalloy Manufacturing	0.10	98.02
3329	Other Fabricated Metal Product Manufacturing	0.10	98.12
4539	Other Miscellaneous Store Retailers	0.09	98.21
5416	Management, Scientific, and Technical Consulting Services	0.09	98.31
3342	Communications Equipment Manufacturing	0.08	98.38
4431	Electronics and Appliance Stores	0.08	98.46
3339	Other General Purpose Machinery Manufacturing	0.07	98.52
4884	Support Activities for Road Transportation	0.06	98.59
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0.06	98.65
4442	Lawn and Garden Equipment and Supplies Stores	0.06	98.71
4821	Rail Transportation	0.06	98.77
4232	Furniture and Home Furnishing Merchant Wholesalers	0.05	98.82
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	0.05	98.88
3372	Office Furniture (including Fixtures) Manufacturing	0.05	98.93
4543	Direct Selling Establishments	0.05	98.98
3365	Railroad Rolling Stock Manufacturing	0.05	99.03
	Balance of industries (126 industry groups)	0.97	100.00
	<i>TOTAL - \$8,422,190,102</i>		

Source: See Table 2.1.

In AE-CRS (Table 2.8), there is an even more concentrated pattern—one Industry Group alone (NAICS 5413) accounts for almost 90 percent of all award dollars and four Industry Groups account for over 95 percent, with the balance distributed among another 61 Industry Groups.

**Table 2.8. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: AE-CRS**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5413	Architectural, Engineering, and Related Services	87.31	87.31
5416	Management, Scientific, and Technical Consulting Services	3.76	91.07
2379	Other Heavy and Civil Engineering Construction	3.65	94.72
2373	Highway, Street, and Bridge Construction	0.92	95.64
5619	Other Support Services	0.78	96.42
2382	Building Equipment Contractors	0.64	97.06
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.50	97.56
6242	Community Food and Housing, and Emergency and Other Relief Services	0.40	97.96
5418	Advertising, Public Relations, and Related Services	0.34	98.30
5415	Computer Systems Design and Related Services	0.31	98.61
5417	Scientific Research and Development Services	0.28	98.89
5613	Employment Services	0.17	99.06
	Balance of industries (53 industry groups)	0.94	100.00
	<i>TOTAL - \$2,544,538,584</i>		

Source: See Table 2.1.

In Maintenance (Table 2.9), just five Industry Groups account for more than three-fifths of all awards, 9 Industry Groups account for almost three-fourths, and the remainder is distributed among 149 additional Industry Groups.

**Table 2.9. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: Maintenance**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3365	Railroad Rolling Stock Manufacturing	21.86	21.86
4247	Petroleum and Petroleum Products Merchant Wholesalers	20.24	42.10
2382	Building Equipment Contractors	7.79	49.89
5612	Facilities Support Services	5.57	55.46
5616	Investigation and Security Services	4.91	60.37

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5617	Services to Buildings and Dwellings	4.35	64.72
2373	Highway, Street, and Bridge Construction	4.17	68.89
2389	Other Specialty Trade Contractors	3.39	72.28
2381	Foundation, Structure, and Building Exterior Contractors	2.46	74.75
5614	Business Support Services	2.22	76.97
4852	Interurban and Rural Bus Transportation	1.93	78.90
4884	Support Activities for Road Transportation	1.65	80.56
2362	Nonresidential Building Construction	1.47	82.03
2379	Other Heavy and Civil Engineering Construction	1.33	83.36
4882	Support Activities for Rail Transportation	1.31	84.67
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	1.25	85.92
4543	Direct Selling Establishments	1.17	87.09
5413	Architectural, Engineering, and Related Services	1.06	88.15
4851	Urban Transit Systems	0.99	89.14
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.97	90.11
5621	Waste Collection	0.71	90.82
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.69	91.51
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	0.59	92.11
3342	Communications Equipment Manufacturing	0.53	92.64
4842	Specialized Freight Trucking	0.50	93.14
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.42	93.56
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.40	93.96
4411	Automobile Dealers	0.37	94.33
3363	Motor Vehicle Parts Manufacturing	0.34	94.67
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.33	95.00
5416	Management, Scientific, and Technical Consulting Services	0.32	95.32
2383	Building Finishing Contractors	0.32	95.64
5622	Waste Treatment and Disposal	0.31	95.96
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.30	96.25
7211	Traveler Accommodation	0.28	96.53
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	0.26	96.79

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5613	Employment Services	0.26	97.04
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.22	97.27
3351	Electric Lighting Equipment Manufacturing	0.21	97.47
5629	Remediation and Other Waste Management Services	0.20	97.67
3323	Architectural and Structural Metals Manufacturing	0.18	97.85
2371	Utility System Construction	0.17	98.01
4246	Chemical and Allied Products Merchant Wholesalers	0.16	98.18
5415	Computer Systems Design and Related Services	0.15	98.32
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.14	98.46
4442	Lawn and Garden Equipment and Supplies Stores	0.14	98.60
8111	Automotive Repair and Maintenance	0.13	98.73
4441	Building Material and Supplies Dealers	0.09	98.83
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.09	98.91
3273	Cement and Concrete Product Manufacturing	0.06	98.98
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	0.06	99.04
	Balance of industries (107 industry groups)	0.96	100.00
	<i>TOTAL - \$1,427,160,377</i>		

Source: See Table 2.1.

In IT (Table 2.10), we see that just two Industry Groups account for almost two-thirds of all award dollars, 9 Industry Groups account for 90 percent, and the remainder is distributed among 89 additional Industry Groups.

**Table 2.10. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: IT**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5415	Computer Systems Design and Related Services	48.62	48.62
3342	Communications Equipment Manufacturing	15.81	64.43
5112	Software Publishers	7.40	71.82
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	6.34	78.17
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	3.33	81.49
5416	Management, Scientific, and Technical Consulting Services	2.74	84.23

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5613	Employment Services	2.28	86.51
2362	Nonresidential Building Construction	1.94	88.45
5418	Advertising, Public Relations, and Related Services	1.53	89.98
5413	Architectural, Engineering, and Related Services	1.23	91.21
2371	Utility System Construction	1.08	92.29
2381	Foundation, Structure, and Building Exterior Contractors	0.97	93.27
5614	Business Support Services	0.96	94.22
3341	Computer and Peripheral Equipment Manufacturing	0.79	95.01
5417	Scientific Research and Development Services	0.77	95.79
5171	Wired Telecommunications Carriers	0.59	96.37
6219	Other Ambulatory Health Care Services	0.52	96.89
5179	Other Telecommunications	0.49	97.39
5182	Data Processing, Hosting, and Related Services	0.42	97.81
6117	Educational Support Services	0.28	98.09
2383	Building Finishing Contractors	0.22	98.30
4431	Electronics and Appliance Stores	0.17	98.47
2382	Building Equipment Contractors	0.16	98.63
2389	Other Specialty Trade Contractors	0.15	98.78
5111	Newspaper, Periodical, Book, and Directory Publishers	0.15	98.93
3231	Printing and Related Support Activities	0.13	99.07
	Balance of industries (72 industry groups)	0.93	100.00
<i>TOTAL - \$1,977,040,832</i>			

Source: See Table 2.1.

In Services (Table 2.11), we see that six Industry Groups account for just over half of all award dollars, 14 Industry Groups account for three-fourths, and the remainder is distributed among 203 additional Industry Groups.

**Table 2.11. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: Services**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2211	Electric Power Generation, Transmission and Distribution	12.81	12.81
6219	Other Ambulatory Health Care Services	12.79	25.61
5611	Office Administrative Services	8.06	33.67

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3399	Other Miscellaneous Manufacturing	7.78	41.45
5418	Advertising, Public Relations, and Related Services	5.91	47.36
4851	Urban Transit Systems	4.88	52.24
4821	Rail Transportation	4.07	56.30
6239	Other Residential Care Facilities	3.62	59.92
4859	Other Transit and Ground Passenger Transportation	3.61	63.52
5241	Insurance Carriers	3.34	66.87
5416	Management, Scientific, and Technical Consulting Services	3.10	69.97
5614	Business Support Services	1.91	71.88
5415	Computer Systems Design and Related Services	1.86	73.73
5413	Architectural, Engineering, and Related Services	1.39	75.13
6212	Offices of Dentists	1.39	76.51
5613	Employment Services	1.33	77.85
7223	Special Food Services	1.24	79.09
6241	Individual and Family Services	1.22	80.31
2212	Natural Gas Distribution	1.14	81.45
3342	Communications Equipment Manufacturing	1.08	82.53
4244	Grocery and Related Product Merchant Wholesalers	1.05	83.57
4247	Petroleum and Petroleum Products Merchant Wholesalers	0.83	84.40
4242	Drugs and Druggists' Sundries Merchant Wholesalers	0.74	85.14
3231	Printing and Related Support Activities	0.74	85.88
5191	Other Information Services	0.68	86.55
5151	Radio and Television Broadcasting	0.65	87.20
4853	Taxi and Limousine Service	0.63	87.83
5242	Agencies, Brokerages, and Other Insurance Related Activities	0.57	88.40
4543	Direct Selling Establishments	0.55	88.95
2213	Water, Sewage and Other Systems	0.54	89.49
3365	Railroad Rolling Stock Manufacturing	0.51	90.00
5617	Services to Buildings and Dwellings	0.51	90.51
5612	Facilities Support Services	0.48	90.99
2382	Building Equipment Contractors	0.47	91.46
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	0.42	91.88

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
8129	Other Personal Services	0.41	92.29
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.38	92.67
5615	Travel Arrangement and Reservation Services	0.32	93.00
5172	Wireless Telecommunications Carriers (except Satellite)	0.32	93.31
6214	Outpatient Care Centers	0.31	93.62
5179	Other Telecommunications	0.30	93.92
5616	Investigation and Security Services	0.30	94.22
5419	Other Professional, Scientific, and Technical Services	0.29	94.51
5111	Newspaper, Periodical, Book, and Directory Publishers	0.29	94.80
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	0.28	95.08
5411	Legal Services	0.25	95.32
5311	Lessors of Real Estate	0.24	95.57
5221	Depository Credit Intermediation	0.23	95.79
6213	Offices of Other Health Practitioners	0.23	96.02
5121	Motion Picture and Video Industries	0.22	96.24
4855	Charter Bus Industry	0.22	96.46
9xxx	State or Local Government	0.19	96.65
4852	Interurban and Rural Bus Transportation	0.19	96.84
5417	Scientific Research and Development Services	0.18	97.03
5619	Other Support Services	0.17	97.20
5112	Software Publishers	0.17	97.36
4842	Specialized Freight Trucking	0.16	97.52
6216	Home Health Care Services	0.15	97.67
8111	Automotive Repair and Maintenance	0.12	97.79
5313	Activities Related to Real Estate	0.11	97.90
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.11	98.01
3254	Pharmaceutical and Medicine Manufacturing	0.10	98.11
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	0.09	98.19
5622	Waste Treatment and Disposal	0.08	98.28
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	0.08	98.35
4922	Local Messengers and Local Delivery	0.07	98.43

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
6211	Offices of Physicians	0.07	98.50
7139	Other Amusement and Recreation Industries	0.07	98.56
4241	Paper and Paper Product Merchant Wholesalers	0.07	98.63
5621	Waste Collection	0.07	98.70
7132	Gambling Industries	0.06	98.76
5629	Remediation and Other Waste Management Services	0.06	98.82
5182	Data Processing, Hosting, and Related Services	0.05	98.87
2379	Other Heavy and Civil Engineering Construction	0.05	98.92
5152	Cable and Other Subscription Programming	0.04	98.96
4542	Vending Machine Operators	0.04	99.00
	Balance of industries (141 industry groups)	1.00	100.00
	<i>TOTAL - \$5,853,224,032</i>		

Source: See Table 2.1.

Finally, in CSE (Table 2.12), we see that just 10 Industry Groups account for almost half of all award dollars, 26 Industry Groups account for three-fourths, and the remainder is distributed among 194 additional Industry Groups.

**Table 2.12. Distribution of Contract and Subcontract Dollars Awarded by Industry Group, State Fiscal Years 2010-2014: CSE**

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3361	Motor Vehicle Manufacturing	9.09	9.09
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	6.90	15.99
4411	Automobile Dealers	5.44	21.43
4246	Chemical and Allied Products Merchant Wholesalers	5.20	26.64
4244	Grocery and Related Product Merchant Wholesalers	4.78	31.42
3364	Aerospace Product and Parts Manufacturing	3.86	35.28
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3.72	39.00
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	3.69	42.68
5172	Wireless Telecommunications Carriers (except Satellite)	3.39	46.07
7223	Special Food Services	3.15	49.23
2212	Natural Gas Distribution	2.96	52.19
4236	Household Appliances and Electrical and Electronic	2.93	55.12

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
	Goods Merchant Wholesalers		
3342	Communications Equipment Manufacturing	2.83	57.96
4532	Office Supplies, Stationery, and Gift Stores	2.00	59.96
5415	Computer Systems Design and Related Services	1.82	61.78
4247	Petroleum and Petroleum Products Merchant Wholesalers	1.64	63.42
2382	Building Equipment Contractors	1.61	65.03
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1.60	66.63
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1.60	68.23
3341	Computer and Peripheral Equipment Manufacturing	1.41	69.64
5112	Software Publishers	1.35	70.99
3231	Printing and Related Support Activities	0.90	71.89
2211	Electric Power Generation, Transmission and Distribution	0.87	72.76
4413	Automotive Parts, Accessories, and Tire Stores	0.85	73.61
4461	Health and Personal Care Stores	0.83	74.43
3365	Railroad Rolling Stock Manufacturing	0.80	75.23
3399	Other Miscellaneous Manufacturing	0.80	76.03
2213	Water, Sewage and Other Systems	0.75	76.78
3333	Commercial and Service Industry Machinery Manufacturing	0.74	77.53
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.74	78.26
4241	Paper and Paper Product Merchant Wholesalers	0.73	78.99
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0.72	79.70
3259	Other Chemical Product and Preparation Manufacturing	0.71	80.41
2373	Highway, Street, and Bridge Construction	0.65	81.06
5111	Newspaper, Periodical, Book, and Directory Publishers	0.62	81.68
3391	Medical Equipment and Supplies Manufacturing	0.60	82.28
8111	Automotive Repair and Maintenance	0.59	82.87
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.58	83.45
3118	Bakeries and Tortilla Manufacturing	0.58	84.03
4842	Specialized Freight Trucking	0.54	84.57
4441	Building Material and Supplies Dealers	0.50	85.07
5413	Architectural, Engineering, and Related Services	0.48	85.55
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.47	86.01
3331	Agriculture, Construction, and Mining Machinery	0.46	86.48

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
	Manufacturing		
3117	Seafood Product Preparation and Packaging	0.43	86.90
3351	Electric Lighting Equipment Manufacturing	0.42	87.32
4431	Electronics and Appliance Stores	0.40	87.72
1121	Cattle Ranching and Farming	0.38	88.11
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.38	88.49
4881	Support Activities for Air Transportation	0.37	88.86
5417	Scientific Research and Development Services	0.36	89.22
3339	Other General Purpose Machinery Manufacturing	0.31	89.52
5171	Wired Telecommunications Carriers	0.30	89.82
4543	Direct Selling Establishments	0.29	90.12
3353	Electrical Equipment Manufacturing	0.28	90.40
4242	Drugs and Druggists' Sundries Merchant Wholesalers	0.27	90.67
6219	Other Ambulatory Health Care Services	0.26	90.93
3344	Semiconductor and Other Electronic Component Manufacturing	0.26	91.19
3332	Industrial Machinery Manufacturing	0.25	91.44
3323	Architectural and Structural Metals Manufacturing	0.25	91.69
3366	Ship and Boat Building	0.24	91.93
3359	Other Electrical Equipment and Component Manufacturing	0.24	92.16
4481	Clothing Stores	0.22	92.38
4232	Furniture and Home Furnishing Merchant Wholesalers	0.21	92.59
3261	Plastics Product Manufacturing	0.21	92.79
5416	Management, Scientific, and Technical Consulting Services	0.20	92.99
3329	Other Fabricated Metal Product Manufacturing	0.20	93.19
3254	Pharmaceutical and Medicine Manufacturing	0.19	93.38
3121	Beverage Manufacturing	0.18	93.55
3115	Dairy Product Manufacturing	0.18	93.73
5613	Employment Services	0.18	93.90
4541	Electronic Shopping and Mail-Order Houses	0.16	94.07
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	0.16	94.22
1142	Hunting and Trapping	0.15	94.37
2389	Other Specialty Trade Contractors	0.15	94.52
5191	Other Information Services	0.14	94.66
3272	Glass and Glass Product Manufacturing	0.14	94.80

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
4539	Other Miscellaneous Store Retailers	0.14	94.94
3363	Motor Vehicle Parts Manufacturing	0.14	95.07
3152	Cut and Sew Apparel Manufacturing	0.13	95.21
5614	Business Support Services	0.13	95.34
5322	Consumer Goods Rental	0.12	95.46
5616	Investigation and Security Services	0.12	95.59
8112	Electronic and Precision Equipment Repair and Maintenance	0.11	95.70
4889	Other Support Activities for Transportation	0.11	95.81
7211	Traveler Accommodation	0.11	95.92
4512	Book Stores and News Dealers	0.11	96.03
5418	Advertising, Public Relations, and Related Services	0.11	96.13
3241	Petroleum and Coal Products Manufacturing	0.10	96.24
2383	Building Finishing Contractors	0.10	96.34
5321	Automotive Equipment Rental and Leasing	0.10	96.44
4421	Furniture Stores	0.10	96.53
5612	Facilities Support Services	0.09	96.63
7225	Restaurants and Other Eating Places	0.09	96.72
5617	Services to Buildings and Dwellings	0.09	96.81
4882	Support Activities for Rail Transportation	0.09	96.90
4511	Sporting Goods, Hobby, and Musical Instrument Stores	0.09	96.98
5629	Remediation and Other Waste Management Services	0.08	97.07
4922	Local Messengers and Local Delivery	0.08	97.15
1123	Poultry and Egg Production	0.08	97.23
4412	Other Motor Vehicle Dealers	0.08	97.30
4452	Specialty Food Stores	0.08	97.38
2123	Nonmetallic Mineral Mining and Quarrying	0.07	97.45
5182	Data Processing, Hosting, and Related Services	0.07	97.53
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.07	97.60
4859	Other Transit and Ground Passenger Transportation	0.07	97.67
6213	Offices of Other Health Practitioners	0.07	97.74
6215	Medical and Diagnostic Laboratories	0.07	97.80
3119	Other Food Manufacturing	0.07	97.87
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	0.06	97.93
3324	Boiler, Tank, and Shipping Container Manufacturing	0.06	97.99

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3312	Steel Product Manufacturing from Purchased Steel	0.06	98.06
2381	Foundation, Structure, and Building Exterior Contractors	0.06	98.12
2362	Nonresidential Building Construction	0.06	98.18
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	0.06	98.23
2371	Utility System Construction	0.05	98.29
5222	Nondepository Credit Intermediation	0.05	98.33
3251	Basic Chemical Manufacturing	0.05	98.38
5121	Motion Picture and Video Industries	0.05	98.43
5619	Other Support Services	0.05	98.48
4442	Lawn and Garden Equipment and Supplies Stores	0.05	98.53
3311	Iron and Steel Mills and Ferroalloy Manufacturing	0.05	98.57
3335	Metalworking Machinery Manufacturing	0.05	98.62
3321	Forging and Stamping	0.04	98.66
4542	Vending Machine Operators	0.04	98.71
3255	Paint, Coating, and Adhesive Manufacturing	0.04	98.75
3222	Converted Paper Product Manufacturing	0.04	98.79
5419	Other Professional, Scientific, and Technical Services	0.04	98.84
8123	Drycleaning and Laundry Services	0.04	98.88
3362	Motor Vehicle Body and Trailer Manufacturing	0.03	98.91
5152	Cable and Other Subscription Programming	0.03	98.94
6211	Offices of Physicians	0.03	98.98
3372	Office Furniture (including Fixtures) Manufacturing	0.03	99.01
	Balance of industries (88 industry groups)	0.99	100.00
	<i>TOTAL - \$2,048,499,182</i>		

Source: See Table 2.1.

The resulting percentage weights from these NAICS Sub-sectors, Groups, and Industries are used below in Chapter III to calculate average M/WBE availability figures for Construction, AE-CRS, Maintenance, IT, Services and CSE.<sup>39</sup>

<sup>39</sup> After re-normalizing the percentage weights to sum to 100.

### III. M/WBE Availability in the State of Maryland's Market Area

#### A. Introduction

Estimates of M/WBE availability are an important element of the State of Maryland's disparity study since they provide benchmarks for assessing the effectiveness of its efforts to encourage M/WBE participation in its contracting and procurement. In addition, they provide a means by which to establish overall goals as well as contract-level goals for M/WBE participation that are tailored to its relevant market area.

Many approaches to estimating availability suffer from internal inconsistency since the data employed to construct the availability numerator (*i.e.*, the total number of M/WBE establishments in the market area) are measured differently than the data employed to construct the availability denominator (*i.e.*, the total number of establishments in the market area). For example, the numerator might be drawn from an agency's internal list of certified M/WBEs while the denominator might be drawn from Census data. Since the methods used to identify and certify firms as M/WBEs are different from the methods used by the Census Bureau to count business establishments, such approaches inevitably compare "apples to oranges."

For this Study, we measure availability using an approach that ensures an "apples to apples" comparison between the availability numerator and denominator. This "Custom Census" method was pioneered by NERA and has been favorably reviewed by each court that has examined it to date. The Tenth Circuit found the custom census approach to be "a more sophisticated method to calculate availability than the earlier studies [by the other consultant in this case]."<sup>40</sup> Likewise, this method was successful in the defense of the DBE programs for Minnesota DOT<sup>41</sup> and Illinois DOT,<sup>42</sup> the M/WBE construction program for the City of Chicago,<sup>43</sup> and, most recently, in the successful defense of a DBE program challenge to U.S. DOT, the Illinois DOT, and the Illinois State Toll Highway Authority.<sup>44</sup>

In addition to its favorable reception in the courts,<sup>45</sup> when properly executed, the Custom Census method is superior to other approaches for at least three reasons. First, as already mentioned, it provides an internally consistent and rigorous "apples to apples" comparison between establishments in the availability numerator and those in the denominator. Second, it comports with the remedial nature of most M/WBE policies by measuring overall M/WBE availability in

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<sup>40</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 966 (10<sup>th</sup> Cir. 2003) ("*Concrete Works IV*"), *cert. denied*, 540 U.S. 1027 (2003).

<sup>41</sup> *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8<sup>th</sup> Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004).

<sup>42</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007).

<sup>43</sup> *Builders Ass'n of Greater Chicago v. City of Chicago*, 298 F.Supp. 2d 725 (N.D. Ill. 2003).

<sup>44</sup> *Midwest Fence Corp. v. United States Department of Transportation, et al.*, 84 F.Supp. 3d 705 (N.D. Ill. 2015), *aff'd*, 2016 U.S. App. LEXIS 19959 (7<sup>th</sup> Cir. November 4, 2016).

<sup>45</sup> See Wainwright and Holt (2010, pp. 30-44).

the relevant market area as opposed to only those businesses currently certified by an agency.<sup>46</sup> Third, a properly executed Custom Census is less likely to be tainted by the effects of past and present discrimination than other methods.<sup>47</sup>

The Custom Census method has seven steps. These are:

1. Create a database of representative and recent State of Maryland contracts in Construction, AE-CRS, Maintenance, IT, Services and CSE;
2. Identify the State's relevant geographic market from this database;
3. Identify the State's relevant product market from this database;
4. Count all business establishments in the relevant market area;
5. Identify listed M/WBE establishments in the relevant market area;
6. Verify the ownership status of listed M/WBEs; and
7. Verify the ownership status of all other firms in the relevant market area.

Steps 1-3 were described above in Chapter II. Steps 4-7 are described in more detail below.

### **B. Identifying Business Establishments in the Relevant Markets**

M/WBE availability (unweighted) is defined as the number of M/WBEs divided by the total number of business establishments in the State of Maryland's contracting market area—what we will refer to as the Baseline Business Universe.<sup>48</sup> Determining the total number of business establishments in the market area, however, is a less complex task than determining the number of minority- or women-owned establishments in those markets. The latter has three main parts: (1) identify all listed M/WBEs in the relevant market; (2) verify the ownership status of listed M/WBEs; and (3) estimate the number of unlisted M/WBEs in the relevant market. This section describes how these tasks were accomplished.

It is important to note that NERA's availability analysis is free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. Factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the market area. Despite the obvious relationship, some

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<sup>46</sup> See *Northern Contracting*, 473 F.3d at 723 (“We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net.”).

<sup>47</sup> See Section B.5., below, for further discussion of this point.

<sup>48</sup> To yield a percentage, the resulting figure is multiplied by 100.

commentators argue that disparities should only be assessed between firms with similar “capacities.”<sup>49</sup>

Several courts have properly refused to make the results of discrimination the benchmark for non-discrimination.<sup>50</sup> They have acknowledged that M/WBEs may be smaller, newer, and otherwise less competitive than non-M/WBEs *because of* the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these “capacity” factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.<sup>51</sup>

## 1. Estimate the Total Number of Business Establishments in the Market

We used data supplied by Dun & Bradstreet to determine the total number of business establishments operating in the relevant geographic and product markets (these markets were discussed in the previous chapter). Dun & Bradstreet produces the most comprehensive publicly available database of business establishments in the U.S. This database contains over 17 million U.S. records and is updated continuously. Each record in Dun & Bradstreet represents a business establishment and includes the business name, address, telephone number, NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet), and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include, among others, annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U.S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We used the Dun & Bradstreet database to identify the total number of businesses in each NAICS code that was identified as part of the State's product market. Table 3.1 shows the number of businesses identified in each NAICS Industry Group within the Construction

<sup>49</sup> See, e.g., *La Noue* (2006). Most of La Noue's expert report in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002), including his views on “capacity,” was rejected by the court on the basis that it was legal opinion and not expert analysis. According to the court, “[legal analysis] is an issue solely for the Court and not for the presentation of expert testimony....” (see Defendants-Appellees' Brief, *Gross Seed Company v. Nebraska Department of Roads*, on appeal to the Eighth Circuit Court of Appeals).

<sup>50</sup> *North Shore Concrete and Assoc., Inc. v. City of New York*, No. 94-CV-4017, 1998 WL 273027 at \*24-31 (E.D.N.Y. April 12, 1998) (firm size not a proper measure of capacity); *Concrete Works of Colorado, Inc. v. City and County of Denver, et al.*, 321 F.3d 950, 981, 983 (10<sup>th</sup> Cir. 2003), *cert. denied*, 540 U.S. 1027 (2003) (“MWBE construction firms are generally smaller and less experienced *because of* discrimination.... Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a particular contract.” (emphasis in the originals)). See also *Northern Contracting, Inc. v. State of Illinois, et al.*, 473 F.3d 715, 723 (7<sup>th</sup> Cir. 2007) (“We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net [than a simple count of the number of registered and prequalified DBEs]”).

<sup>51</sup> *Concrete Works*, 321 F.3d at 981 (emphasis in the original). See also Wainwright and Holt (2010), Appendix B “Understanding Capacity,” and Section B.5, below.

category, along with the associated industry weight according to dollars awarded. Comparable data for AE-CRS, Maintenance, IT, Services and CSE appear in Tables 3.2 through 3.6.<sup>52</sup>

Although numerous industries are represented in the State of Maryland Baseline Business Universe, contracting and subcontracting opportunities are not distributed evenly among them. Indeed, the distribution of contract expenditures is quite skewed, as documented above in Chapter II.<sup>53</sup>

**Table 3.1. Construction—Number of Establishments and Industry Weight, by NAICS Code**

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2382	Building Equipment Contractors	9,358	22.19	22.19
2373	Highway, Street, and Bridge Construction	819	18.65	40.84
2381	Foundation, Structure, and Building Exterior Contractors	4,062	15.20	56.04
2362	Nonresidential Building Construction	2,462	10.73	66.77
2389	Other Specialty Trade Contractors	5,579	4.96	71.73
2383	Building Finishing Contractors	5,230	4.38	76.11
3323	Architectural and Structural Metals Manufacturing	328	2.54	78.64
4233	Lumber and Other Construction Materials Merchant Wholesalers	946	2.34	80.99
4247	Petroleum and Petroleum Products Merchant Wholesalers	212	2.12	83.10
2371	Utility System Construction	424	2.10	85.20
2379	Other Heavy and Civil Engineering Construction	230	1.80	87.01
4842	Specialized Freight Trucking	255	1.45	88.46
5413	Architectural, Engineering, and Related Services	7,638	0.87	89.33
5617	Services to Buildings and Dwellings	7,805	0.87	90.20
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,792	0.80	91.00
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	209	0.79	91.79
3273	Cement and Concrete Product Manufacturing	216	0.75	92.55
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	849	0.72	93.27
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	646	0.61	93.88
3351	Electric Lighting Equipment Manufacturing	57	0.60	94.48
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,037	0.51	94.99
5619	Other Support Services	66,060	0.42	95.41
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	236	0.40	95.81
5616	Investigation and Security Services	1,632	0.38	96.19

<sup>52</sup> The industry weights in Tables 3.1 through 3.12 differ slightly from those that appear above in Tables 2.7 through 2.12, because the weights used in Chapter III through the end of the report are based on those industries that account for 99 percent of award and paid dollars, whereas the industry weights in Chapter II are based on 100 percent of award and paid dollars.

<sup>53</sup> Analogous sets of weights using paid dollars were also produced. They are similar and not published here due to space considerations.

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NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,176	0.33	96.52
5415	Computer Systems Design and Related Services	15,405	0.28	96.81
3399	Other Miscellaneous Manufacturing	982	0.26	97.07
3219	Other Wood Product Manufacturing	267	0.25	97.32
5629	Remediation and Other Waste Management Services	312	0.23	97.55
4889	Other Support Activities for Transportation	2,373	0.21	97.77
2123	Nonmetallic Mineral Mining and Quarrying	14	0.15	97.92
3359	Other Electrical Equipment and Component Mfg.	195	0.15	98.07
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	986	0.14	98.22
4422	Home Furnishings Stores	1,333	0.14	98.36
5613	Employment Services	820	0.12	98.47
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	57	0.12	98.59
3311	Iron and Steel Mills and Ferroalloy Manufacturing	34	0.10	98.69
4441	Building Material and Supplies Dealers	1,061	0.10	98.79
4539	Other Miscellaneous Store Retailers	3,412	0.09	98.88
5416	Management, Scientific, and Technical Consulting Svcs.	16,376	0.08	98.96
3329	Other Fabricated Metal Product Manufacturing	67	0.08	99.04
4431	Electronics and Appliance Stores	2,498	0.07	99.11
3342	Communications Equipment Manufacturing	76	0.07	99.17
4884	Support Activities for Road Transportation	181	0.06	99.24
4442	Lawn and Garden Equipment and Supplies Stores	320	0.06	99.30
4821	Rail Transportation	38	0.06	99.36
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	31	0.06	99.41
4232	Furniture and Home Furnishing Merchant Wholesalers	984	0.06	99.47
4543	Direct Selling Establishments	249	0.05	99.52
3365	Railroad Rolling Stock Manufacturing	13	0.05	99.57
5312	Offices of Real Estate Agents and Brokers	10,953	0.05	99.62
3372	Office Furniture (including Fixtures) Manufacturing	61	0.05	99.67
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	53	0.05	99.72
2211	Electric Power Generation, Transmission and Distribution	311	0.05	99.76
5621	Waste Collection	77	0.04	99.80
3339	Other General Purpose Machinery Manufacturing	9	0.03	99.83
5321	Automotive Equipment Rental and Leasing	436	0.03	99.86
3333	Commercial and Service Industry Machinery Manufacturing	106	0.03	99.89
5242	Agencies, Brokerages, and Other Insurance Related Activities	4,733	0.03	99.92
4931	Warehousing and Storage	512	0.03	99.95
4421	Furniture Stores	1,112	0.03	99.97
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	195	0.03	100.00

Sources: Dun & Bradstreet; M/WBE business directory information compiled by NERA. Notes: (1) The dollar-based industry weight and cumulative industry weight are expressed as percentages; (2) Cumulative percentages do not always sum to 100 because a very small number of NAICS codes identified as being in the study universe were not associated with establishments that had a presence in the market area.

**Table 3.2. AE-CRS—Number of Establishments and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	10,060	88.19	88.19
5416	Management, Scientific, and Technical Consulting Services	42,256	3.80	91.99
2379	Other Heavy and Civil Engineering Construction	230	3.69	95.68
2373	Highway, Street, and Bridge Construction	819	0.93	96.61
5619	Other Support Services	66,060	0.79	97.39
2382	Building Equipment Contractors	5,438	0.56	97.95
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	61	0.51	98.46
6242	Community Food and Housing, and Emergency and Other Relief Services	11	0.40	98.86
5418	Advertising, Public Relations, and Related Services	653	0.33	99.19
5417	Scientific Research and Development Services	1,421	0.28	99.47
5415	Computer Systems Design and Related Services	8,755	0.26	99.73
5613	Employment Services	820	0.17	99.91
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	480	0.09	100.00

Source and Notes: *See* Table 3.1.

**Table 3.3. Maintenance—Number of Establishments and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3365	Railroad Rolling Stock Manufacturing	13	22.08	22.08
4247	Petroleum and Petroleum Products Merchant Wholesalers	212	20.44	42.52
2382	Building Equipment Contractors	9,358	7.87	50.39
5612	Facilities Support Services	333	5.63	56.02
5616	Investigation and Security Services	1,983	4.96	60.98
5617	Services to Buildings and Dwellings	8,656	4.37	65.35
2373	Highway, Street, and Bridge Construction	819	4.21	69.56
2389	Other Specialty Trade Contractors	5,579	3.43	72.99
2381	Foundation, Structure, and Building Exterior Contractors	2,565	2.43	75.42
5614	Business Support Services	8,144	2.24	77.67
4852	Interurban and Rural Bus Transportation	32	1.95	79.62
4884	Support Activities for Road Transportation	181	1.67	81.29
2362	Nonresidential Building Construction	2,462	1.48	82.77
2379	Other Heavy and Civil Engineering Construction	230	1.35	84.12
4882	Support Activities for Rail Transportation	311	1.32	85.44
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	849	1.26	86.70
4543	Direct Selling Establishments	249	1.18	87.88
5413	Architectural, Engineering, and Related Services	5,696	1.05	88.93
4851	Urban Transit Systems	44	1.00	89.93
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	195	0.98	90.90
5621	Waste Collection	77	0.71	91.62
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	858	0.70	92.32
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	710	0.60	92.91
3342	Communications Equipment Manufacturing	271	0.54	93.45
4842	Specialized Freight Trucking	255	0.50	93.95
4233	Lumber and Other Construction Materials Merchant Wholesalers	946	0.40	94.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,181	0.39	94.74
4411	Automobile Dealers	1,352	0.38	95.12
3363	Motor Vehicle Parts Manufacturing	43	0.34	95.46
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	471	0.32	95.78
5622	Waste Treatment and Disposal	103	0.31	96.09
5416	Management, Scientific, and Technical Consulting Services	16,376	0.30	96.39
2383	Building Finishing Contractors	4,470	0.28	96.67
7211	Traveler Accommodation	2,275	0.28	96.95
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,018	0.28	97.23
5613	Employment Services	2,016	0.26	97.49
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	600	0.23	97.72

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NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	52	0.21	97.93
3351	Electric Lighting Equipment Manufacturing	57	0.21	98.14
5629	Remediation and Other Waste Management Services	334	0.20	98.34
3323	Architectural and Structural Metals Manufacturing	206	0.18	98.51
4246	Chemical and Allied Products Merchant Wholesalers	201	0.16	98.67
2371	Utility System Construction	341	0.16	98.83
5415	Computer Systems Design and Related Services	15,862	0.15	98.98
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	209	0.14	99.12
4442	Lawn and Garden Equipment and Supplies Stores	320	0.14	99.26
8111	Automotive Repair and Maintenance	1,984	0.11	99.37
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	986	0.09	99.46
4441	Building Material and Supplies Dealers	747	0.08	99.54
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	53	0.06	99.60
4881	Support Activities for Air Transportation	79	0.06	99.66
3364	Aerospace Product and Parts Manufacturing	46	0.05	99.72
4921	Couriers and Express Delivery Services	211	0.05	99.77
4821	Rail Transportation	38	0.05	99.82
3273	Cement and Concrete Product Manufacturing	79	0.05	99.86
4885	Freight Transportation Arrangement	648	0.04	99.90
3339	Other General Purpose Machinery Manufacturing	13	0.04	99.94
6243	Vocational Rehabilitation Services	817	0.03	99.97
2211	Electric Power Generation, Transmission and Distribution	311	0.03	100.00

Source and Notes: See Table 3.1.

**Table 3.4. IT—Number of Establishments and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	16,026	49.08	49.08
3342	Communications Equipment Manufacturing	240	15.95	65.04
5112	Software Publishers	1,145	7.47	72.50
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	600	6.36	78.86
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	849	3.34	82.20
5416	Management, Scientific, and Technical Consulting Services	40,498	2.74	84.94
5613	Employment Services	2,016	2.31	87.25
2362	Nonresidential Building Construction	2,462	1.96	89.21
5418	Advertising, Public Relations, and Related Services	653	1.54	90.75
5413	Architectural, Engineering, and Related Services	7,357	1.21	91.96
2371	Utility System Construction	83	1.09	93.05
5614	Business Support Services	43	0.95	94.00
2381	Foundation, Structure, and Building Exterior Contractors	2,806	0.89	94.89
3341	Computer and Peripheral Equipment Manufacturing	191	0.79	95.68
5417	Scientific Research and Development Services	1,747	0.78	96.46
5171	Wired Telecommunications Carriers	615	0.59	97.05
6219	Other Ambulatory Health Care Services	4,068	0.52	97.57
5179	Other Telecommunications	542	0.49	98.06
5182	Data Processing, Hosting, and Related Services	1,171	0.43	98.48
6117	Educational Support Services	741	0.28	98.76
4431	Electronics and Appliance Stores	2,498	0.17	98.94
2383	Building Finishing Contractors	768	0.16	99.10
5111	Newspaper, Periodical, Book, and Directory Publishers	306	0.15	99.24
2389	Other Specialty Trade Contractors	956	0.13	99.38
3231	Printing and Related Support Activities	1,359	0.13	99.51
2382	Building Equipment Contractors	3,845	0.13	99.64
3323	Architectural and Structural Metals Manufacturing	106	0.12	99.76
5414	Specialized Design Services	1,999	0.09	99.85
2379	Other Heavy and Civil Engineering Construction	230	0.08	99.93
5617	Services to Buildings and Dwellings	4,050	0.07	100.00

Source and Notes: See Table 3.1.

**Table 3.5. Services—Number of Establishments and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2211	Electric Power Generation, Transmission and Distribution	311	12.94	12.94
6219	Other Ambulatory Health Care Services	4,068	12.92	25.86
5611	Office Administrative Services	5,740	8.14	34.00
3399	Other Miscellaneous Manufacturing	91	7.85	41.85
5418	Advertising, Public Relations, and Related Services	2,313	5.96	47.81
4851	Urban Transit Systems	44	4.92	52.73
4821	Rail Transportation	38	4.11	56.84
6239	Other Residential Care Facilities	389	3.65	60.49
4859	Other Transit and Ground Passenger Transportation	290	3.64	64.13
5241	Insurance Carriers	340	3.38	67.51
5416	Management, Scientific, and Technical Consulting Services	43,349	3.13	70.64
5614	Business Support Services	8,115	1.92	72.56
5415	Computer Systems Design and Related Services	15,862	1.87	74.43
5413	Architectural, Engineering, and Related Services	7,341	1.40	75.84
6212	Offices of Dentists	6,459	1.40	77.24
5613	Employment Services	2,016	1.33	78.57
7223	Special Food Services	75	1.24	79.81
6241	Individual and Family Services	4,624	1.23	81.04
2212	Natural Gas Distribution	71	1.15	82.19
3342	Communications Equipment Manufacturing	195	1.08	83.27
4244	Grocery and Related Product Merchant Wholesalers	884	1.04	84.32
4247	Petroleum and Petroleum Products Merchant Wholesalers	212	0.84	85.16
4242	Drugs and Druggists' Sundries Merchant Wholesalers	320	0.74	85.90
3231	Printing and Related Support Activities	1,359	0.74	86.64
5191	Other Information Services	340	0.68	87.32
5151	Radio and Television Broadcasting	202	0.65	87.97
4853	Taxi and Limousine Service	1,031	0.64	88.61
5242	Agencies, Brokerages, and Other Insurance Related Activities	4,793	0.57	89.18
4543	Direct Selling Establishments	249	0.55	89.73
2213	Water, Sewage and Other Systems	4	0.54	90.28
3365	Railroad Rolling Stock Manufacturing	13	0.52	90.80
5617	Services to Buildings and Dwellings	7,805	0.51	91.31
5612	Facilities Support Services	333	0.48	91.79
2382	Building Equipment Contractors	9,283	0.47	92.26
8129	Other Personal Services	311	0.42	92.68
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	4,500	0.41	93.08
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	117	0.36	93.44
5172	Wireless Telecommunications Carriers (except Satellite)	668	0.32	93.76
5615	Travel Arrangement and Reservation Services	110	0.32	94.08
6214	Outpatient Care Centers	744	0.31	94.39
5179	Other Telecommunications	542	0.30	94.69
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	207	0.28	94.97
5111	Newspaper, Periodical, Book, and Directory Publishers	697	0.28	95.25

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NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5419	Other Professional, Scientific, and Technical Services	1,684	0.27	95.52
5616	Investigation and Security Services	1,306	0.26	95.79
5411	Legal Services	14,464	0.25	96.03
5311	Lessors of Real Estate	798	0.24	96.27
5221	Depository Credit Intermediation	2,759	0.23	96.50
5121	Motion Picture and Video Industries	1,374	0.22	96.72
4855	Charter Bus Industry	104	0.22	96.94
6213	Offices of Other Health Practitioners	1,858	0.21	97.15
4852	Interurban and Rural Bus Transportation	32	0.19	97.34
5417	Scientific Research and Development Services	3,168	0.18	97.52
5619	Other Support Services	66,060	0.17	97.69
5112	Software Publishers	1,145	0.17	97.86
4842	Specialized Freight Trucking	255	0.16	98.02
6216	Home Health Care Services	1,253	0.15	98.17
5313	Activities Related to Real Estate	3,606	0.11	98.28
8111	Automotive Repair and Maintenance	4,708	0.11	98.39
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,256	0.10	98.49
3254	Pharmaceutical and Medicine Manufacturing	236	0.10	98.59
5622	Waste Treatment and Disposal	103	0.08	98.67
4922	Local Messengers and Local Delivery	166	0.07	98.75
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	487	0.06	98.81
7132	Gambling Industries	16	0.06	98.88
7139	Other Amusement and Recreation Industries	248	0.06	98.94
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	852	0.06	99.00
6211	Offices of Physicians	17,157	0.06	99.06
5621	Waste Collection	77	0.06	99.11
4241	Paper and Paper Product Merchant Wholesalers	15	0.05	99.17
5182	Data Processing, Hosting, and Related Services	1,171	0.05	99.22
2379	Other Heavy and Civil Engineering Construction	230	0.05	99.27
5629	Remediation and Other Waste Management Services	22	0.05	99.32
5152	Cable and Other Subscription Programming	220	0.04	99.36
4542	Vending Machine Operators	420	0.04	99.40
1133	Logging	67	0.04	99.44
2373	Highway, Street, and Bridge Construction	819	0.04	99.48
6117	Educational Support Services	741	0.03	99.51
2362	Nonresidential Building Construction	2,462	0.03	99.55
3351	Electric Lighting Equipment Manufacturing	29	0.03	99.58
4461	Health and Personal Care Stores	1,714	0.03	99.61
4411	Automobile Dealers	1,352	0.03	99.64
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	858	0.03	99.67
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	358	0.03	99.70
7211	Traveler Accommodation	2,275	0.03	99.72

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<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Estab-lishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
8139	Business, Professional, Labor, Political, and Similar Organizations	667	0.02	99.75
6113	Colleges, Universities, and Professional Schools	861	0.02	99.77
2389	Other Specialty Trade Contractors	956	0.02	99.79
5414	Specialized Design Services	1,999	0.02	99.80

Source and Notes: *See* Table 3.1.

**Table 3.6. CSE—Number of Establishments and Industry Weight, by NAICS Code**

<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3361	Motor Vehicle Manufacturing	36	9.19	9.19
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,708	6.95	16.14
4411	Automobile Dealers	1,352	5.50	21.63
4246	Chemical and Allied Products Merchant Wholesalers	201	5.25	26.88
4244	Grocery and Related Product Merchant Wholesalers	1,000	4.81	31.69
3364	Aerospace Product and Parts Manufacturing	132	3.90	35.60
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	505	3.75	39.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2,097	3.72	43.07
5172	Wireless Telecommunications Carriers (except Satellite)	668	3.42	46.50
7223	Special Food Services	1,378	3.18	49.68
2212	Natural Gas Distribution	71	2.99	52.68
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	998	2.96	55.64
3342	Communications Equipment Manufacturing	271	2.86	58.50
4532	Office Supplies, Stationery, and Gift Stores	258	2.02	60.51
5415	Computer Systems Design and Related Services	15,862	1.84	62.35
4247	Petroleum and Petroleum Products Merchant Wholesalers	246	1.66	64.01
2382	Building Equipment Contractors	9,358	1.63	65.63
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	2,276	1.62	67.25
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	710	1.61	68.86
3341	Computer and Peripheral Equipment Manufacturing	293	1.42	70.29
5112	Software Publishers	1,145	1.36	71.65
3231	Printing and Related Support Activities	1,359	0.91	72.56
2211	Electric Power Generation, Transmission and Distribution	351	0.88	73.44
4413	Automotive Parts, Accessories, and Tire Stores	1,437	0.86	74.30
4461	Health and Personal Care Stores	905	0.83	75.13
3365	Railroad Rolling Stock Manufacturing	13	0.81	75.94
3399	Other Miscellaneous Manufacturing	1,230	0.77	76.71
2213	Water, Sewage and Other Systems	4	0.76	77.47
3333	Commercial and Service Industry Machinery Manufacturing	163	0.75	78.22
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	646	0.74	78.95
4241	Paper and Paper Product Merchant Wholesalers	341	0.73	79.69
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	21	0.72	80.41
3259	Other Chemical Product and Preparation Manufacturing	73	0.71	81.12
2373	Highway, Street, and Bridge Construction	819	0.66	81.78
5111	Newspaper, Periodical, Book, and Directory Publishers	954	0.61	82.39
3391	Medical Equipment and Supplies Manufacturing	281	0.60	82.99
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	1,028	0.59	83.58
3118	Bakeries and Tortilla Manufacturing	709	0.58	84.17
8111	Automotive Repair and Maintenance	5,921	0.58	84.75

## M/WBE Availability in the State of Maryland's Market Area

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4842	Specialized Freight Trucking	255	0.54	85.29
4441	Building Material and Supplies Dealers	1,423	0.50	85.79
5413	Architectural, Engineering, and Related Services	7,638	0.48	86.27
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,176	0.47	86.74
3331	Agriculture, Construction, and Mining Machinery Manufacturing	86	0.46	87.20
3117	Seafood Product Preparation and Packaging	21	0.43	87.63
3351	Electric Lighting Equipment Manufacturing	57	0.42	88.05
4431	Electronics and Appliance Stores	2,498	0.40	88.45
1121	Cattle Ranching and Farming	339	0.39	88.84
4233	Lumber and Other Construction Materials Merchant Wholesalers	869	0.39	89.23
4881	Support Activities for Air Transportation	79	0.37	89.60
5417	Scientific Research and Development Services	1,747	0.35	89.95
5171	Wired Telecommunications Carriers	615	0.30	90.25
3339	Other General Purpose Machinery Manufacturing	158	0.29	90.54
4543	Direct Selling Establishments	249	0.29	90.83
3353	Electrical Equipment Manufacturing	113	0.28	91.12
4242	Drugs and Druggists' Sundries Merchant Wholesalers	320	0.28	91.39
6219	Other Ambulatory Health Care Services	4,068	0.25	91.65
3323	Architectural and Structural Metals Manufacturing	256	0.25	91.89
3366	Ship and Boat Building	109	0.24	92.14
3344	Semiconductor and Other Electronic Component Manufacturing	171	0.24	92.37
3359	Other Electrical Equipment and Component Manufacturing	222	0.23	92.60
3332	Industrial Machinery Manufacturing	48	0.23	92.83
4232	Furniture and Home Furnishing Merchant Wholesalers	984	0.21	93.04
4481	Clothing Stores	886	0.20	93.24
5416	Management, Scientific, and Technical Consulting Services	42,256	0.20	93.43
3261	Plastics Product Manufacturing	129	0.19	93.62
3254	Pharmaceutical and Medicine Manufacturing	365	0.19	93.81
3115	Dairy Product Manufacturing	69	0.18	93.99
3121	Beverage Manufacturing	69	0.18	94.17
3329	Other Fabricated Metal Product Manufacturing	98	0.18	94.34
5613	Employment Services	2,016	0.17	94.52
4541	Electronic Shopping and Mail-Order Houses	499	0.16	94.68
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	63	0.16	94.84
1142	Hunting and Trapping	63	0.15	94.99
2389	Other Specialty Trade Contractors	5,579	0.15	95.14
5191	Other Information Services	295	0.14	95.28
4539	Other Miscellaneous Store Retailers	3,412	0.14	95.42
3152	Cut and Sew Apparel Manufacturing	102	0.14	95.55
3272	Glass and Glass Product Manufacturing	69	0.14	95.69
3363	Motor Vehicle Parts Manufacturing	75	0.13	95.82
5614	Business Support Services	8,032	0.12	95.94
5616	Investigation and Security Services	1,632	0.12	96.06

## M/WBE Availability in the State of Maryland's Market Area

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5322	Consumer Goods Rental	338	0.11	96.18
4889	Other Support Activities for Transportation	2,373	0.11	96.29
8112	Electronic and Precision Equipment Repair and Maintenance	1,316	0.11	96.40
7211	Traveler Accommodation	2,275	0.11	96.51
4512	Book Stores and News Dealers	511	0.11	96.62
3241	Petroleum and Coal Products Manufacturing	64	0.11	96.72
4421	Furniture Stores	1,112	0.10	96.82
5612	Facilities Support Services	333	0.09	96.91
5617	Services to Buildings and Dwellings	11,279	0.09	97.01
7225	Restaurants and Other Eating Places	20,165	0.09	97.10
5321	Automotive Equipment Rental and Leasing	479	0.09	97.19
4882	Support Activities for Rail Transportation	311	0.09	97.28
4511	Sporting Goods, Hobby, and Musical Instrument Stores	1,525	0.09	97.36
2383	Building Finishing Contractors	4,470	0.08	97.44
4922	Local Messengers and Local Delivery	166	0.08	97.52
1123	Poultry and Egg Production	21	0.08	97.60
5418	Advertising, Public Relations, and Related Services	953	0.08	97.68
5629	Remediation and Other Waste Management Services	269	0.07	97.76
5182	Data Processing, Hosting, and Related Services	1,171	0.07	97.83
4452	Specialty Food Stores	168	0.07	97.91
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	858	0.07	97.98
4859	Other Transit and Ground Passenger Transportation	290	0.07	98.05
2123	Nonmetallic Mineral Mining and Quarrying	24	0.07	98.12
4412	Other Motor Vehicle Dealers	833	0.07	98.19
6213	Offices of Other Health Practitioners	2,501	0.07	98.26
6215	Medical and Diagnostic Laboratories	522	0.07	98.32
3312	Steel Product Manufacturing from Purchased Steel	11	0.06	98.39
2362	Nonresidential Building Construction	2,462	0.06	98.45
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	291	0.06	98.50
3119	Other Food Manufacturing	98	0.06	98.56
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	79	0.05	98.61
2371	Utility System Construction	341	0.05	98.66
3324	Boiler, Tank, and Shipping Container Manufacturing	4	0.05	98.71
5222	Nondepository Credit Intermediation	401	0.05	98.76
5121	Motion Picture and Video Industries	1,374	0.05	98.81
3311	Iron and Steel Mills and Ferroalloy Manufacturing	34	0.05	98.86
4542	Vending Machine Operators	420	0.04	98.90
3321	Forging and Stamping	18	0.04	98.95
4442	Lawn and Garden Equipment and Supplies Stores	320	0.04	98.99
3335	Metalworking Machinery Manufacturing	36	0.04	99.03
5619	Other Support Services	66,060	0.04	99.07
3255	Paint, Coating, and Adhesive Manufacturing	43	0.04	99.11
2381	Foundation, Structure, and Building Exterior Contractors	1,037	0.04	99.15
5419	Other Professional, Scientific, and Technical Services	15,274	0.04	99.19
3362	Motor Vehicle Body and Trailer Manufacturing	20	0.04	99.22

## M/WBE Availability in the State of Maryland's Market Area

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5152	Cable and Other Subscription Programming	220	0.04	99.26
3251	Basic Chemical Manufacturing	123	0.03	99.29
6211	Offices of Physicians	17,157	0.03	99.33
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	40	0.03	99.36
5622	Waste Treatment and Disposal	103	0.03	99.39
8123	Drycleaning and Laundry Services	1,359	0.03	99.42
3116	Animal Slaughtering and Processing	22	0.03	99.44
3379	Other Furniture Related Product Manufacturing	10	0.03	99.47
4884	Support Activities for Road Transportation	181	0.03	99.49
3222	Converted Paper Product Manufacturing	13	0.02	99.52
5313	Activities Related to Real Estate	670	0.02	99.54
3372	Office Furniture (including Fixtures) Manufacturing	17	0.02	99.57
2379	Other Heavy and Civil Engineering Construction	230	0.02	99.59
3326	Spring and Wire Product Manufacturing	31	0.02	99.61
6214	Outpatient Care Centers	243	0.02	99.63
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	195	0.02	99.65
4885	Freight Transportation Arrangement	648	0.02	99.67
1125	Aquaculture	30	0.02	99.69
4245	Farm Product Raw Material Merchant Wholesalers	89	0.02	99.71
3262	Rubber Product Manufacturing	31	0.02	99.73
5221	Depository Credit Intermediation	2,759	0.02	99.75
4841	General Freight Trucking	4,049	0.02	99.77
3343	Audio and Video Equipment Manufacturing	94	0.02	99.79
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	26	0.02	99.80
5179	Other Telecommunications	2,015	0.02	99.82
5242	Agencies, Brokerages, and Other Insurance Related Activities	4,733	0.02	99.84
3219	Other Wood Product Manufacturing	33	0.02	99.85
3273	Cement and Concrete Product Manufacturing	89	0.02	99.87
5615	Travel Arrangement and Reservation Services	2,156	0.02	99.89
3274	Lime and Gypsum Product Manufacturing	3	0.02	99.90
1152	Support Activities for Animal Production	493	0.02	99.92
5411	Legal Services	14,464	0.02	99.93
6117	Educational Support Services	741	0.01	99.95
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	209	0.01	99.96
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	31	0.01	99.97
6212	Offices of Dentists	6,459	0.01	99.99
7139	Other Amusement and Recreation Industries	3,689	0.01	100.00

Source and Notes: See Table 3.1.

## 2. Identify Listed M/WBEs

While extensive, Dun & Bradstreet does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in Dun & Bradstreet, experience has demonstrated that many are also missed. For this reason, several additional steps were required to identify the appropriate percentage of M/WBEs in the relevant market.

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in the Maryland market area. Beyond the information already in Dun & Bradstreet, NERA's master directory included lists of M/WBEs from other public and private entities. Specifically, directories were included from: Maryland Department of Transportation, Anne Arundel County, Charles County, City of Baltimore, Coppin State University, Delaware Department of Transportation, Diversity Information Resources, DiversityBusiness.com, Howard County, Montgomery County, Prince George County Public Schools, Small Business Administration, U.S. Department of Commerce Minority Business Development Agency, and the West Virginia Department of Transportation.<sup>54</sup>

Tables 3.7 through 3.12 show the listed M/WBEs in Construction, AE-CRS, Maintenance, IT, Services and CSE, respectively. If the listed M/WBEs identified in Tables 3.7 through 3.12 are in fact *all* M/WBEs and are the *only* M/WBEs among all of the establishments in the relevant market identified in Tables 3.1 through 3.6, then an estimate of "listed" M/WBE availability is simply the number of listed M/WBEs divided by the total number of establishments in the relevant market. However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring M/WBE availability.

There are two reasons for this. First, it is likely that some proportion of the M/WBEs listed in the tables is not actually minority-owned or women-owned. Second, it is likely that there are additional "unlisted" M/WBEs among all of the establishments included in Tables 3.1 through 3.6. Such businesses do not appear in any of the directories we gathered and are therefore not included as M/WBEs in these tables. Additional steps are required to test these two conditions and to arrive at a more accurate representation of M/WBE availability within the Baseline Business Universe. We discuss these steps below in Sections 3.a and 3.b.

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<sup>54</sup> We also obtained information from certain entities that was duplicative of either Dun & Bradstreet or one or more of the other sources listed above. These entities are listed below in Appendix D. We were unable to obtain relevant lists or directories from a number of entities. The reasons for this include: (1) the entity did not have a list or the entity's list did not include race and sex information; (2) the entity was unresponsive to repeated attempts at contacts; or, (3) the entity simply declined to provide us the list. These entities, as well, are listed in Appendix D.

**Table 3.7. Construction—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2382	Building Equipment Contractors	1,003	22.19	22.19
2373	Highway, Street, and Bridge Construction	164	18.65	40.84
2381	Foundation, Structure, and Building Exterior Contractors	492	15.20	56.04
2362	Nonresidential Building Construction	766	10.73	66.77
2389	Other Specialty Trade Contractors	516	4.96	71.73
2383	Building Finishing Contractors	558	4.38	76.11
3323	Architectural and Structural Metals Manufacturing	43	2.54	78.64
4233	Lumber and Other Construction Materials Merchant Wholesalers	95	2.34	80.99
4247	Petroleum and Petroleum Products Merchant Wholesalers	17	2.12	83.10
2371	Utility System Construction	85	2.10	85.20
2379	Other Heavy and Civil Engineering Construction	41	1.80	87.01
4842	Specialized Freight Trucking	67	1.45	88.46
5413	Architectural, Engineering, and Related Services	1,708	0.87	89.33
5617	Services to Buildings and Dwellings	1,575	0.87	90.20
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	227	0.80	91.00
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	17	0.79	91.79
3273	Cement and Concrete Product Manufacturing	15	0.75	92.55
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	120	0.72	93.27
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	62	0.61	93.88
3351	Electric Lighting Equipment Manufacturing	19	0.60	94.48
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	234	0.51	94.99
5619	Other Support Services	3,242	0.42	95.41
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	25	0.40	95.81
5616	Investigation and Security Services	406	0.38	96.19
4239	Miscellaneous Durable Goods Merchant Wholesalers	100	0.33	96.52
5415	Computer Systems Design and Related Services	5,875	0.28	96.81
3399	Other Miscellaneous Manufacturing	172	0.26	97.07
3219	Other Wood Product Manufacturing	9	0.25	97.32
5629	Remediation and Other Waste Management Services	42	0.23	97.55
4889	Other Support Activities for Transportation	119	0.21	97.77
2123	Nonmetallic Mineral Mining and Quarrying	1	0.15	97.92
3359	Other Electrical Equipment and Component Manufacturing	29	0.15	98.07
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	64	0.14	98.22
4422	Home Furnishings Stores	93	0.14	98.36
5613	Employment Services	209	0.12	98.47

# M/WBE Availability in the State of Maryland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	10	0.12	98.59
3311	Iron and Steel Mills and Ferroalloy Manufacturing	1	0.10	98.69
4441	Building Material and Supplies Dealers	92	0.10	98.79
4539	Other Miscellaneous Store Retailers	382	0.09	98.88
5416	Management, Scientific, and Technical Consulting Services	5,554	0.08	98.96
3329	Other Fabricated Metal Product Manufacturing	14	0.08	99.04
4431	Electronics and Appliance Stores	265	0.07	99.11
3342	Communications Equipment Manufacturing	16	0.07	99.17
4884	Support Activities for Road Transportation	27	0.06	99.24
4442	Lawn and Garden Equipment and Supplies Stores	40	0.06	99.30
4821	Rail Transportation	1	0.06	99.36
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	2	0.06	99.41
4232	Furniture and Home Furnishing Merchant Wholesalers	151	0.06	99.47
4543	Direct Selling Establishments	22	0.05	99.52
3365	Railroad Rolling Stock Manufacturing	2	0.05	99.57
5312	Offices of Real Estate Agents and Brokers	1,096	0.05	99.62
3372	Office Furniture (including Fixtures) Manufacturing	20	0.05	99.67
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	10	0.05	99.72
2211	Electric Power Generation, Transmission and Distribution	27	0.05	99.76
5621	Waste Collection	20	0.04	99.80
3339	Other General Purpose Machinery Manufacturing	1	0.03	99.83
5321	Automotive Equipment Rental and Leasing	10	0.03	99.86
3333	Commercial and Service Industry Machinery Manufacturing	20	0.03	99.89
5242	Agencies, Brokerages, and Other Insurance Related Activities	423	0.03	99.92
4931	Warehousing and Storage	51	0.03	99.95
4421	Furniture Stores	119	0.03	99.97
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	28	0.03	100.00

Source and Notes: See Table 3.1.

**Table 3.8. AE-CRS—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5413	Architectural, Engineering, and Related Services	1,925	88.19	88.19
5416	Management, Scientific, and Technical Consulting Services	11,120	3.80	91.99
2379	Other Heavy and Civil Engineering Construction	41	3.69	95.68
2373	Highway, Street, and Bridge Construction	164	0.93	96.61
5619	Other Support Services	3,242	0.79	97.39
2382	Building Equipment Contractors	440	0.56	97.95
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	14	0.51	98.46
6242	Community Food and Housing, and Emergency and Other Relief Services	1	0.40	98.86
5418	Advertising, Public Relations, and Related Services	160	0.33	99.19
5417	Scientific Research and Development Services	269	0.28	99.47
5415	Computer Systems Design and Related Services	3,661	0.26	99.73
5613	Employment Services	209	0.17	99.91
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	65	0.09	100.00

Source and Notes: See Table 3.1.

**Table 3.9. Maintenance—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3365	Railroad Rolling Stock Manufacturing	2	22.08	22.08
4247	Petroleum and Petroleum Products Merchant Wholesalers	17	20.44	42.52
2382	Building Equipment Contractors	1,003	7.87	50.39
5612	Facilities Support Services	145	5.63	56.02
5616	Investigation and Security Services	540	4.96	60.98
5617	Services to Buildings and Dwellings	1,651	4.37	65.35
2373	Highway, Street, and Bridge Construction	164	4.21	69.56
2389	Other Specialty Trade Contractors	516	3.43	72.99
2381	Foundation, Structure, and Building Exterior Contractors	340	2.43	75.42
5614	Business Support Services	1,026	2.24	77.67
4852	Interurban and Rural Bus Transportation	5	1.95	79.62
4884	Support Activities for Road Transportation	27	1.67	81.29
2362	Nonresidential Building Construction	766	1.48	82.77
2379	Other Heavy and Civil Engineering Construction	41	1.35	84.12
4882	Support Activities for Rail Transportation	37	1.32	85.44
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	120	1.26	86.70
4543	Direct Selling Establishments	22	1.18	87.88
5413	Architectural, Engineering, and Related Services	1,350	1.05	88.93
4851	Urban Transit Systems	16	1.00	89.93
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	28	0.98	90.90
5621	Waste Collection	20	0.71	91.62
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	40	0.70	92.32
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	43	0.60	92.91
3342	Communications Equipment Manufacturing	44	0.54	93.45
4842	Specialized Freight Trucking	67	0.50	93.95
4233	Lumber and Other Construction Materials Merchant Wholesalers	95	0.40	94.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	138	0.39	94.74
4411	Automobile Dealers	51	0.38	95.12
3363	Motor Vehicle Parts Manufacturing	3	0.34	95.46
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	35	0.32	95.78
5622	Waste Treatment and Disposal	21	0.31	96.09
5416	Management, Scientific, and Technical Consulting Services	5,554	0.30	96.39
2383	Building Finishing Contractors	507	0.28	96.67
7211	Traveler Accommodation	183	0.28	96.95
4239	Miscellaneous Durable Goods Merchant Wholesalers	86	0.28	97.23
5613	Employment Services	613	0.26	97.49

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NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	179	0.23	97.72
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	9	0.21	97.93
3351	Electric Lighting Equipment Manufacturing	19	0.21	98.14
5629	Remediation and Other Waste Management Services	50	0.20	98.34
3323	Architectural and Structural Metals Manufacturing	35	0.18	98.51
4246	Chemical and Allied Products Merchant Wholesalers	43	0.16	98.67
2371	Utility System Construction	55	0.16	98.83
5415	Computer Systems Design and Related Services	6,087	0.15	98.98
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	17	0.14	99.12
4442	Lawn and Garden Equipment and Supplies Stores	40	0.14	99.26
8111	Automotive Repair and Maintenance	174	0.11	99.37
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	64	0.09	99.46
4441	Building Material and Supplies Dealers	51	0.08	99.54
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	10	0.06	99.60
4881	Support Activities for Air Transportation	21	0.06	99.66
3364	Aerospace Product and Parts Manufacturing	8	0.05	99.72
4921	Couriers and Express Delivery Services	42	0.05	99.77
4821	Rail Transportation	1	0.05	99.82
3273	Cement and Concrete Product Manufacturing	2	0.05	99.86
4885	Freight Transportation Arrangement	141	0.04	99.90
3339	Other General Purpose Machinery Manufacturing	4	0.04	99.94
6243	Vocational Rehabilitation Services	81	0.03	99.97
2211	Electric Power Generation, Transmission and Distribution	27	0.03	100.00

Source and Notes: See Table 3.1.

**Table 3.10. IT—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
5415	Computer Systems Design and Related Services	6,165	49.08	49.08
3342	Communications Equipment Manufacturing	34	15.95	65.04
5112	Software Publishers	195	7.47	72.50
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	179	6.36	78.86
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	120	3.34	82.20
5416	Management, Scientific, and Technical Consulting Services	10,735	2.74	84.94
5613	Employment Services	613	2.31	87.25
2362	Nonresidential Building Construction	766	1.96	89.21
5418	Advertising, Public Relations, and Related Services	160	1.54	90.75
5413	Architectural, Engineering, and Related Services	1,660	1.21	91.96
2371	Utility System Construction	30	1.09	93.05
5614	Business Support Services	10	0.95	94.00
2381	Foundation, Structure, and Building Exterior Contractors	313	0.89	94.89
3341	Computer and Peripheral Equipment Manufacturing	43	0.79	95.68
5417	Scientific Research and Development Services	381	0.78	96.46
5171	Wired Telecommunications Carriers	92	0.59	97.05
6219	Other Ambulatory Health Care Services	332	0.52	97.57
5179	Other Telecommunications	66	0.49	98.06
5182	Data Processing, Hosting, and Related Services	357	0.43	98.48
6117	Educational Support Services	297	0.28	98.76
4431	Electronics and Appliance Stores	265	0.17	98.94
2383	Building Finishing Contractors	86	0.16	99.10
5111	Newspaper, Periodical, Book, and Directory Publishers	43	0.15	99.24
2389	Other Specialty Trade Contractors	125	0.13	99.38
3231	Printing and Related Support Activities	265	0.13	99.51
2382	Building Equipment Contractors	544	0.13	99.64
3323	Architectural and Structural Metals Manufacturing	21	0.12	99.76
5414	Specialized Design Services	811	0.09	99.85
2379	Other Heavy and Civil Engineering Construction	41	0.08	99.93
5617	Services to Buildings and Dwellings	275	0.07	100.00

Source and Notes: See Table 3.1.

**Table 3.11. Services—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
2211	Electric Power Generation, Transmission and Distribution	27	12.94	12.94
6219	Other Ambulatory Health Care Services	332	12.92	25.86
5611	Office Administrative Services	939	8.14	34.00
3399	Other Miscellaneous Manufacturing	26	7.85	41.85
5418	Advertising, Public Relations, and Related Services	572	5.96	47.81
4851	Urban Transit Systems	16	4.92	52.73
4821	Rail Transportation	1	4.11	56.84
6239	Other Residential Care Facilities	7	3.65	60.49
4859	Other Transit and Ground Passenger Transportation	109	3.64	64.13
5241	Insurance Carriers	31	3.38	67.51
5416	Management, Scientific, and Technical Consulting Services	11,632	3.13	70.64
5614	Business Support Services	1,026	1.92	72.56
5415	Computer Systems Design and Related Services	6,087	1.87	74.43
5413	Architectural, Engineering, and Related Services	1,671	1.40	75.84
6212	Offices of Dentists	505	1.40	77.24
5613	Employment Services	613	1.33	78.57
7223	Special Food Services	19	1.24	79.81
6241	Individual and Family Services	60	1.23	81.04
2212	Natural Gas Distribution	5	1.15	82.19
3342	Communications Equipment Manufacturing	28	1.08	83.27
4244	Grocery and Related Product Merchant Wholesalers	132	1.04	84.32
4247	Petroleum and Petroleum Products Merchant Wholesalers	17	0.84	85.16
4242	Drugs and Druggists' Sundries Merchant Wholesalers	50	0.74	85.90
3231	Printing and Related Support Activities	265	0.74	86.64
5191	Other Information Services	84	0.68	87.32
5151	Radio and Television Broadcasting	46	0.65	87.97
4853	Taxi and Limousine Service	109	0.64	88.61
5242	Agencies, Brokerages, and Other Insurance Related Activities	425	0.57	89.18
4543	Direct Selling Establishments	22	0.55	89.73
2213	Water, Sewage and Other Systems	1	0.54	90.28
3365	Railroad Rolling Stock Manufacturing	2	0.52	90.80
5617	Services to Buildings and Dwellings	1,575	0.51	91.31
5612	Facilities Support Services	145	0.48	91.79
2382	Building Equipment Contractors	984	0.47	92.26
8129	Other Personal Services	24	0.42	92.68
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	823	0.41	93.08
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	20	0.36	93.44
5172	Wireless Telecommunications Carriers (except Satellite)	39	0.32	93.76
5615	Travel Arrangement and Reservation Services	17	0.32	94.08

# M/WBE Availability in the State of Maryland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
6214	Outpatient Care Centers	94	0.31	94.39
5179	Other Telecommunications	66	0.30	94.69
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	22	0.28	94.97
5111	Newspaper, Periodical, Book, and Directory Publishers	85	0.28	95.25
5419	Other Professional, Scientific, and Technical Services	705	0.27	95.52
5616	Investigation and Security Services	286	0.26	95.79
5411	Legal Services	1,069	0.25	96.03
5311	Lessors of Real Estate	34	0.24	96.27
5221	Depository Credit Intermediation	29	0.23	96.50
5121	Motion Picture and Video Industries	363	0.22	96.72
4855	Charter Bus Industry	35	0.22	96.94
6213	Offices of Other Health Practitioners	230	0.21	97.15
4852	Interurban and Rural Bus Transportation	5	0.19	97.34
5417	Scientific Research and Development Services	650	0.18	97.52
5619	Other Support Services	3,242	0.17	97.69
5112	Software Publishers	195	0.17	97.86
4842	Specialized Freight Trucking	67	0.16	98.02
6216	Home Health Care Services	266	0.15	98.17
5313	Activities Related to Real Estate	120	0.11	98.28
8111	Automotive Repair and Maintenance	225	0.11	98.39
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	176	0.10	98.49
3254	Pharmaceutical and Medicine Manufacturing	32	0.10	98.59
5622	Waste Treatment and Disposal	21	0.08	98.67
4922	Local Messengers and Local Delivery	23	0.07	98.75
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	30	0.06	98.81
7132	Gambling Industries	1	0.06	98.88
7139	Other Amusement and Recreation Industries	14	0.06	98.94
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	180	0.06	99.00
6211	Offices of Physicians	1,225	0.06	99.06
5621	Waste Collection	20	0.06	99.11
4241	Paper and Paper Product Merchant Wholesalers	4	0.05	99.17
5182	Data Processing, Hosting, and Related Services	357	0.05	99.22
2379	Other Heavy and Civil Engineering Construction	41	0.05	99.27
5629	Remediation and Other Waste Management Services	8	0.05	99.32
5152	Cable and Other Subscription Programming	16	0.04	99.36
4542	Vending Machine Operators	44	0.04	99.40
1133	Logging	6	0.04	99.44
2373	Highway, Street, and Bridge Construction	164	0.04	99.48
6117	Educational Support Services	297	0.03	99.51
2362	Nonresidential Building Construction	766	0.03	99.55
3351	Electric Lighting Equipment Manufacturing	7	0.03	99.58
4461	Health and Personal Care Stores	47	0.03	99.61

## M/WBE Availability in the State of Maryland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
4411	Automobile Dealers	51	0.03	99.64
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	40	0.03	99.67
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	74	0.03	99.70
7211	Traveler Accommodation	183	0.03	99.72
8139	Business, Professional, Labor, Political, and Similar Organizations	2	0.02	99.75
6113	Colleges, Universities, and Professional Schools	5	0.02	99.77
2389	Other Specialty Trade Contractors	125	0.02	99.79
5414	Specialized Design Services	811	0.02	99.80

Source and Notes: *See* Table 3.1.

**Table 3.12. CSE—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code**

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
3361	Motor Vehicle Manufacturing	3	9.19	9.19
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	404	6.95	16.14
4411	Automobile Dealers	51	5.50	21.63
4246	Chemical and Allied Products Merchant Wholesalers	43	5.25	26.88
4244	Grocery and Related Product Merchant Wholesalers	146	4.81	31.69
3364	Aerospace Product and Parts Manufacturing	18	3.90	35.60
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	72	3.75	39.35
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	261	3.72	43.07
5172	Wireless Telecommunications Carriers (except Satellite)	39	3.42	46.50
7223	Special Food Services	255	3.18	49.68
2212	Natural Gas Distribution	5	2.99	52.68
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	137	2.96	55.64
3342	Communications Equipment Manufacturing	44	2.86	58.50
4532	Office Supplies, Stationery, and Gift Stores	51	2.02	60.51
5415	Computer Systems Design and Related Services	6,087	1.84	62.35
4247	Petroleum and Petroleum Products Merchant Wholesalers	21	1.66	64.01
2382	Building Equipment Contractors	1,003	1.63	65.63
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	206	1.62	67.25
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	43	1.61	68.86
3341	Computer and Peripheral Equipment Manufacturing	61	1.42	70.29
5112	Software Publishers	195	1.36	71.65
3231	Printing and Related Support Activities	265	0.91	72.56
2211	Electric Power Generation, Transmission and Distribution	32	0.88	73.44
4413	Automotive Parts, Accessories, and Tire Stores	50	0.86	74.30
4461	Health and Personal Care Stores	158	0.83	75.13
3365	Railroad Rolling Stock Manufacturing	2	0.81	75.94
3399	Other Miscellaneous Manufacturing	197	0.77	76.71
2213	Water, Sewage and Other Systems	1	0.76	77.47
3333	Commercial and Service Industry Machinery Manufacturing	30	0.75	78.22
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	62	0.74	78.95
4241	Paper and Paper Product Merchant Wholesalers	108	0.73	79.69
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	4	0.72	80.41
3259	Other Chemical Product and Preparation Manufacturing	12	0.71	81.12
2373	Highway, Street, and Bridge Construction	164	0.66	81.78
5111	Newspaper, Periodical, Book, and Directory Publishers	138	0.61	82.39

# M/WBE Availability in the State of Maryland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
3391	Medical Equipment and Supplies Manufacturing	45	0.60	82.99
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	72	0.59	83.58
3118	Bakeries and Tortilla Manufacturing	117	0.58	84.17
8111	Automotive Repair and Maintenance	343	0.58	84.75
4842	Specialized Freight Trucking	67	0.54	85.29
4441	Building Material and Supplies Dealers	112	0.50	85.79
5413	Architectural, Engineering, and Related Services	1,708	0.48	86.27
4239	Miscellaneous Durable Goods Merchant Wholesalers	100	0.47	86.74
3331	Agriculture, Construction, and Mining Machinery Manufacturing	7	0.46	87.20
3117	Seafood Product Preparation and Packaging	3	0.43	87.63
3351	Electric Lighting Equipment Manufacturing	19	0.42	88.05
4431	Electronics and Appliance Stores	265	0.40	88.45
1121	Cattle Ranching and Farming	9	0.39	88.84
4233	Lumber and Other Construction Materials Merchant Wholesalers	88	0.39	89.23
4881	Support Activities for Air Transportation	21	0.37	89.60
5417	Scientific Research and Development Services	381	0.35	89.95
5171	Wired Telecommunications Carriers	92	0.30	90.25
3339	Other General Purpose Machinery Manufacturing	20	0.29	90.54
4543	Direct Selling Establishments	22	0.29	90.83
3353	Electrical Equipment Manufacturing	13	0.28	91.12
4242	Drugs and Druggists' Sundries Merchant Wholesalers	50	0.28	91.39
6219	Other Ambulatory Health Care Services	332	0.25	91.65
3323	Architectural and Structural Metals Manufacturing	38	0.25	91.89
3366	Ship and Boat Building	7	0.24	92.14
3344	Semiconductor and Other Electronic Component Manufacturing	28	0.24	92.37
3359	Other Electrical Equipment and Component Manufacturing	32	0.23	92.60
3332	Industrial Machinery Manufacturing	9	0.23	92.83
4232	Furniture and Home Furnishing Merchant Wholesalers	151	0.21	93.04
4481	Clothing Stores	166	0.20	93.24
5416	Management, Scientific, and Technical Consulting Services	11,120	0.20	93.43
3261	Plastics Product Manufacturing	22	0.19	93.62
3254	Pharmaceutical and Medicine Manufacturing	55	0.19	93.81
3115	Dairy Product Manufacturing	11	0.18	93.99
3121	Beverage Manufacturing	3	0.18	94.17
3329	Other Fabricated Metal Product Manufacturing	18	0.18	94.34
5613	Employment Services	613	0.17	94.52
4541	Electronic Shopping and Mail-Order Houses	94	0.16	94.68
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	13	0.16	94.84
1142	Hunting and Trapping	9	0.15	94.99
2389	Other Specialty Trade Contractors	516	0.15	95.14
5191	Other Information Services	75	0.14	95.28
4539	Other Miscellaneous Store Retailers	382	0.14	95.42

## M/WBE Availability in the State of Maryland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
3152	Cut and Sew Apparel Manufacturing	27	0.14	95.55
3272	Glass and Glass Product Manufacturing	14	0.14	95.69
3363	Motor Vehicle Parts Manufacturing	4	0.13	95.82
5614	Business Support Services	1,008	0.12	95.94
5616	Investigation and Security Services	406	0.12	96.06
5322	Consumer Goods Rental	49	0.11	96.18
4889	Other Support Activities for Transportation	119	0.11	96.29
8112	Electronic and Precision Equipment Repair and Maintenance	255	0.11	96.40
7211	Traveler Accommodation	183	0.11	96.51
4512	Book Stores and News Dealers	80	0.11	96.62
3241	Petroleum and Coal Products Manufacturing	7	0.11	96.72
4421	Furniture Stores	119	0.10	96.82
5612	Facilities Support Services	145	0.09	96.91
5617	Services to Buildings and Dwellings	1,994	0.09	97.01
7225	Restaurants and Other Eating Places	1,679	0.09	97.10
5321	Automotive Equipment Rental and Leasing	13	0.09	97.19
4882	Support Activities for Rail Transportation	37	0.09	97.28
4511	Sporting Goods, Hobby, and Musical Instrument Stores	106	0.09	97.36
2383	Building Finishing Contractors	507	0.08	97.44
4922	Local Messengers and Local Delivery	23	0.08	97.52
1123	Poultry and Egg Production	3	0.08	97.60
5418	Advertising, Public Relations, and Related Services	238	0.08	97.68
5629	Remediation and Other Waste Management Services	28	0.07	97.76
5182	Data Processing, Hosting, and Related Services	357	0.07	97.83
4452	Specialty Food Stores	23	0.07	97.91
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	40	0.07	97.98
4859	Other Transit and Ground Passenger Transportation	109	0.07	98.05
2123	Nonmetallic Mineral Mining and Quarrying	1	0.07	98.12
4412	Other Motor Vehicle Dealers	49	0.07	98.19
6213	Offices of Other Health Practitioners	465	0.07	98.26
6215	Medical and Diagnostic Laboratories	58	0.07	98.32
3312	Steel Product Manufacturing from Purchased Steel	0	0.06	98.39
2362	Nonresidential Building Construction	766	0.06	98.45
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	56	0.06	98.50
3119	Other Food Manufacturing	18	0.06	98.56
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	23	0.05	98.61
2371	Utility System Construction	55	0.05	98.66
3324	Boiler, Tank, and Shipping Container Manufacturing	0	0.05	98.71
5222	Nondepository Credit Intermediation	16	0.05	98.76
5121	Motion Picture and Video Industries	363	0.05	98.81
3311	Iron and Steel Mills and Ferroalloy Manufacturing	1	0.05	98.86
4542	Vending Machine Operators	44	0.04	98.90
3321	Forging and Stamping	5	0.04	98.95
4442	Lawn and Garden Equipment and Supplies Stores	40	0.04	98.99

# M/WBE Availability in the State of Maryland's Market Area

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Cumulative Industry Weight
3335	Metalworking Machinery Manufacturing	6	0.04	99.03
5619	Other Support Services	3,242	0.04	99.07
3255	Paint, Coating, and Adhesive Manufacturing	9	0.04	99.11
2381	Foundation, Structure, and Building Exterior Contractors	142	0.04	99.15
5419	Other Professional, Scientific, and Technical Services	2,112	0.04	99.19
3362	Motor Vehicle Body and Trailer Manufacturing	2	0.04	99.22
5152	Cable and Other Subscription Programming	16	0.04	99.26
3251	Basic Chemical Manufacturing	7	0.03	99.29
6211	Offices of Physicians	1,225	0.03	99.33
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	1	0.03	99.36
5622	Waste Treatment and Disposal	21	0.03	99.39
8123	Drycleaning and Laundry Services	404	0.03	99.42
3116	Animal Slaughtering and Processing	2	0.03	99.44
3379	Other Furniture Related Product Manufacturing	0	0.03	99.47
4884	Support Activities for Road Transportation	27	0.03	99.49
3222	Converted Paper Product Manufacturing	3	0.02	99.52
5313	Activities Related to Real Estate	88	0.02	99.54
3372	Office Furniture (including Fixtures) Manufacturing	5	0.02	99.57
2379	Other Heavy and Civil Engineering Construction	41	0.02	99.59
3326	Spring and Wire Product Manufacturing	2	0.02	99.61
6214	Outpatient Care Centers	0	0.02	99.63
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	28	0.02	99.65
4885	Freight Transportation Arrangement	141	0.02	99.67
1125	Aquaculture	2	0.02	99.69
4245	Farm Product Raw Material Merchant Wholesalers	8	0.02	99.71
3262	Rubber Product Manufacturing	2	0.02	99.73
5221	Depository Credit Intermediation	29	0.02	99.75
4841	General Freight Trucking	429	0.02	99.77
3343	Audio and Video Equipment Manufacturing	24	0.02	99.79
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	2	0.02	99.80
5179	Other Telecommunications	229	0.02	99.82
5242	Agencies, Brokerages, and Other Insurance Related Activities	423	0.02	99.84
3219	Other Wood Product Manufacturing	4	0.02	99.85
3273	Cement and Concrete Product Manufacturing	9	0.02	99.87
5615	Travel Arrangement and Reservation Services	356	0.02	99.89
3274	Lime and Gypsum Product Manufacturing	0	0.02	99.90
1152	Support Activities for Animal Production	101	0.02	99.92
5411	Legal Services	1,069	0.02	99.93
6117	Educational Support Services	297	0.01	99.95
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	17	0.01	99.96
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	2	0.01	99.97
6212	Offices of Dentists	505	0.01	99.99

## M/WBE Availability in the State of Maryland's Market Area

<b>NAICS Industry Group</b>	<b>NAICS Description</b>	<b>Number of Listed M/WBEs</b>	<b>Industry Weight</b>	<b>Cumulative Industry Weight</b>
7139	Other Amusement and Recreation Industries	410	0.01	100.00

Source and Notes: *See* Table 3.1.

### 3. Verify Listed M/WBEs

#### a. Introduction

It is likely that the race and gender classifications for businesses from Dun & Bradstreet and the race and gender classifications from M/WBE directories are not correct in all instances. Phenomena such as ownership changes, associate or mentor status, recording errors, or even misrepresentation, will lead to businesses being listed as M/WBEs in a particular directory even though they may not actually be owned by such entities. Other things equal, this type of error would cause our availability estimate to be biased upward from the actual availability number.

The second likelihood that must be addressed is that not all M/WBE businesses are necessarily listed—either in Dun & Bradstreet or in any of the other directories we collected. Such phenomena as geographic relocation, ownership changes, directory compilation errors, fear of stigmatization, and limitations in M/WBE outreach, could all lead to such establishments being unlisted. Other things equal, this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. For this Study, we corrected for the effect of these biases using statistical sampling procedures. We surveyed a large, stratified random sample of 75,000 records drawn from the Baseline Business Universe and measured how often and how they were misclassified (or unclassified) by race and gender status.<sup>55</sup>

Strata were defined according to NAICS industries and listed M/WBE status.<sup>56</sup> In the telephone survey, up to 10 attempts were made to reach each business and speak with an appropriate respondent. Attempts were scheduled for a mix of day and evening, weekdays and weekends, and appointments were scheduled for callbacks when necessary. Of the 75,000 establishments in our sample, 23,054 (31%) were listed M/WBEs and 51,946 (69%) were unclassified by race or gender. Of these 75,000 establishments, however, 14,875 (20%) were excluded as “unable to contact.” Exclusions resulted from a variety of reasons including disconnected and wrong phone numbers, and establishments that were no longer in business.<sup>57</sup> Of the remaining 60,125 establishments, 18,697 (31%) were listed M/WBEs and the remaining 41,428 establishments (69%) were unclassified.

The first part of the survey tested whether our sample of listed M/WBEs was correctly classified by race and/or gender. The second part of the survey tested whether the unclassified

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<sup>55</sup> A similar method, with respect to M/WBE establishments, was employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Survey of Small Business Finances for 1993 and 1998. See Haggerty, C., K. Grigorian, R. Harter and J. D. Wolken (2000).

<sup>56</sup> A total of 270 separate industry strata were created based on NAICS code. All strata were then split according to listed M/WBE status to create a total of 540 strata. Generally, listed M/WBEs were sampled at a higher rate than unclassified establishments.

<sup>57</sup> Other reasons included changed ownership, duplicate records, and refusals. Putative M/WBEs were not more likely to be affected by this than putative non-M/WBEs.

establishments (that is, those putatively owned by nonminority males) could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.<sup>58</sup>

## b. Survey of Listed M/WBEs

We selected a stratified random sample of 23,054 listed M/WBEs to verify the race and gender status of their owner(s). Of these, 4,357 (19%) were excluded as “unable to contact.” Of the remaining 18,697 establishments, we obtained complete interviews from 5,435, for a response rate of 29 percent.

Of the 5,435 establishments interviewed, 1,568 (28.9%) were actually owned by nonminority males. Misclassification varied by putative race and gender, as shown in Table 3.13. Misclassification was highest among putative Native American-owned establishments, followed by putative Asian-owned establishments, then Hispanic-owned establishments, then nonminority female-owned establishments, and finally African American-owned establishments.<sup>59</sup> Misclassification was also observed in 89 percent of NAICS strata, ranging from a high of 100 percent to a low of 16.7 percent, with a median of 42.5 percent and a mean of 45.3 percent.

**Table 3.13. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type**

<b>Putative Race/Gender</b>	<b>Misclassification (Percentage Nonminority Male)</b>	<b>Misclassification (Percentage Other M/WBE Type)</b>	<b>Percentage Correctly Classified</b>	<b>Number of Businesses Interviewed</b>
African American (either gender)	17.94	6.53	75.53	1,594
Hispanic (either gender)	33.21	15.69	51.70	530
Asian (either gender)	30.85	18.09	51.06	752
Native American (either gender)	37.21	30.23	32.56	86
Nonminority Female	34.05	13.47	52.49	2,473
All M/WBE Types	28.85	12.49	58.66	5,435

Source: NERA telephone surveys.

Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

(2) Similar calculations, not shown here, were performed within each stratum.

<sup>58</sup> By “putative,” we mean the race and gender that we initially assigned to each firm based on the information provided by the State of Maryland, the Maryland DOT, Dun & Bradstreet, our master M/WBE directory, or from other sources.

<sup>59</sup> For this Study, “Black” or “African American” refers to an individual having origins in any of the black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to an individual having origins in the Far East, Southeast Asia, or the Indian subcontinent; “Native American” or “American Indian” refers to an individual having origins in any of the original peoples of North America but does not include individuals of Eskimo or Aleutian origin.

The race and gender status of the listed M/WBEs responding to the survey was changed, if necessary, according to the survey results. For example, if an establishment originally listed as African American-owned was actually nonminority male-owned, then that establishment was counted as nonminority male-owned for purposes of calculating M/WBE availability.

But what about the remaining putative African American-owned establishments that we did not interview? For these businesses, we estimated the race and gender of their ownership based on the amount of misclassification we observed among the putatively African American-owned establishments that we did interview. In this example, our interviews showed that 75.53 percent of these establishments were indeed actually African American-owned, 17.94 percent were actually nonminority male-owned, 4.27 percent were actually nonminority female-owned, 1.07 percent were actually Hispanic-owned, 0.75 percent were actually Native American-owned, and 0.44 percent were Asian-owned. Therefore, we assigned each of the remaining putative African American-owned establishments a 75.53 percent probability of being African American-owned, a 17.94 percent probability of being nonminority male-owned, a 4.27 percent probability of being nonminority female-owned, a 1.07 percent probability of being Hispanic-owned, a 0.75 percent probability of being Native American-owned, and a 0.44 percent probability of being Asian-owned. We performed this procedure within each sample stratum and for all putative race and gender categories.

#### **4. Verify Putative Non-M/WBEs**

##### **a. Survey of Unclassified Businesses**

In the same manner as our survey of listed M/WBEs, we also examined unclassified businesses, *i.e.*, any business that was not originally identified as an M/WBE, either in Dun & Bradstreet or in one or more of the other directories, and that would otherwise appear to be a non-M/WBE.

We selected a stratified random sample of 51,946 unclassified businesses. Of these, 10,518 (20%) were excluded as “unable to contact.” Of the 41,428 remaining establishments, we obtained 12,857 complete interviews, for a response rate of 31 percent.

In Table 3.14, of the 12,857 establishments interviewed, 9,835 (76.50%) were indeed owned by nonminority males. Clearly, a significant majority of unclassified businesses in the Baseline Business Universe are nonminority male-owned. Nevertheless, the survey results indicate that 23.50 percent of these establishments are *not* nonminority male-owned. Among the latter, the largest group was nonminority female-owned (10.55%), followed by African American-owned (6.27%), with descending size shares accounted for by Asian-owned (3.21%), Hispanic-owned (2.64%), and Native American-owned (0.83%). Misclassification was also observed in 91 percent of NAICS strata, ranging from a high of 100 percent to a low of 2.9 percent, with a median of 22.2 percent and a mean of 23.4 percent.

**Table 3.14. Unclassified Businesses Survey—By Race and Gender**

Verified Race/Gender	Number of Businesses Interviewed	Percentage of Total
Nonminority male	9,835	76.49
Nonminority female	1,356	10.55
African American (either gender)	806	6.27
Hispanic (either gender)	340	2.64
Asian (either gender)	413	3.21
Native American (either gender)	107	0.83
TOTAL	12,857	100.00

Source and Notes: See Table 3.13. Numbers may not add to total due to rounding.

In the same manner as the survey of listed M/WBEs, the race and gender status of unclassified establishments was changed, if necessary, according to the survey results. For example, if an interviewed establishment that was originally unclassified indicated that it was actually nonminority male-owned, then that establishment was counted as nonminority male-owned for purposes of the M/WBE availability calculation. If the establishment indicated it was nonminority female-owned, it was counted as nonminority female, and so on. For unclassified establishments that were not interviewed, we assigned probability values (probability actually nonminority male-owned, probability actually nonminority female-owned, probability actually African American-owned, *etc.*) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

## 5. Understanding “Capacity”

As noted in the beginning of this chapter, some observers, primarily opponents of efforts to address discrimination in contracting, have argued that, in order to be accurate, availability estimates must be adjusted for “capacity.” These assertions are rarely accompanied by specific suggestions about how such adjustments could be made consistent with professional social science standards. This Study does adjust for certain appropriate characteristics of firms related to capacity (such as industry affiliation, geographic location, owner labor market experience, and educational attainment); however, we are careful to not adjust for capacity factors that are themselves likely to be influenced by discrimination. In our view, all of the “capacity” indicators recommended by program opponents (*e.g.*, firm age, annual individual firm revenues, number of employees, largest contract received, bonding limits) are subject to the impact of discrimination.

Further, the reality is that large, adverse statistical disparities between minority-owned or women-owned businesses and nonminority male-owned businesses have been documented in numerous research studies and reports since *Croson*.<sup>60</sup> Business outcomes, however, can be

<sup>60</sup> See Enchautegui, et al. (1996). More recently, see Wainwright (2012), Wainwright (2010).

influenced by multiple factors, and it is important that disparity studies examine the likelihood of whether discrimination is an important contributing factor to observed disparities.

Moreover, terms such as “capacity,” “qualifications,” and “ability,” are not well defined in any statistical sense. Does “capacity” mean the level of annual individual firm revenues, employment size, bonding limits, or number of contracts bid or awarded? Does “qualified” or “able” mean possession of a business license, certain amounts of training, types of work experience, or the number of contracts a firm can perform at a given moment? What mix of business attributes properly reflects “capacity”? Does the meaning of such terms differ from industry to industry, locality to locality, or through time? Where and how might such data be reliably gathered? Even if capacity is well-defined and adequate data are gathered, when measuring the existence of discrimination, the statistical method used should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, annual individual firm revenues, bonding limits, or number of employees.

Consider an extreme example where discrimination has prevented the emergence of any minority-owned or women-owned firms. Suppose that discrimination was ingrained in a state's construction market. As a result, few minority or female construction employees are given the opportunity to gain managerial experience in the business; minorities or women who do end up starting construction firms are denied the opportunity to work as subcontractors for nonminority prime contractors; and nonminority prime contractors refuse to work with minority or female firms and put pressure on bonding companies and banks to prevent such firms from securing bonding and capital. In this example, discrimination has prevented the emergence of a minority or female highway construction industry with “capacity.” Those M/WBEs that exist at all will be smaller and less experienced and have lower annual individual firm revenues, bonding limits, and employees (*i.e.*, “capacity”) because of discrimination than firms that have benefited from the exclusionary system.

Using annual individual firm revenues as the measure of qualifications illustrates the point. If M/WBEs are subject to market area discrimination, their annual individual firm revenues will be smaller than nonminority, male-owned businesses because they will be less successful at obtaining work. Annual individual firm revenues measure the extent to which a firm has succeeded in the market area, perhaps in spite of discrimination—it does not measure the ability to succeed in the absence of discrimination and should not be used to evaluate the effects of discrimination.

Therefore, focusing on the “capacity” of businesses in terms of employment, annual individual firm revenues, bonding limits, number of trucks, and so forth, is simply wrong as a matter of economics because it can obscure the existence of discrimination. A truly “effective” discriminatory system would lead to a finding of no “capacity,” and under the “capacity” approach, a finding of no discrimination. Excluding firms from an availability measure based on their “capacity” in a discriminatory market merely affirms the results of discrimination rather than ameliorating them.

Further, in dynamic business environments, and especially in the construction sector, such “qualifications” or “capacity” can be obtained relatively easily. It is well known that small construction companies can expand rapidly as needs arise by hiring workers and renting

equipment, and many general contractors subcontract the majority of a project. Firms grow quickly when demand increases and shrink quickly when demand decreases. Subcontracting is one important source of this elasticity, as has been noted by several academic studies.<sup>61</sup> Other industry sectors, especially in this era of Internet commerce and independent contractors, can also quickly grow or shrink in response to demand.

Finally, even where “capacity”-type factors have been controlled for in statistical analyses, results consistent with business discrimination are still typically observed. For example, large and statistically significant differences in commercial loan denial rates between minority and nonminority firms are evident throughout the country, even when detailed balance sheet and creditworthiness measures are held constant.<sup>62</sup> Similarly, economists using decennial census data have demonstrated that statistically significant disparities in business formation and business owner earnings between M/WBEs and non-M/WBEs remain even after controlling for a host of additional relevant factors, including educational achievement, labor market experience, marital status, disability status, veteran status, interest and dividend income, labor market attachment, industry, geographic location, and local labor market variables such as the unemployment rate, population growth rate, government employment rate, or per capita income.<sup>63</sup>

To summarize, the statistical analysis of the availability of minority and female firms in disparity studies should not adjust for inappropriate “capacity” factors because:

- “Capacity” has been ill-defined; and reliable data for measurement are generally unavailable;
- Small firms, particularly in the construction industry, are highly elastic with regard to ability to perform;
- Studies have shown that even when “capacity” and “qualifications”-type factors are held constant in statistical analyses, evidence of disparity against M/WBE firms persists;<sup>64</sup> and
- Most important, identifiable indicators of “capacity” are themselves impacted by discrimination.

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<sup>61</sup> See Bourdon and Levitt (1980); *see also* Eccles (1981); and Gould (1980).

<sup>62</sup> See Wainwright (2008).

<sup>63</sup> Wainwright (2000).

<sup>64</sup> Within the present Study, *see esp.* Chapter V, throughout, and Chapter VII, Tables 7.3-7.6 and the accompanying discussion.

### C. Estimates of M/WBE Availability

Top-level estimates of M/WBE availability appear below in Table 3.15. Two sets of weighted availability measures are provided for each of the six major procurement categories of Construction, AE-CRS, Maintenance, IT, Services and CSE. The first set is weighted by award dollars for all contracts. The second set is weighted by paid dollars for substantially completed contracts.

**Table 3.15. Overall Estimated M/WBE Availability Percentages**

	African American	Hispanic	Asian	Native American	Minority	Non-minority Female	M/WBE	Non-M/WBE
<b>OVERALL</b>								
AWARD DOLLARS	11.61	3.59	5.41	1.04	21.64	14.24	35.89	64.11
PAID DOLLARS	11.18	3.84	4.65	1.03	20.70	14.04	34.75	65.25
<b>CONSTRUCTION</b>								
AWARD DOLLARS	10.66	4.91	2.65	0.77	18.99	13.94	32.93	67.07
PAID DOLLARS	10.26	5.10	2.68	0.79	18.83	13.65	32.48	67.52
<b>AE-CRS</b>								
AWARD DOLLARS	8.61	2.22	4.82	1.22	16.87	12.16	29.02	70.98
PAID DOLLARS	8.46	2.21	4.83	1.23	16.73	11.93	28.66	71.34
<b>MAINTENANCE</b>								
AWARD DOLLARS	13.87	4.78	3.48	1.87	23.99	12.44	36.44	63.56
PAID DOLLARS	16.16	5.42	3.52	2.22	27.33	13.49	40.82	59.18
<b>IT</b>								
AWARD DOLLARS	15.55	3.53	13.01	1.20	33.29	13.26	46.55	53.45
PAID DOLLARS	15.54	3.55	12.67	1.19	32.95	13.43	46.37	53.63
<b>SERVICES</b>								
AWARD DOLLARS	13.52	3.08	5.53	1.06	23.19	17.67	40.86	59.14
PAID DOLLARS	13.92	2.91	4.82	1.15	22.79	18.18	40.97	59.03

## M/WBE Availability in the State of Maryland's Market Area

	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Minority</b>	<b>Non- minority Female</b>	<b>M/WBE</b>	<b>Non- M/WBE</b>
<b>CSE</b>								
<b>AWARD DOLLARS</b>	10.50	3.24	6.10	0.85	20.70	13.02	33.71	66.29
<b>PAID DOLLARS</b>	10.78	3.15	6.33	0.83	21.09	13.20	34.29	65.71

Sources: Dun & Bradstreet; M/WBE business directory information compiled by NERA; NERA telephone surveys.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Overall M/WBE availability in the Construction sector is between 32.48 and 32.93 percent. Non-M/WBE availability is between 67.07 and 67.52 percent. Among M/WBEs, availability of African American-owned businesses is between 10.26 and 10.66 percent, availability of Hispanic-owned businesses is between 4.91 and 5.10 percent, availability of Asian-owned businesses is 2.65 and 2.68 percent, and availability of Native American-owned businesses is between 0.77 and 0.79 percent. Availability of minority-owned businesses as a group is between 18.83 and 18.99 percent. Availability of nonminority female-owned businesses is between 13.65 and 13.94 percent.

Overall M/WBE availability in the AE-CRS sector is between 28.66 and 29.02 percent. Non-M/WBE availability is between 70.98 and 71.34 percent. Among M/WBEs, availability of African American-owned businesses is between 8.46 and 8.61 percent, availability of Hispanic-owned businesses is between 2.21 and 2.22 percent, availability of Asian-owned businesses is between 4.82 and 4.83 percent, and availability of Native American-owned businesses is between 1.22 and 1.23 percent. Availability of minority-owned businesses as a group is between 16.73 and 16.87 percent. Availability of nonminority female-owned businesses is between 11.93 and 12.16 percent.

Overall M/WBE availability in the Maintenance sector is between 36.44 and 40.82 percent. Non-M/WBE availability is between 59.18 and 63.56 percent. Among M/WBEs, availability of African American-owned businesses is between 13.87 and 16.16 percent, availability of Hispanic-owned businesses is between 4.78 and 5.42 percent, availability of Asian-owned businesses is between 3.48 and 3.52 percent, and availability of Native American-owned businesses is between 1.87 and 2.22 percent. Availability of minority-owned businesses as a group is between 23.99 and 27.33 percent. Availability of nonminority female-owned businesses is between 12.44 and 13.49 percent.

Overall M/WBE availability in the IT sector is between 46.37 and 46.55 percent. Non-M/WBE availability is between 53.45 and 53.63 percent. Among M/WBEs, availability of African American-owned businesses is between 15.54 and 15.55 percent, availability of Hispanic-owned businesses is between 3.53 and 3.55 percent, availability of Asian-owned businesses is between 12.67 and 13.01 percent, and availability of Native American-owned businesses is between 1.19 and 1.20 percent. Availability of minority-owned businesses as a group is between 32.95 and

33.29 percent. Availability of nonminority female-owned businesses is between 13.26 and 13.43 percent.

Overall M/WBE availability in the Services sector is between 40.86 and 40.97 percent. Non-M/WBE availability is between 59.03 and 59.14 percent. Among M/WBEs, availability of African American-owned businesses is between 13.52 and 13.92 percent, availability of Hispanic-owned businesses is between 2.91 and 3.08 percent, availability of Asian-owned businesses is between 4.82 and 5.53 percent, and availability of Native American-owned businesses is between 1.06 and 1.15 percent. Availability of minority-owned businesses as a group is between 22.79 and 23.19 percent. Availability of nonminority female-owned businesses is between 17.67 and 18.18 percent.

Overall M/WBE availability in the CSE sector is between 33.71 and 34.29 percent. Non-M/WBE availability is between 65.71 and 66.29 percent. Among M/WBEs, availability of African American-owned businesses is between 10.50 and 10.78 percent, availability of Hispanic-owned businesses is between 3.15 and 3.24 percent, availability of Asian-owned businesses is between 6.10 and 6.33 percent, and availability of Native American-owned businesses is between 0.83 and 0.85 percent. Availability of minority-owned businesses as a group is between 20.70 and 21.09 percent. Availability of nonminority female-owned businesses is between 13.02 and 13.20 percent.

Tables 3.16 through 3.21 present detailed estimates of M/WBE availability in the State of Maryland's relevant market area for Construction, AE-CRS, Maintenance, IT, Services, and CSE.<sup>65</sup>

**Table 3.16. Detailed M/WBE Availability Percentages—Construction (All Contracts) (Dollars Awarded)**

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Building Equipment Contractors (NAICS 2382)	9.14	4.67	1.52	0.64	12.45	28.41	71.59
Highway, Street, and Bridge Construction (NAICS 2373)	13.59	3.09	3.70	0.38	11.87	32.62	67.38
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.02	5.87	1.13	0.48	8.91	23.41	76.59
Nonresidential Building Construction (NAICS 2362)	12.17	6.74	4.46	2.09	10.01	35.47	64.53
Other Specialty Trade Contractors (NAICS 2389)	6.79	4.54	3.68	2.92	11.61	29.55	70.45
Building Finishing Contractors (NAICS 2383)	3.90	12.26	2.95	0.17	13.32	32.59	67.41
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.93	0.04	0.23	0.18	14.05	20.43	79.57

<sup>65</sup> Similar tables using paid dollar weights were also produced but are not included here for space considerations.

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.27	2.10	1.21	0.87	10.56	20.01	79.99
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.55	0.23	5.55	0.12	11.32	25.76	74.24
Utility System Construction (NAICS 2371)	9.17	1.81	2.38	1.14	10.38	24.88	75.12
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Specialized Freight Trucking (NAICS 4842)	24.84	7.48	1.87	0.12	11.65	45.97	54.03
Architectural, Engineering, and Related Services (NAICS 5413)	6.97	1.98	4.88	1.37	10.25	25.45	74.55
Services to Buildings and Dwellings (NAICS 5617)	17.57	3.45	2.70	2.24	11.53	37.50	62.50
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	4.86	2.42	6.60	0.97	9.83	24.68	75.32
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	10.28	0.06	7.17	0.04	18.00	35.55	64.45
Cement and Concrete Product Manufacturing (NAICS 3273)	3.08	1.12	0.51	0.07	5.75	10.53	89.47
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.38	1.02	2.19	0.94	8.62	17.16	82.84
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	1.80	0.32	2.60	0.55	6.67	11.94	88.06
Electric Lighting Equipment Manufacturing (NAICS 3351)	4.05	0.08	0.15	4.75	15.11	24.13	75.87
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	5.93	0.82	3.36	0.68	15.46	26.25	73.75
Other Support Services (NAICS 5619)	18.71	2.45	2.57	0.02	28.54	52.30	47.70
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	11.81	0.23	7.83	0.23	14.79	34.89	65.11
Investigation and Security Services (NAICS 5616)	19.84	1.44	5.00	1.16	11.73	39.16	60.84
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	8.83	3.66	4.95	0.54	16.02	34.00	66.00
Computer Systems Design and Related Services (NAICS 5415)	16.35	3.48	14.17	1.27	13.04	48.31	51.69

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Other Miscellaneous Manufacturing (NAICS 3399)	7.16	1.54	1.07	0.04	27.72	37.52	62.48
Other Wood Product Manufacturing (NAICS 3219)	1.29	0.68	0.64	0.00	3.78	6.40	93.60
Remediation and Other Waste Management Services (NAICS 5629)	4.48	6.72	6.65	0.01	15.51	33.36	66.64
Other Support Activities for Transportation (NAICS 4889)	30.32	15.93	7.11	0.06	4.93	58.36	41.64
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.00	0.00	0.00	0.00	7.14	7.14	92.86
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	12.46	4.15	5.60	0.89	15.77	38.87	61.13
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	5.77	3.39	1.78	0.29	10.03	21.26	78.74
Home Furnishings Stores (NAICS 4422)	0.94	9.73	7.22	0.01	10.14	28.04	71.96
Employment Services (NAICS 5613)	9.20	2.44	3.33	0.03	12.27	27.27	72.73
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	4.27	0.00	0.00	0.02	13.28	17.57	82.43
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	12.67	6.33	6.33	0.00	12.67	38.01	61.99
Building Material and Supplies Dealers (NAICS 4441)	3.07	0.03	2.31	0.01	16.87	22.30	77.70
Other Miscellaneous Store Retailers (NAICS 4539)	11.81	3.65	4.95	0.92	17.50	38.83	61.17
Management, Scientific, and Technical Consulting Services (NAICS 5416)	11.11	2.69	5.28	1.59	19.54	40.21	59.79
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.19	1.51	2.42	4.43	18.69	27.24	72.76
Electronics and Appliance Stores (NAICS 4431)	10.01	0.31	3.00	0.29	15.37	28.99	71.01
Communications Equipment Manufacturing (NAICS 3342)	3.95	11.40	0.00	0.00	20.48	35.83	64.17
Support Activities for Road Transportation (NAICS 4884)	6.71	9.01	0.15	1.78	16.46	34.11	65.89
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.19	0.04	0.83	2.27	21.37	24.70	75.30
Rail Transportation (NAICS 4821)	0.65	0.14	0.20	0.08	1.69	2.74	97.26

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.87	0.04	0.07	0.07	8.03	15.08	84.92
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	13.23	3.63	5.47	0.96	17.77	41.06	58.94
Direct Selling Establishments (NAICS 4543)	2.43	0.82	0.83	0.01	8.60	12.68	87.32
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Real Estate Agents and Brokers (NAICS 5312)	7.84	1.56	4.25	0.33	18.14	32.12	67.88
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	16.68	1.35	3.58	0.83	17.37	39.81	60.19
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	7.82	0.81	3.77	0.00	13.48	25.88	74.12
Electric Power Generation, Transmission and Distribution (NAICS 2211)	1.22	0.01	1.80	1.11	8.17	12.31	87.69
Waste Collection (NAICS 5621)	23.81	0.00	0.00	3.14	7.25	34.21	65.79
Other General Purpose Machinery Manufacturing (NAICS 3339)	0.00	0.00	0.00	0.00	22.22	22.22	77.78
Automotive Equipment Rental and Leasing (NAICS 5321)	2.08	0.07	2.88	0.95	3.13	9.11	90.89
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	11.19	0.00	1.89	0.00	16.24	29.31	70.69
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	8.56	0.75	1.35	0.07	14.61	25.34	74.66
Warehousing and Storage (NAICS 4931)	10.26	3.17	4.54	0.76	13.91	32.64	67.36
Furniture Stores (NAICS 4421)	3.83	0.05	0.52	1.19	14.41	20.00	80.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	1.09	2.37	0.01	3.14	6.87	13.48	86.52

Sources and Notes: See Table 3.15.

**Table 3.17. Detailed M/WBE Availability Percentages—AE-CRS (All Contracts) (Dollars Awarded)**

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Architectural, Engineering, and Related Services (NAICS 5413)	7.21	2.17	4.92	1.35	10.31	25.96	74.04
Management, Scientific, and Technical Consulting Services (NAICS 5416)	9.23	2.09	4.30	1.52	15.85	33.00	67.00
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Highway, Street, and Bridge Construction (NAICS 2373)	13.59	3.09	3.70	0.38	11.87	32.62	67.38
Other Support Services (NAICS 5619)	18.71	2.45	2.57	0.02	28.54	52.30	47.70
Building Equipment Contractors (NAICS 2382)	5.81	3.16	1.43	0.13	12.18	22.72	77.28
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.34	1.66	0.89	0.04	0.92	3.84	96.16
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	0.00	0.00	0.00	0.00	9.09	9.09	90.91
Advertising, Public Relations, and Related Services (NAICS 5418)	7.68	4.62	1.70	0.34	26.75	41.08	58.92
Scientific Research and Development Services (NAICS 5417)	4.59	0.01	1.12	0.41	6.95	13.08	86.92
Computer Systems Design and Related Services (NAICS 5415)	17.01	3.19	13.33	1.24	13.39	48.15	51.85
Employment Services (NAICS 5613)	9.20	2.44	3.33	0.03	12.27	27.27	72.73
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.49	0.02	1.44	1.24	8.16	15.35	84.65

Sources and Notes: See Table 3.15.

**Table 3.18. Detailed M/WBE Availability Percentages—Maintenance (All Contracts) (Dollars Awarded)**

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.55	0.23	5.55	0.12	11.32	25.76	74.24
Building Equipment Contractors (NAICS 2382)	10.69	3.56	1.04	0.47	13.07	28.84	71.16
Facilities Support Services (NAICS 5612)	26.39	3.77	2.52	1.15	9.10	42.92	57.08
Investigation and Security Services (NAICS 5616)	20.58	1.89	3.21	1.48	11.62	38.79	61.21
Services to Buildings and Dwellings (NAICS 5617)	22.48	6.98	3.48	1.19	12.62	46.76	53.24
Highway, Street, and Bridge Construction (NAICS 2373)	13.59	3.09	3.70	0.38	11.87	32.62	67.38
Other Specialty Trade Contractors (NAICS 2389)	6.64	3.38	3.51	3.36	11.47	28.36	71.64
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	4.28	6.80	1.58	1.57	11.29	25.52	74.48
Business Support Services (NAICS 5614)	18.77	4.72	4.66	5.24	15.17	48.58	51.42
Interurban and Rural Bus Transportation (NAICS 4852)	20.62	0.00	0.00	0.00	14.37	35.00	65.00
Support Activities for Road Transportation (NAICS 4884)	6.71	9.01	0.15	1.78	16.46	34.11	65.89
Nonresidential Building Construction (NAICS 2362)	12.17	6.74	4.46	2.09	10.01	35.47	64.53
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Support Activities for Rail Transportation (NAICS 4882)	18.21	12.34	3.80	2.17	13.75	50.27	49.73
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.46	0.28	1.64	1.16	8.28	15.82	84.18
Direct Selling Establishments (NAICS 4543)	2.43	0.82	0.83	0.01	8.60	12.68	87.32
Architectural, Engineering, and Related Services (NAICS 5413)	6.75	2.06	5.33	1.57	9.40	25.12	74.88
Urban Transit Systems (NAICS 4851)	42.42	4.79	10.65	0.12	5.04	63.02	36.98
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	1.09	2.37	0.01	3.14	6.87	13.48	86.52
Waste Collection (NAICS 5621)	23.81	0.00	0.00	3.14	7.25	34.21	65.79

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	5.95	2.11	0.41	0.01	3.20	11.68	88.32
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	1.79	3.65	2.27	1.22	7.00	15.93	84.07
Communications Equipment Manufacturing (NAICS 3342)	6.61	2.28	4.18	0.01	7.40	20.48	79.52
Specialized Freight Trucking (NAICS 4842)	24.84	7.48	1.87	0.12	11.65	45.97	54.03
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.84	1.78	1.16	1.23	11.47	20.48	79.52
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	3.61	0.27	0.82	0.52	11.17	16.38	83.62
Automobile Dealers (NAICS 4411)	4.17	2.71	2.96	0.05	10.16	20.05	79.95
Motor Vehicle Parts Manufacturing (NAICS 3363)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	1.23	0.00	2.83	0.00	4.07	8.13	91.87
Waste Treatment and Disposal (NAICS 5622)	8.77	2.81	0.97	0.00	22.25	34.80	65.20
Management, Scientific, and Technical Consulting Services (NAICS 5416)	6.85	2.26	4.41	2.20	18.78	34.50	65.50
Building Finishing Contractors (NAICS 2383)	5.24	17.85	3.19	0.05	12.89	39.23	60.77
Traveler Accommodation (NAICS 7211)	0.13	1.43	10.56	3.60	9.94	25.65	74.35
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	10.59	3.98	5.58	0.11	17.56	37.82	62.18
Employment Services (NAICS 5613)	11.34	2.41	4.18	0.19	13.84	31.97	68.03
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.07	0.42	1.68	0.24	28.55	38.96	61.04
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	12.59	0.00	0.00	0.05	0.16	12.81	87.19
Electric Lighting Equipment Manufacturing (NAICS 3351)	2.16	0.04	0.08	5.87	13.06	21.21	78.79

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Remediation and Other Waste Management Services (NAICS 5629)	6.29	2.91	1.99	0.05	14.80	26.04	73.96
Architectural and Structural Metals Manufacturing (NAICS 3323)	3.47	0.04	0.06	0.84	12.76	17.17	82.83
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	6.23	4.13	7.07	1.19	6.46	25.08	74.92
Utility System Construction (NAICS 2371)	9.16	1.81	2.38	1.15	10.41	24.90	75.10
Computer Systems Design and Related Services (NAICS 5415)	17.02	3.15	15.07	1.04	11.45	47.74	52.26
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	10.28	0.06	7.17	0.04	18.00	35.55	64.45
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.19	0.04	0.83	2.27	21.37	24.70	75.30
Automotive Repair and Maintenance (NAICS 8111)	8.22	3.96	9.00	0.18	11.62	32.98	67.02
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	6.82	3.48	2.38	0.40	11.15	24.23	75.77
Building Material and Supplies Dealers (NAICS 4441)	4.87	1.40	1.91	0.35	10.96	19.49	80.51
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	7.82	0.81	3.77	0.00	13.48	25.88	74.12
Support Activities for Air Transportation (NAICS 4881)	18.32	1.91	2.91	0.13	2.42	25.69	74.31
Aerospace Product and Parts Manufacturing (NAICS 3364)	0.00	4.35	0.00	0.00	19.13	23.48	76.52
Couriers and Express Delivery Services (NAICS 4921)	24.20	3.10	0.10	2.52	1.80	31.73	68.27
Rail Transportation (NAICS 4821)	0.65	0.14	0.20	0.08	1.69	2.74	97.26
Cement and Concrete Product Manufacturing (NAICS 3273)	2.95	0.05	0.07	0.01	0.19	3.27	96.73
Freight Transportation Arrangement (NAICS 4885)	17.82	4.09	7.34	0.18	11.67	41.11	58.89
Other General Purpose Machinery Manufacturing (NAICS 3339)	7.69	0.00	15.38	0.00	24.62	47.69	52.31
Vocational Rehabilitation Services (NAICS 6243)	13.63	4.02	5.48	0.90	16.19	40.22	59.78
Electric Power Generation, Transmission and Distribution (NAICS 2211)	1.22	0.01	1.80	1.11	8.17	12.31	87.69

Sources and Notes: See Table 3.15.

**Table 3.19. Detailed M/WBE Availability Percentages—IT (All Contracts) (Dollars Awarded)**

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Computer Systems Design and Related Services (NAICS 5415)	17.55	2.95	14.21	1.45	11.58	47.74	52.26
Communications Equipment Manufacturing (NAICS 3342)	6.82	1.00	4.65	0.01	5.96	18.44	81.56
Software Publishers (NAICS 5112)	11.92	3.54	8.00	0.28	13.22	36.96	63.04
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	10.53	1.55	6.15	0.88	9.50	28.61	71.39
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.06	4.06	4.48	0.05	10.02	22.68	77.32
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.33	2.70	5.94	1.04	18.83	42.85	57.15
Employment Services (NAICS 5613)	12.43	2.40	4.61	0.28	14.63	34.36	65.64
Nonresidential Building Construction (NAICS 2362)	12.17	6.74	4.46	2.09	10.01	35.47	64.53
Advertising, Public Relations, and Related Services (NAICS 5418)	7.68	4.62	1.70	0.34	26.75	41.08	58.92
Architectural, Engineering, and Related Services (NAICS 5413)	6.29	1.93	4.00	1.28	10.08	23.57	76.43
Utility System Construction (NAICS 2371)	10.23	2.27	2.41	0.51	8.48	23.89	76.11
Business Support Services (NAICS 5614)	12.36	0.10	0.12	0.02	12.45	25.04	74.96
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	9.83	8.13	1.81	0.10	6.74	26.61	73.39
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	13.60	3.53	6.14	0.96	16.46	40.69	59.31
Scientific Research and Development Services (NAICS 5417)	4.78	0.89	5.29	2.80	5.71	19.48	80.52
Wired Telecommunications Carriers (NAICS 5171)	14.59	0.20	2.02	0.05	6.34	23.20	76.80
Other Ambulatory Health Care Services (NAICS 6219)	13.34	3.93	7.38	0.65	17.53	42.83	57.17
Other Telecommunications (NAICS 5179)	4.61	2.56	1.77	0.43	3.00	12.38	87.62
Data Processing, Hosting, and Related Services (NAICS 5182)	21.33	1.91	5.77	0.14	15.34	44.50	55.50
Educational Support Services (NAICS 6117)	25.75	0.71	3.31	2.37	10.40	42.54	57.46
Electronics and Appliance Stores (NAICS 4431)	10.01	0.31	3.00	0.29	15.37	28.99	71.01

## M/WBE Availability in the State of Maryland's Market Area

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Building Finishing Contractors (NAICS 2383)	3.32	8.87	1.91	0.05	14.38	28.54	71.46
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	2.20	0.39	0.51	0.08	16.21	19.40	80.60
Other Specialty Trade Contractors (NAICS 2389)	6.37	1.28	3.21	4.14	11.20	26.21	73.79
Printing and Related Support Activities (NAICS 3231)	4.82	1.60	5.27	0.98	17.92	30.59	69.41
Building Equipment Contractors (NAICS 2382)	13.07	6.81	1.73	1.31	12.66	35.56	64.44
Architectural and Structural Metals Manufacturing (NAICS 3323)	7.09	0.04	0.08	0.04	15.98	23.23	76.77
Specialized Design Services (NAICS 5414)	15.06	3.76	4.93	1.27	24.71	49.73	50.27
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Services to Buildings and Dwellings (NAICS 5617)	16.65	2.83	2.56	2.41	11.31	35.76	64.24

Sources and Notes: *See Table 3.15.*

**Table 3.20. Detailed M/WBE Availability Percentages—Services (All Contracts) (Dollars Awarded)**

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Electric Power Generation, Transmission and Distribution (NAICS 2211)	1.22	0.01	1.80	1.11	8.17	12.31	87.69
Other Ambulatory Health Care Services (NAICS 6219)	13.34	3.93	7.38	0.65	17.53	42.83	57.17
Office Administrative Services (NAICS 5611)	12.78	2.34	2.67	0.81	19.74	38.34	61.66
Other Miscellaneous Manufacturing (NAICS 3399)	21.79	5.95	1.10	0.00	16.94	45.79	54.21
Advertising, Public Relations, and Related Services (NAICS 5418)	8.06	3.08	1.44	0.60	25.75	38.92	61.08
Urban Transit Systems (NAICS 4851)	42.42	4.79	10.65	0.12	5.04	63.02	36.98
Rail Transportation (NAICS 4821)	0.65	0.14	0.20	0.08	1.69	2.74	97.26
Other Residential Care Facilities (NAICS 6239)	13.45	0.69	0.70	0.03	10.36	25.22	74.78
Other Transit and Ground Passenger Transportation (NAICS 4859)	29.55	4.35	3.85	0.80	14.10	52.65	47.35
Insurance Carriers (NAICS 5241)	5.75	1.57	0.10	1.39	1.62	10.43	89.57
Management, Scientific, and Technical Consulting Services (NAICS 5416)	13.69	2.46	5.22	0.93	16.81	39.11	60.89
Business Support Services (NAICS 5614)	17.29	3.83	3.25	3.96	14.73	43.07	56.93
Computer Systems Design and Related Services (NAICS 5415)	16.82	3.26	14.14	1.18	12.66	48.07	51.93
Architectural, Engineering, and Related Services (NAICS 5413)	7.07	1.94	5.15	1.41	10.28	25.86	74.14
Offices of Dentists (NAICS 6212)	6.41	2.30	10.10	1.80	17.54	38.15	61.85
Employment Services (NAICS 5613)	14.90	2.37	5.60	0.47	16.44	39.78	60.22
Special Food Services (NAICS 7223)	16.39	0.43	3.94	0.11	2.02	22.89	77.11
Individual and Family Services (NAICS 6241)	9.52	0.64	2.46	1.82	11.27	25.71	74.29
Natural Gas Distribution (NAICS 2212)	5.63	0.00	4.87	0.00	0.00	10.50	89.50
Communications Equipment Manufacturing (NAICS 3342)	6.97	1.03	4.75	0.01	5.59	18.36	81.64
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.73	5.41	4.34	1.20	16.25	35.93	64.07
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.55	0.23	5.55	0.12	11.32	25.76	74.24

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.89	3.31	7.70	0.02	14.10	34.00	66.00
Printing and Related Support Activities (NAICS 3231)	4.82	1.60	5.27	0.98	17.92	30.59	69.41
Other Information Services (NAICS 5191)	12.97	0.73	7.46	6.67	11.06	38.88	61.12
Radio and Television Broadcasting (NAICS 5151)	5.39	0.13	1.69	2.13	2.21	11.55	88.45
Taxi and Limousine Service (NAICS 4853)	22.66	4.26	11.86	1.63	8.65	49.06	50.94
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	4.42	0.39	0.70	0.04	14.11	19.66	80.34
Direct Selling Establishments (NAICS 4543)	2.43	0.82	0.83	0.01	8.60	12.68	87.32
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	50.00	50.00	50.00
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Services to Buildings and Dwellings (NAICS 5617)	27.20	9.96	4.17	0.48	13.86	55.67	44.33
Facilities Support Services (NAICS 5612)	26.39	3.77	2.52	1.15	9.10	42.92	57.08
Building Equipment Contractors (NAICS 2382)	11.91	6.22	1.68	1.12	12.58	33.51	66.49
Other Personal Services (NAICS 8129)	4.15	0.96	0.50	0.01	2.61	8.24	91.76
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	13.66	0.96	1.41	1.92	24.85	42.80	57.20
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.01	4.85	0.06	0.00	16.04	20.96	79.04
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	9.50	3.00	4.55	0.68	12.18	29.92	70.08
Travel Arrangement and Reservation Services (NAICS 5615)	8.13	0.00	2.03	2.03	7.10	19.30	80.70
Outpatient Care Centers (NAICS 6214)	4.10	0.67	0.64	0.71	7.67	13.79	86.21
Other Telecommunications (NAICS 5179)	4.61	2.56	1.77	0.43	3.00	12.38	87.62
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities (NAICS 6232)	20.85	0.02	4.87	0.00	10.89	36.62	63.38
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	1.73	0.68	1.09	0.68	14.01	18.19	81.81

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Other Professional, Scientific, and Technical Services (NAICS 5419)	2.24	15.73	4.23	2.66	29.19	54.06	45.94
Investigation and Security Services (NAICS 5616)	20.42	1.88	2.44	1.88	11.94	38.56	61.44
Legal Services (NAICS 5411)	5.16	3.53	0.26	0.04	21.42	30.42	69.58
Lessors of Real Estate (NAICS 5311)	2.99	0.15	1.89	0.03	14.43	19.48	80.52
Depository Credit Intermediation (NAICS 5221)	0.19	0.00	0.42	0.00	0.44	1.06	98.94
Motion Picture and Video Industries (NAICS 5121)	14.52	3.33	2.18	0.10	25.68	45.82	54.18
Charter Bus Industry (NAICS 4855)	29.84	0.97	0.39	0.18	17.80	49.19	50.81
Offices of Other Health Practitioners (NAICS 6213)	5.02	1.31	4.01	2.03	21.09	33.46	66.54
Interurban and Rural Bus Transportation (NAICS 4852)	20.62	0.00	0.00	0.00	14.37	35.00	65.00
Scientific Research and Development Services (NAICS 5417)	4.75	0.73	4.52	2.36	5.94	18.29	81.71
Other Support Services (NAICS 5619)	18.71	2.45	2.57	0.02	28.54	52.30	47.70
Software Publishers (NAICS 5112)	11.92	3.54	8.00	0.28	13.22	36.96	63.04
Specialized Freight Trucking (NAICS 4842)	24.84	7.48	1.87	0.12	11.65	45.97	54.03
Home Health Care Services (NAICS 6216)	37.69	3.81	0.92	0.04	11.38	53.84	46.16
Activities Related to Real Estate (NAICS 5313)	11.69	4.81	1.66	0.01	20.62	38.79	61.21
Automotive Repair and Maintenance (NAICS 8111)	11.90	7.57	4.57	0.95	8.85	33.84	66.16
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	6.80	1.35	6.89	1.03	12.40	28.46	71.54
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	3.62	0.87	11.46	4.33	6.84	27.12	72.88
Waste Treatment and Disposal (NAICS 5622)	8.77	2.81	0.97	0.00	22.25	34.80	65.20
Local Messengers and Local Delivery (NAICS 4922)	13.55	3.26	4.98	0.78	15.17	37.75	62.25
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	0.93	3.40	2.39	1.14	6.68	14.55	85.45
Gambling Industries (NAICS 7132)	15.62	0.00	0.00	0.00	31.25	46.88	53.12
Other Amusement and Recreation Industries (NAICS 7139)	0.05	1.11	0.83	1.10	15.30	18.38	81.62

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	12.25	1.93	2.59	0.41	12.52	29.70	70.30
Offices of Physicians (NAICS 6211)	6.70	2.32	7.35	3.95	18.47	38.79	61.21
Waste Collection (NAICS 5621)	23.81	0.00	0.00	3.14	7.25	34.21	65.79
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	13.33	0.00	0.00	0.00	0.00	13.33	86.67
Data Processing, Hosting, and Related Services (NAICS 5182)	21.33	1.91	5.77	0.14	15.34	44.50	55.50
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Remediation and Other Waste Management Services (NAICS 5629)	5.14	0.05	0.10	0.10	2.22	7.61	92.39
Cable and Other Subscription Programming (NAICS 5152)	5.49	3.55	4.00	0.06	3.25	16.35	83.65
Vending Machine Operators (NAICS 4542)	21.89	0.72	4.46	0.01	7.43	34.49	65.51
Logging (NAICS 1133)	2.24	0.00	0.00	0.00	26.78	29.02	70.98
Highway, Street, and Bridge Construction (NAICS 2373)	13.59	3.09	3.70	0.38	11.87	32.62	67.38
Educational Support Services (NAICS 6117)	25.75	0.71	3.31	2.37	10.40	42.54	57.46
Nonresidential Building Construction (NAICS 2362)	12.17	6.74	4.46	2.09	10.01	35.47	64.53
Electric Lighting Equipment Manufacturing (NAICS 3351)	6.12	0.11	0.23	3.52	17.36	27.34	72.66
Health and Personal Care Stores (NAICS 4461)	6.28	2.68	2.00	0.01	4.90	15.87	84.13
Automobile Dealers (NAICS 4411)	4.17	2.71	2.96	0.05	10.16	20.05	79.95
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	5.95	2.11	0.41	0.01	3.20	11.68	88.32
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	14.25	3.77	4.97	1.04	19.46	43.48	56.52
Traveler Accommodation (NAICS 7211)	0.13	1.43	10.56	3.60	9.94	25.65	74.35
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	11.62	4.08	5.30	0.82	15.09	36.91	63.09
Colleges, Universities, and Professional Schools (NAICS 6113)	10.98	3.89	5.08	0.78	14.37	35.10	64.90

## M/WBE Availability in the State of Maryland's Market Area

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Other Specialty Trade Contractors (NAICS 2389)	6.37	1.28	3.21	4.14	11.20	26.21	73.79
Specialized Design Services (NAICS 5414)	15.06	3.76	4.93	1.27	24.71	49.73	50.27

Sources and Notes: *See* Table 3.15.

**Table 3.21. Detailed M/WBE Availability Percentages—CSE (All Contracts) (Dollars Awarded)**

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Motor Vehicle Manufacturing (NAICS 3361)	0.11	0.04	0.08	0.01	0.16	0.41	99.59
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.67	1.43	5.44	0.38	11.26	27.17	72.83
Automobile Dealers (NAICS 4411)	4.17	2.71	2.96	0.05	10.16	20.05	79.95
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	6.23	4.13	7.07	1.19	6.46	25.08	74.92
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.57	5.42	4.23	1.22	16.08	35.52	64.48
Aerospace Product and Parts Manufacturing (NAICS 3364)	2.40	0.28	0.03	0.07	3.99	6.78	93.22
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	2.05	0.60	1.30	0.02	9.20	13.16	86.84
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.33	1.70	3.25	0.68	11.48	22.44	77.56
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	9.50	3.00	4.55	0.68	12.18	29.92	70.08
Special Food Services (NAICS 7223)	16.60	0.53	3.87	0.11	2.55	23.67	76.33
Natural Gas Distribution (NAICS 2212)	5.63	0.00	4.87	0.00	0.00	10.50	89.50
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	4.51	1.96	2.93	0.68	9.21	19.30	80.70
Communications Equipment Manufacturing (NAICS 3342)	5.09	7.48	1.80	0.01	14.86	29.23	70.77
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	6.29	0.03	1.59	0.01	11.88	19.80	80.20
Computer Systems Design and Related Services (NAICS 5415)	16.18	3.55	14.71	1.24	12.59	48.27	51.73
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.59	0.27	5.53	0.13	11.38	25.90	74.10
Building Equipment Contractors (NAICS 2382)	9.18	4.77	1.55	0.66	12.42	28.58	71.42
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	7.80	3.73	1.66	1.08	21.77	36.04	63.96
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	2.51	3.86	2.18	1.29	7.26	17.09	82.91

# M/WBE Availability in the State of Maryland's Market Area

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	13.60	3.56	6.07	0.95	16.37	40.55	59.45
Software Publishers (NAICS 5112)	11.92	3.54	8.00	0.28	13.22	36.96	63.04
Printing and Related Support Activities (NAICS 3231)	4.82	1.60	5.27	0.98	17.92	30.59	69.41
Electric Power Generation, Transmission and Distribution (NAICS 2211)	1.28	0.02	1.53	0.94	7.69	11.47	88.53
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	2.51	2.67	1.52	0.55	4.27	11.52	88.48
Health and Personal Care Stores (NAICS 4461)	13.34	2.90	4.68	1.27	10.11	32.31	67.69
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Manufacturing (NAICS 3399)	10.49	1.44	1.47	0.12	25.78	39.30	60.70
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	50.00	50.00	50.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	11.68	0.96	4.36	0.39	16.07	33.47	66.53
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	1.33	0.05	2.79	0.08	4.45	8.69	91.31
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	14.33	1.59	1.28	0.31	23.00	40.51	59.49
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	0.85	0.08	4.32	0.02	1.01	6.27	93.73
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	0.16	0.06	11.72	0.01	0.21	12.15	87.85
Highway, Street, and Bridge Construction (NAICS 2373)	13.59	3.09	3.70	0.38	11.87	32.62	67.38
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	8.43	1.14	1.41	1.59	16.75	29.31	70.69
Medical Equipment and Supplies Manufacturing (NAICS 3391)	11.44	3.75	5.61	0.80	15.14	36.74	63.26
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	5.98	3.35	1.90	0.36	10.35	21.94	78.06
Bakeries and Tortilla Manufacturing (NAICS 3118)	8.81	11.77	0.42	0.08	16.23	37.31	62.69
Automotive Repair and Maintenance (NAICS 8111)	10.35	6.85	5.14	1.33	9.47	33.13	66.87
Specialized Freight Trucking (NAICS 4842)	24.84	7.48	1.87	0.12	11.65	45.97	54.03

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Building Material and Supplies Dealers (NAICS 4441)	5.92	0.94	4.17	0.24	16.83	28.09	71.91
Architectural, Engineering, and Related Services (NAICS 5413)	6.87	2.03	5.02	1.45	9.88	25.25	74.75
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	7.68	3.45	4.55	0.82	15.02	31.51	68.49
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	2.08	5.21	0.96	0.15	9.67	18.06	81.94
Seafood Product Preparation and Packaging (NAICS 3117)	0.00	0.00	0.00	0.00	52.38	52.38	47.62
Electric Lighting Equipment Manufacturing (NAICS 3351)	3.22	0.06	0.12	5.24	14.21	22.85	77.15
Electronics and Appliance Stores (NAICS 4431)	10.01	0.31	3.00	0.29	15.37	28.99	71.01
Cattle Ranching and Farming (NAICS 1121)	0.00	0.00	0.00	2.06	17.26	19.31	80.69
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.30	2.06	1.32	0.88	12.35	21.90	78.10
Support Activities for Air Transportation (NAICS 4881)	18.32	1.91	2.91	0.13	2.42	25.69	74.31
Scientific Research and Development Services (NAICS 5417)	4.78	0.89	5.29	2.80	5.71	19.48	80.52
Wired Telecommunications Carriers (NAICS 5171)	14.59	0.20	2.02	0.05	6.34	23.20	76.80
Other General Purpose Machinery Manufacturing (NAICS 3339)	12.67	2.25	6.50	0.52	17.26	39.20	60.80
Direct Selling Establishments (NAICS 4543)	2.43	0.82	0.83	0.01	8.60	12.68	87.32
Electrical Equipment Manufacturing (NAICS 3353)	1.31	0.38	0.68	0.12	9.93	12.41	87.59
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.89	3.31	7.70	0.02	14.10	34.00	66.00
Other Ambulatory Health Care Services (NAICS 6219)	13.34	3.93	7.38	0.65	17.53	42.83	57.17
Architectural and Structural Metals Manufacturing (NAICS 3323)	2.61	0.03	0.04	0.51	13.01	16.19	83.81
Ship and Boat Building (NAICS 3366)	2.12	0.93	1.29	0.15	21.21	25.70	74.30
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	4.02	0.42	0.77	0.13	8.44	13.79	86.21
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	14.85	3.29	4.41	0.88	13.13	36.56	63.44
Industrial Machinery Manufacturing (NAICS 3332)	0.00	7.87	0.00	7.87	4.86	20.60	79.40

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	13.66	3.65	5.34	0.97	18.18	41.80	58.20
Clothing Stores (NAICS 4481)	12.44	3.59	5.89	1.00	18.59	41.51	58.49
Management, Scientific, and Technical Consulting Services (NAICS 5416)	13.47	2.45	4.92	0.63	13.82	35.28	64.72
Plastics Product Manufacturing (NAICS 3261)	4.34	0.78	3.74	0.06	8.69	17.62	82.38
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	9.75	2.22	9.21	2.28	11.71	35.17	64.83
Dairy Product Manufacturing (NAICS 3115)	11.03	3.51	4.24	0.85	16.37	36.01	63.99
Beverage Manufacturing (NAICS 3121)	13.77	1.47	8.45	0.27	5.24	29.20	70.80
Other Fabricated Metal Product Manufacturing (NAICS 3329)	2.30	1.99	2.74	3.77	17.88	28.68	71.32
Employment Services (NAICS 5613)	10.81	2.42	3.97	0.15	13.45	30.79	69.21
Electronic Shopping and Mail-Order Houses (NAICS 4541)	10.50	0.00	1.78	1.45	27.24	40.96	59.04
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	13.29	0.80	7.73	0.09	16.07	37.98	62.02
Hunting and Trapping (NAICS 1142)	12.54	4.35	4.88	0.94	18.73	41.44	58.56
Other Specialty Trade Contractors (NAICS 2389)	7.28	8.37	4.22	1.50	12.11	33.47	66.53
Other Information Services (NAICS 5191)	17.27	0.83	3.39	0.44	12.82	34.75	65.25
Other Miscellaneous Store Retailers (NAICS 4539)	11.81	3.65	4.95	0.92	17.50	38.83	61.17
Cut and Sew Apparel Manufacturing (NAICS 3152)	21.76	2.95	7.28	1.42	16.12	49.53	50.47
Glass and Glass Product Manufacturing (NAICS 3272)	9.34	7.46	3.51	0.68	17.66	38.65	61.35
Motor Vehicle Parts Manufacturing (NAICS 3363)	7.05	2.50	3.26	0.51	9.47	22.79	77.21
Business Support Services (NAICS 5614)	19.11	4.83	4.34	5.33	15.31	48.92	51.08
Investigation and Security Services (NAICS 5616)	19.28	1.10	6.28	0.90	11.87	39.43	60.57
Consumer Goods Rental (NAICS 5322)	12.73	3.58	5.21	0.97	17.70	40.19	59.81
Other Support Activities for Transportation (NAICS 4889)	30.32	15.93	7.11	0.06	4.93	58.36	41.64
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	15.50	3.99	6.26	0.93	16.36	43.04	56.96
Traveler Accommodation (NAICS 7211)	0.13	1.43	10.56	3.60	9.94	25.65	74.35

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Book Stores and News Dealers (NAICS 4512)	10.76	3.28	4.61	0.93	17.70	37.29	62.71
Petroleum and Coal Products Manufacturing (NAICS 3241)	3.11	1.11	1.44	0.22	19.46	25.35	74.65
Furniture Stores (NAICS 4421)	3.83	0.05	0.52	1.19	14.41	20.00	80.00
Facilities Support Services (NAICS 5612)	26.39	3.77	2.52	1.15	9.10	42.92	57.08
Services to Buildings and Dwellings (NAICS 5617)	18.62	4.83	3.45	1.64	13.17	41.71	58.29
Restaurants and Other Eating Places (NAICS 7225)	6.70	3.27	7.33	0.45	11.99	29.75	70.25
Automotive Equipment Rental and Leasing (NAICS 5321)	6.00	2.00	3.78	0.90	9.00	21.68	78.32
Support Activities for Rail Transportation (NAICS 4882)	18.21	12.34	3.80	2.17	13.75	50.27	49.73
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	11.52	3.91	5.11	0.88	16.73	38.14	61.86
Building Finishing Contractors (NAICS 2383)	6.15	10.87	3.80	0.08	11.75	32.64	67.36
Local Messengers and Local Delivery (NAICS 4922)	13.55	3.26	4.98	0.78	15.17	37.75	62.25
Poultry and Egg Production (NAICS 1123)	14.75	3.62	4.77	1.05	18.06	42.25	57.75
Advertising, Public Relations, and Related Services (NAICS 5418)	9.19	4.44	2.49	0.52	25.40	42.04	57.96
Remediation and Other Waste Management Services (NAICS 5629)	7.01	1.36	0.10	0.06	14.42	22.95	77.05
Data Processing, Hosting, and Related Services (NAICS 5182)	21.33	1.91	5.77	0.14	15.34	44.50	55.50
Specialty Food Stores (NAICS 4452)	0.07	0.02	1.68	0.00	21.47	23.25	76.75
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	5.95	2.11	0.41	0.01	3.20	11.68	88.32
Other Transit and Ground Passenger Transportation (NAICS 4859)	29.55	4.35	3.85	0.80	14.10	52.65	47.35
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	3.71	1.33	1.72	0.27	9.48	16.51	83.49
Other Motor Vehicle Dealers (NAICS 4412)	11.31	3.88	4.95	0.87	16.53	37.55	62.45
Offices of Other Health Practitioners (NAICS 6213)	6.96	1.58	2.92	1.97	22.65	36.08	63.92
Medical and Diagnostic Laboratories (NAICS 6215)	9.21	2.65	4.44	0.73	12.44	29.48	70.52
Steel Product Manufacturing from Purchased Steel (NAICS 3312)	8.35	2.98	3.87	0.60	11.03	26.83	73.17
Nonresidential Building Construction (NAICS 2362)	12.17	6.74	4.46	2.09	10.01	35.47	64.53

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	13.30	3.55	5.43	1.05	18.60	41.94	58.06
Other Food Manufacturing (NAICS 3119)	13.20	3.14	4.44	0.71	11.60	33.10	66.90
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	4.57	0.75	1.25	0.24	60.43	67.24	32.76
Utility System Construction (NAICS 2371)	9.16	1.81	2.38	1.15	10.41	24.90	75.10
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)	8.61	3.07	4.00	0.61	11.37	27.66	72.34
Nondepository Credit Intermediation (NAICS 5222)	9.69	3.17	3.79	0.63	11.80	29.08	70.92
Motion Picture and Video Industries (NAICS 5121)	14.52	3.33	2.18	0.10	25.68	45.82	54.18
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	12.67	6.33	6.33	0.00	12.67	38.01	61.99
Vending Machine Operators (NAICS 4542)	21.89	0.72	4.46	0.01	7.43	34.49	65.51
Forging and Stamping (NAICS 3321)	0.00	0.00	0.00	0.00	28.89	28.89	71.11
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.19	0.04	0.83	2.27	21.37	24.70	75.30
Metalworking Machinery Manufacturing (NAICS 3335)	11.37	3.73	6.33	1.09	17.49	40.00	60.00
Other Support Services (NAICS 5619)	18.71	2.45	2.57	0.02	28.54	52.30	47.70
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	10.39	2.67	4.75	0.78	19.87	38.47	61.53
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	5.99	3.58	0.74	1.60	14.39	26.30	73.70
Other Professional, Scientific, and Technical Services (NAICS 5419)	9.17	2.80	4.67	1.29	18.70	36.64	63.36
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	10.41	5.04	4.64	0.81	16.33	37.22	62.78
Cable and Other Subscription Programming (NAICS 5152)	5.49	3.55	4.00	0.06	3.25	16.35	83.65
Basic Chemical Manufacturing (NAICS 3251)	8.80	2.98	4.32	0.67	12.90	29.67	70.33
Offices of Physicians (NAICS 6211)	6.70	2.32	7.35	3.95	18.47	38.79	61.21
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)	5.88	2.05	3.64	0.55	7.86	19.97	80.03
Waste Treatment and Disposal (NAICS 5622)	8.77	2.81	0.97	0.00	22.25	34.80	65.20
Drycleaning and Laundry Services (NAICS 8123)	11.39	3.11	12.61	1.04	17.52	45.68	54.32

# M/WBE Availability in the State of Maryland's Market Area

Detailed Industry Group	African American	Hispanic	Asian	Native American	Non-minority Female	M/WBE	Non-M/WBE
Animal Slaughtering and Processing (NAICS 3116)	13.43	3.69	4.90	0.81	15.52	38.35	61.65
Other Furniture Related Product Manufacturing (NAICS 3379)	10.33	3.69	4.80	0.74	13.65	33.20	66.80
Support Activities for Road Transportation (NAICS 4884)	6.71	9.01	0.15	1.78	16.46	34.11	65.89
Converted Paper Product Manufacturing (NAICS 3222)	15.00	2.69	3.61	1.06	17.52	39.88	60.12
Activities Related to Real Estate (NAICS 5313)	4.29	1.69	1.66	0.05	20.64	28.32	71.68
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	18.41	0.06	0.13	0.13	14.64	33.38	66.62
Other Heavy and Civil Engineering Construction (NAICS 2379)	8.76	1.99	3.41	0.45	10.28	24.89	75.11
Spring and Wire Product Manufacturing (NAICS 3326)	10.47	3.51	4.61	0.83	15.87	35.28	64.72
Outpatient Care Centers (NAICS 6214)	0.00	0.88	0.88	0.00	0.00	1.77	98.23
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	1.09	2.37	0.01	3.14	6.87	13.48	86.52
Freight Transportation Arrangement (NAICS 4885)	17.82	4.09	7.34	0.18	11.67	41.11	58.89
Aquaculture (NAICS 1125)	11.58	3.90	5.12	0.91	17.41	38.92	61.08
Farm Product Raw Material Merchant Wholesalers (NAICS 4245)	13.36	3.79	5.01	0.89	16.57	39.63	60.37
Rubber Product Manufacturing (NAICS 3262)	13.04	3.32	4.41	0.63	12.03	33.43	66.57
Depository Credit Intermediation (NAICS 5221)	0.19	0.00	0.42	0.00	0.44	1.06	98.94
General Freight Trucking (NAICS 4841)	14.27	4.15	5.16	0.85	15.91	40.33	59.67
Audio and Video Equipment Manufacturing (NAICS 3343)	15.37	3.02	6.87	0.86	16.75	42.86	57.14
Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Telecommunications (NAICS 5179)	13.02	3.91	5.24	0.92	16.58	39.66	60.34
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	8.56	0.75	1.35	0.07	14.61	25.34	74.66
Other Wood Product Manufacturing (NAICS 3219)	11.67	3.73	4.95	0.98	19.25	40.58	59.42
Cement and Concrete Product Manufacturing (NAICS 3273)	2.25	2.66	0.00	0.00	13.30	18.20	81.80
Travel Arrangement and Reservation Services (NAICS 5615)	12.80	3.83	5.23	1.02	18.97	41.86	58.14

## M/WBE Availability in the State of Maryland's Market Area

<b>Detailed Industry Group</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Non-minority Female</b>	<b>M/WBE</b>	<b>Non-M/WBE</b>
Lime and Gypsum Product Manufacturing (NAICS 3274)	7.65	2.73	3.55	0.55	10.11	24.59	75.41
Support Activities for Animal Production (NAICS 1152)	11.87	3.48	4.86	1.10	21.83	43.14	56.86
Legal Services (NAICS 5411)	5.16	3.53	0.26	0.04	21.42	30.42	69.58
Educational Support Services (NAICS 6117)	25.75	0.71	3.31	2.37	10.40	42.54	57.46
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	10.28	0.06	7.17	0.04	18.00	35.55	64.45
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.87	0.04	0.07	0.07	8.03	15.08	84.92
Offices of Dentists (NAICS 6212)	6.41	2.30	10.10	1.80	17.54	38.15	61.85
Other Amusement and Recreation Industries (NAICS 7139)	12.46	3.80	5.05	0.95	18.00	40.26	59.74

Sources and Notes: *See* Table 3.15.

## IV. Market-Based Disparities in Business Formation and Business Owner Earnings

### A. Introduction

In this chapter, we examine disparities in business formation and earnings in the private sector, where contracting activities are generally *not* subject to M/WBE or other affirmative action requirements. Statistical examination of disparities in the private sector of the relevant geographic market area is important for at least two reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of M/WBEs to compete, those practices will impact the larger private sector as well as the public sector. Second, examining the utilization of M/WBEs in the private sector provides an indicator of the extent to which M/WBEs are used in the absence of race- and gender-conscious efforts, since few firms in the private sector make such efforts.

There is a significant body of research on the economics of entrepreneurship and self-employment,<sup>66</sup> and there exists significant agreement on the microeconomic correlates of self-employment.<sup>67</sup> In the U.S., it is known that self-employment rises with age, is higher among men than women, and higher among non-minorities than minorities. The least educated have the highest probability of being self-employed. However, there is evidence in the U.S. that the most highly educated also have a relatively high probability of self-employment. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of self-employment, at least for men. Workers in agriculture and construction, by contrast, are also relatively more likely to be self-employed, despite lower average levels of education.

There has been relatively less work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, 1987), immigration (Fairlie and Meyer, 1998 and 2003; Olson, Zuiker and Montalto, 2000; Mora and Dávila, 2006; Robles and Cordero-Guzmán, 2007),<sup>68</sup> immigration policy (Borjas and

<sup>66</sup> Microeconomic work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie and Meyer (1996, 1998), Reardon (1998), Fairlie (1999), Wainwright (2000), Blanchflower and Wainwright (2005), and Blanchflower (2009) for the United States; Rees and Shah (1986), Pickles and O'Farrell (1987), Blanchflower and Oswald (1990, 1998), Meager (1992), Taylor (1996), Robson (1998a, 1998b), and Blanchflower and Shadforth (2007) for the UK; DeWit and van Winden (1990) for the Netherlands; Alba-Ramirez (1994) for Spain; Bernhardt (1994), Schuetze (1998), Arai (1997), Lentz and Laband (1990), and Kuhn and Schuetze (1998) for Canada; LaFerrere and McEntee (1995) for France; Blanchflower and Meyer (1994) and Kidd (1993) for Australia; and Foti and Vivarelli (1994) for Italy. There are also several theoretical papers including Kihlstrom and Laffont (1979), Kanbur (1990), Holmes and Schmitz (1990), Coate and Tennyson (1992), and Cagetti and DeNardi (2006), plus a few papers that draw comparisons across countries, *e.g.*, Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994), Blanchflower (2000), Blanchflower, Oswald, and Stutzer (2001), and Blanchflower and Oswald (2008) for many countries.

<sup>67</sup> Parker (2004) and Aronson (1991) provide good overviews.

<sup>68</sup> Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on African American self-employment. In a subsequent paper, Fairlie and Meyer (2003) found that self-employed

Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), Blau (1987), and Schuetze (2000), have considered the role of taxes.<sup>69</sup> A number of other studies have also considered the cyclical aspects of self-employment and in particular how movements of self-employment are correlated with movements in unemployment. Meager (1992) provides a useful summary of much of this work.<sup>70</sup>

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.<sup>71</sup> In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question. Why do so few individuals in the U.S. and OECD countries manage to translate their preferences into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also econometric evidence that confirms this barrier. Holding other influences constant, people who inherit cash, who win the lottery, or who have large family assets, are all more likely both to set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to

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immigrants did displace self-employed native non-African Americans. They found that immigration has a large negative effect on the probability of self-employment among native non-African Americans, although, surprisingly, they found that immigrants increase native self-employment earnings.

<sup>69</sup> In an interesting study pooling individual level data for the U.S. and Canada from the Current Population Survey and the Survey of Consumer Finances, respectively, Schuetze (1998) finds that increases in income taxes have large and positive effects on the male self-employment rate. He found that a 30 percent increase in taxes generated a rise of 0.9 to 2.0 percentage points in the male self-employment rate in Canada compared with a rise of 0.8 to 1.4 percentage points in the U.S. over 1994 levels.

<sup>70</sup> Evans and Leighton (1989) found that nonminority men who are unemployed are nearly twice as likely as wage workers to enter self-employment. Bogenhold and Staber (1991) also find evidence that unemployment and self-employment are positively correlated. Blanchflower and Oswald (1990) found a strong negative relationship between regional unemployment and self-employment for the period 1983-1989 in the U.K. using a pooled cross-section time-series data set. Blanchflower and Oswald (1998) confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment model for young people age 23 in 1981 and for the same people aged 33 in 1991. Taylor (1996) confirmed this result using data from the British Household Panel Study of 1991, showing that the probability of being self-employed rises when expected self-employment earnings increase relative to employee earnings, *i.e.*, when unemployment is low. Acs and Evans (1994) found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation. However, Schuetze (1998) found that for the U.S. and Canada the elasticity of the male self-employment rate with respect to the unemployment rate was considerably smaller than found for the effect from taxes discussed above. The elasticity of self-employment associated with the unemployment rate is about 0.1 in both countries using 1994 figures. A decrease of 5 percentage points in the unemployment rate in the U.S. (about the same decline occurred from 1983-1989) leads to about a 1 percentage point decrease in self-employment. Blanchflower (2000) found that there is generally a negative relationship between the self-employment rate and the unemployment rate. It does seem then that there is some disagreement in the literature on whether high unemployment acts to discourage self-employment because of the lack of available opportunities or encourage it because of the lack of viable alternatives.

<sup>71</sup> The OECD is an international organization of those developed countries that accept the principles of representative democracy and a free market economy. There are currently 30 full members.

have almost no predictive power about which persons will be running their own businesses as adults (Blanchflower and Oswald, 1998).

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.<sup>72</sup> Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b) drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit. In contrast, Hurst and Lusardi (2004), citing evidence from the U.S. *Panel Study of Income Dynamics*, claim to show that wealth is not a significant determinant of entry into self-employment. In response, however, Fairlie and Krashinsky (2012) have demonstrated that when the sample is split into two segments—those who enter self-employment after job loss and those who do not—the strong correlation between assets and rate of entry in business formation is evident in both segments.

The work of Black, et al. (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997) find a similar result. Again, these are both suggestive of capital constraints. Finally, Lindh and Ohlsson (1996) adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden. Bernhardt (1994), in a study for Canada using data from the 1981 Social Change in Canada Project, also found evidence that capital constraints appear to bind. Using the 1991 French Household Survey of Financial Assets, Laferrere and McEntee (1995) examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital, and a range of demographic variables.

They also find evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital, and the structure of the family, were found to be determining factors in the decision to move from wage work into entrepreneurship. Broussard, et al. (2013) found that the self-employed have between

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<sup>72</sup> This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives.

0.1 and 0.2 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction and in agriculture, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of African Americans, in particular, who do not have as strong a history of business ownership as indigenous non-minorities. Analogously, Hout and Rosen (2000) and Fairlie and Robb (2007a) found that the offspring of self-employed parents are more likely than others to become self-employed and argued that the historically low rates of self-employment among African Americans and Latinos may contribute to their low contemporary rates. Fairlie and Robb (2007b), using data from the U.S. *Characteristics of Business Owners Survey*, and Dunn and Holtz-Eakin (2000), using data from the U.S. *National Longitudinal Surveys*, show that the transmission of positive effects of family on self-employment operates through two channels, intergenerational transmission of entrepreneurial preferences and wealth, and the acquisition of general and specific human capital.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of African American males is one-third of that of nonminority males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels, “did not have large effects on the trend in the racial gap in self-employment” (p. 662). They also found that an initial lack of business experience “cannot explain the current low levels of black self-employment.” Further, they found that “the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment” (p. 664).

Fairlie (1999) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African American and nonminority self-employment rate can be attributed to discrimination. Using the 5 percent Public Use Microdata Sample data (“PUMS”) from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.<sup>73</sup>

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999, 2006)

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<sup>73</sup> In Wainwright (2000), the author conducted a series of regression analyses, similar to those reported in Chapter IV, that examined racial differences among males in business formation rates and business owner earnings while holding a large set of control factors constant. Separate regressions were conducted for each of the nine Census geographic divisions. In addition to race, the following factors were controlled for: educational attainment, age, marital status, non-mover status, number of workers in the family, number of children, immigrant status, years in the U.S., English language proficiency, work-limiting disability, veteran status, years of military services, interest and dividend income, usual weeks worked per year, and usual hours worked per week, industry, and occupation. Additionally, a set of local labor market variables was included for each Census division, including the unemployment rate, population size, population growth rate, the government employment rate, and per capita income. The results, in general, showed large and statistically significant disparities in both sets of regressions for all minority groups examined. The findings were strongest for African Americans, followed by Native Americans and Hispanics. Large disparities were documented for Asians as well in many instances.

demonstrates, for example, that the African American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same rate as it does into bath B—that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the nonminority firms). When we return after 10 minutes, even though the inflow rates are the same there is much less water in bath A than there is in bath B. A lower exit rate for nonminority-owned firms than is found for minority-owned firms is perfectly consistent with the observed fact that minority-owned firms are younger and smaller than nonminority-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

### **B. Race and Gender Disparities in Wage and Salary Earnings**

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their nonminority male counterparts. Other things equal, if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly situated nonminorities because of discrimination, then failure rates for M/WBEs will be higher and M/WBE formation rates will be lower than would be observed in a race- and gender-neutral market area. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, that is, non-business owners. It is helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower 2000). Therefore, employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential M/WBEs. In every instance examined, a statistically significant disparity in wage and salary earnings is observed—in the economy at large, and in the Construction, AE-CRS, Maintenance, IT, Services, and CSE sectors.<sup>74</sup>

We then turn to an examination of differences in earnings among the self-employed, that is, among business owners. Here too, among the pool of minorities and women who have formed businesses despite discrimination in both employment opportunities and business opportunities, statistically significant disparities are observed in the vast majority of cases in the economy as a whole and in the Construction, AE-CRS, Maintenance, IT, Services, and CSE sectors.

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<sup>74</sup> There is a substantial body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to obtain them, there is evidence that these loans are not obtained on equal terms: minority-owned firms have to pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. *See* Chapter V, *infra*.

In the remainder of this chapter, we discuss the methods and data we employed and present the specific findings.

## 1. Methods

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or gender differences remain. In a discrimination free market area, one would not expect to observe significant differences in earnings by race or gender among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to the State of Maryland's relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator variable for the State of Maryland Market Area (MDMA), which is comprised of the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.<sup>75</sup> This variable estimates the differential effect of location in the MDMA relevant to the rest of the country. This model appears as Specification 1 in Tables 4.1 through 4.7. Next, we estimated Specification 2, which is the same model as Specification 1 but with the addition of indicator variables that interact race and gender with the MDMA indicator. These variables estimate the differential effect of location in the MDMA *and* membership in the given race or gender group. Specification 3 represents our ultimate specification, which includes all of the variables from the basic model as well as any of the interaction terms from Specification 2 that were statistically significant.<sup>76</sup>

Any negative and statistically significant differences by race or gender that remain in Specification 3 after holding all of these other factors constant—time, age, education, geography, and industry—are consistent with what would be observed in a market suffering from business-related discrimination.<sup>77</sup>

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<sup>75</sup> Footnote 38 lists the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

<sup>76</sup> If none of these terms is significant, then Specification 3 reduces to Specification 1.

<sup>77</sup> Typically, a given test statistic is considered to be statistically significant if there is a reasonably low probability that the value of the statistic is due to random chance alone. Unless otherwise indicated, in this and subsequent chapters, we employ three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance.

## 2. Data

The analyses undertaken in this Study require individual-level data (*i.e.*, “microdata”) with relevant information on business ownership status and other key socioeconomic characteristics. The data source used is the American Community Survey (ACS) Public Use Microdata Sample (PUMS) for 2010–2014. The Census Bureau’s ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3.5 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia.<sup>78</sup> The PUMS file from the ACS contains records for a subsample of the full ACS. The data used here are the multi-year estimates combining the 2010 through 2014 ACS PUMS records. The combined file contains over six million person-level records. The 2010-2014 ACS PUMS provides the full range of population and housing information collected in the annual ACS and in the decennial census. Business ownership status is identified in the ACS PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

## 3. Findings: Race and Gender Disparities in Wage and Salary Earnings

Tables 4.1 through 4.7 report results from our regression analyses of annual earnings among wage and salary workers in those industries most relevant to State of Maryland contracting and procurement. Table 4.1 focuses on the economy as a whole, Table 4.2 on Construction, Table 4.3 on AE-CRS, Table 4.4 on Maintenance, Table 4.5 on IT, Table 4.6 on Services, and Table 4.7 on CSE.<sup>79</sup> The numbers shown in each table indicate the percentage difference in that sector between the average annual wages of a given race/gender group and comparable nonminority males.

### a. Specification 1 - the Basic Model

For example, in Table 4.1 Specification 1, the estimated percentage difference in average annual wages between African Americans (both genders) and nonminority males in 2010–2014 was -38.8 percent. That is, average annual wages among African Americans were 38.8 percent lower than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 4.1 through 4.7, a t-statistic of 1.96 or larger indicates statistical significance at a 95 percent confidence level or better, while a t-statistic of 1.64 or larger indicates statistical significance at a 90 percent confidence level or better.<sup>80</sup> In the example just used, the t-statistic of 251.16 indicates that the result is statistically significant at better than a 95 percent level of confidence.

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<sup>78</sup> U.S. Census Bureau (2013).

<sup>79</sup> Procurement categories for Tables 4.2 through 4.7 are based on the top 95 percent of industries relevant to State of Maryland procurement, as described above in Tables 2.7 through 2.12.

<sup>80</sup> From a two-tailed test.

Specification 1 in Table 4.1 shows adverse and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from -19.4 percent for Asians to -38.8 percent for African Americans.

Specification 1 in Table 4.2 shows similar results when the basic analysis is restricted to Construction. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -15.2 percent for Asians to -37.0 percent for Native Americans.

Specification 1 in Table 4.3 shows similar results when the basic analysis is restricted to AE-CRS. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -13.0 percent for Asians to -38.5 percent for African Americans.

Specification 1 in Table 4.4 shows similar results when the basic analysis is restricted to Maintenance. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -13.0 percent for Asians to -35.6 percent for Native Americans.

Specification 1 in Table 4.5 shows similar results when the basic analysis is restricted to IT. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -9.5 percent for Asians to -42.5 percent for African Americans.

Specification 1 in Table 4.6 shows similar results when the basic analysis is restricted to Services. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -15.4 percent for Asians to -38.2 percent for Native Americans.

Finally, Specification 1 in Table 4.7 for CSE also shows large, adverse, and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large in this sector also, ranging from -15.4 percent for Asians to -36.6 percent for African Americans.

**b. Specifications 2 and 3 - the Full Model Including State of Maryland-Specific Interaction Terms**

Next, we turn to Specifications 2 and 3 in Tables 4.1 through 4.7. In each of these Tables, Specification 2 is the basic regression model with a set of interaction terms added, designed to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification 2 in Table 4.1, for example, shows a statistically significant 19.2 percent wage decrement that estimates the direct effect of being Asian in 2010–2014, as well as a statistically significant 5.6 percent wage decrement that captures the indirect effect of residing in the MDMA and being Asian. That is, wages for Asians in the MDMA, on average, were 19.2 percent lower than for Asians in the nation as a whole and 24.8 percent lower (–19.2 percent minus 5.6 percent) than for nonminority males in the MDMA. For African Americans, there is a statistically significant 2.2 percent wage increment (in Specification 2) associated with residing in the MDMA, leading to an overall wage decrement of 36.7 percent (38.9 percent plus 2.2 percent). For Hispanics, there is a 0.7 percent wage increment (in Specification 2) associated with residing in the MDMA, but this difference is not statistically significant, leading to an overall wage decrement of 29.5 percent. For Native Americans, there is a 0.1 percent wage decrement associated with residing in the MDMA, but this difference is not statistically significant, leading to an overall wage decrement of 36.9 percent. For nonminority women, there is a 0.6 percent wage increment associated with residing in the MDMA, but this difference is also not statistically significant, leading to an overall wage decrement of 32.9 percent.

Specification 3 simply repeats Specification 2, dropping any MDMA interactions that are not statistically significant in Specification 2 at a confidence level of 95 percent or better. In Table 4.1, for example, interaction terms were included in the final specification only for African Americans and Asians. The net result of Specification 3 in Table 4.1 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women consistent with the presence of discrimination in these markets—both nationally and in the MDMA. The same is true for all the other procurement categories as well: Construction (Table 4.2), AE-CRS (Table 4.3), Maintenance (Table 4.4), IT (Table 4.5), Services (Table 4.6), and CSE (Table 4.7).

In Construction, there are two groups with additional statistically significant wage increments associated with living in the MDMA and one with a statistically significant wage decrement. African Americans have a 14.8 percent wage increment, nonminority females have an 8.0 percent wage increment, and Hispanics have a 5.3 percent wage decrement. The result for African Americans in Construction in the MDMA indicates that, on average, wages were 14.8 percent higher than for African Americans in the nation as a whole but 21.3 percent lower (–36.1 percent plus 14.8 percent) than for nonminority males in the MDMA. The result for nonminority females in Construction in the MDMA indicates that, on average, wages were 8.0 percent higher than for nonminority females in the nation as a whole but 23.1 percent lower (–31.1 percent plus 8.0 percent) than for nonminority males in the MDMA. The result for Hispanics in Construction in the MDMA indicates that, on average, wages were 5.3 percent lower than for Hispanics in the nation as a whole and 29.9 percent lower (–24.6 percent minus 5.3 percent) than for nonminority males in the MDMA. For the remaining groups—Asians, Native Americans, and persons

reporting two or more races, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

In AE-CRS, there are two groups with additional statistically significant wage increments associated with living in the MDMA and one with a statistically significant wage decrement. African Americans have a 13.4 percent wage increment, nonminority females have a 9.9 percent wage increment, and Hispanics have a 6.4 percent wage decrement. The result for African Americans in AE-CRS in the MDMA indicates that, on average, wages were 13.4 percent higher than for African Americans in the nation as a whole and 26.0 percent lower (-39.4 percent plus 13.4 percent) than for nonminority males in the MDMA. The result for nonminority females in AE-CRS in the MDMA indicates that, on average, wages were 9.9 percent higher than for nonminority females in the nation as a whole and 23.2 percent lower (-33.1 percent plus 9.9 percent) than for nonminority males in the MDMA. The result for Hispanics in AE-CRS in the MDMA indicates that, on average, wages were 6.4 percent lower than for Hispanics in the nation as a whole and 31.4 percent lower (-25.0 percent minus 6.4 percent) than for nonminority males in the MDMA. For the remaining groups—Asians, Native Americans, and persons reporting two or more races, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

In Maintenance, there are two groups with additional statistically significant wage increments associated with living in the MDMA. African Americans have a 10.9 percent wage increment and nonminority females have an 8.3 percent wage increment. The result for African Americans in Maintenance in the MDMA indicates that, on average, wages were 10.9 percent higher than for African Americans in the nation as a whole and 24.7 percent lower (-35.6 percent plus 10.9 percent) than for nonminority males in the MDMA. The result for nonminority females in Maintenance in the MDMA indicates that, on average, wages were 8.3 percent higher than for nonminority females in the nation as a whole and 25.0 percent lower (-33.3 percent plus 8.3 percent) than for nonminority males in the MDMA. For the remaining groups—Hispanics, Asians, Native Americans, and persons reporting two or more races, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

In IT, there are three groups with additional statistically significant wage increments associated with living in the MDMA and one with a statistically significant wage decrement. African Americans have a 16.9 percent wage increment, nonminority females have a 3.7 percent wage increment, persons reporting two or more races have a 9.6 percent wage increment, and Asians have an 8.0 percent wage decrement. The result for African Americans in IT in the MDMA indicates that, on average, wages were 16.9 percent higher than for African Americans in the nation as a whole and 26.6 percent lower (-43.5 percent plus 16.9 percent) than for nonminority males in the MDMA. The result for nonminority females in IT in the MDMA indicates that, on average, wages were 3.7 percent higher than for nonminority females in the nation as a whole and 25.4 percent lower (-29.1 percent plus 3.7 percent) than for nonminority males in the MDMA. The result for persons reporting two or more races in IT in the MDMA indicates that, on average, wages were 9.6 percent higher than for persons reporting two or more races in the nation as a whole and 16.9 percent lower (-26.5 percent plus 9.6 percent) than for nonminority males in the MDMA. The result for Asians in IT in the MDMA indicates that, on average, wages were 8.0 percent lower than for Asians in the nation as a whole and 16.9 percent lower (-8.9 percent minus 8.0 percent) than for nonminority males in the MDMA. For the remaining

groups—Hispanics, Native Americans, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

In Services, there is one group with an additional statistically significant wage increment associated with living in the MDMA and one with a statistically significant wage decrement. African Americans have a 5.8 percent wage increment and Asians have a 7.0 percent wage decrement. The result for African Americans in Services in the MDMA indicates that, on average, wages were 5.8 percent higher than for African Americans in the nation as a whole and 32.4 percent lower (-38.2 percent plus 5.8 percent) than for nonminority males in the MDMA. The result for Asians in Services in the MDMA indicates that, on average, wages were 7.0 percent lower than for Asians in the nation as a whole and 22.0 percent lower (-15.0 percent minus 7.0 percent) than for nonminority males in the MDMA. For the remaining groups—Hispanics, Native Americans, persons reporting two or more races, and nonminority females, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

In CSE, there is one group with an additional statistically significant wage decrement associated with living in the MDMA. Asians have a 6.6 percent wage decrement. The result for Asians in CSE in the MDMA indicates that, on average, wages were 6.6 percent lower than for Asians in the nation as a whole and 21.7 percent lower (-15.1 percent minus 6.6 percent) than for nonminority males in the MDMA. For the remaining groups—African Americans, Hispanics, Native Americans, persons reporting two or more races, and nonminority females, the adverse wage disparities observed are no different in the MDMA than in the nation as a whole.

### **c. Conclusions**

Tables 4.1 through 4.7 demonstrate that minorities and women earn substantially and significantly less from their labor than do their similarly situated nonminority male counterparts—in the nation as a whole and in the State of Maryland Market Area in particular. Such disparities are consistent with the presence of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to acquiring the skills, experience and contacts necessary to take advantage of entrepreneurial opportunities.<sup>81</sup> They also demonstrate that discrimination results in less opportunity for minorities and women to accumulate and save business start-up capital through their work as employees. These disparities reflect more than just “societal discrimination” because they indicate a nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities, in turn, lead to lower M/WBE availability levels than would be expected if the market area were race- and gender-neutral.

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<sup>81</sup> See, e.g., Ruetschlin and Asante-Muhammad (2015), Hamilton, et al. (2011), Pitts (2007).

**Table 4.1. Annual Wage Earnings Regressions, All Industries, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.388 (251.16)	-0.389 (243.81)	-0.389 (244.08)
Hispanic	-0.295 (203.22)	-0.295 (200.89)	-0.295 (203.10)
Asian	-0.194 (96.35)	-0.192 (92.64)	-0.192 (92.71)
Native American	-0.369 (69.20)	-0.369 (68.79)	-0.369 (69.19)
Two or more races	-0.298 (94.41)	-0.298 (92.43)	-0.298 (94.38)
Nonminority Female	-0.328 (338.26)	-0.329 (333.56)	-0.328 (338.27)
Age	0.201 (719.15)	0.201 (719.15)	0.201 (719.15)
Age <sup>2</sup>	-0.002 (625.28)	-0.002 (625.28)	-0.002 (625.28)
MDMA	0.405 (60.10)	0.408 (51.75)	0.412 (59.48)
MDMA*African American		0.022 (2.74)	0.019 (2.56)
MDMA*Hispanic		0.007 (0.67)	n/a
MDMA*Asian		-0.056 (5.65)	-0.059 (6.27)
MDMA*Native American		-0.001 (0.02)	n/a
MDMA*Two or more races		-0.007 (0.39)	n/a
MDMA*Nonminority Female		0.006 (1.00)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	3,967,952	3,967,952	3,967,952
Adj. R <sup>2</sup>	.3970	.3970	.3970

Source: NERA calculations from the 2010-2014 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.3.(a)-(b) for a description of Specifications 1 through 3; (2) Universe is all private sector wage and salary workers between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual wages between a given group and nonminority men; (4) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) “MDMA” is shorthand for “State of Maryland Market Area,” which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (7) “n/a” in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.3.b; (8) The “Yes” values next to the “Education,” “Geography” and “Industry” rows indicate that control variables were included in the regression specification for these factors.

**Table 4.2. Annual Wage Earnings Regressions, Construction, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.354 (75.34)	-0.361 (74.19)	-0.361 (74.19)
Hispanic	-0.247 (68.89)	-0.246 (67.44)	-0.246 (67.48)
Asian	-0.152 (20.39)	-0.151 (19.72)	-0.151 (20.29)
Native American	-0.370 (28.74)	-0.370 (28.44)	-0.371 (28.75)
Two or more races	-0.243 (25.58)	-0.244 (25.27)	-0.243 (25.55)
Nonminority Female	-0.308 (99.43)	-0.311 (98.28)	-0.311 (98.30)
Age	0.155 (196.31)	0.155 (196.32)	0.155 (196.32)
Age <sup>2</sup>	-0.001 (171.93)	-0.001 (171.95)	-0.001 (171.95)
MDMA	0.512 (29.27)	0.490 (25.93)	0.491 (26.51)
MDMA*African American		0.149 (6.52)	0.148 (6.53)
MDMA*Hispanic		-0.052 (2.76)	-0.053 (2.83)
MDMA*Asian		-0.004 (0.12)	n/a
MDMA*Native American		-0.089 (0.73)	n/a
MDMA*Two or more races		0.065 (1.13)	n/a
MDMA*Nonminority Female		0.081 (4.19)	0.080 (4.19)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	521,357	521,357	521,357
Adj. R <sup>2</sup>	.2496	.2497	.2497

Source and Notes: See Table 4.1.

**Table 4.3. Annual Wage Earnings Regressions, AE-CRS, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.385 (56.04)	-0.394 (53.94)	-0.394 (53.96)
Hispanic	-0.253 (54.21)	-0.250 (52.66)	-0.250 (52.75)
Asian	-0.130 (14.97)	-0.126 (13.73)	-0.129 (14.79)
Native American	-0.375 (23.81)	-0.374 (23.51)	-0.375 (23.83)
Two or more races	-0.243 (20.52)	-0.244 (19.95)	-0.243 (20.47)
Nonminority Female	-0.326 (83.17)	-0.330 (81.70)	-0.331 (81.78)
Age	0.157 (152.53)	0.157 (152.54)	0.157 (152.54)
Age <sup>2</sup>	-0.002 (134.09)	-0.002 (134.10)	-0.002 (134.10)
MDMA	0.561 (28.78)	0.536 (25.54)	0.530 (25.96)
MDMA*African American		0.131 (4.73)	0.134 (4.88)
MDMA*Hispanic		-0.067 (2.99)	-0.064 (2.89)
MDMA*Asian		-0.036 (1.17)	n/a
MDMA*Native American		-0.074 (0.54)	n/a
MDMA*Two or more races		0.022 (0.37)	n/a
MDMA*Nonminority Female		0.095 (4.93)	0.099 (5.18)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	332,324	332,324	332,324
Adj. R <sup>2</sup>	.2296	.2297	.2297

Source and Notes: See Table 4.1.

**Table 4.4. Annual Wage Earnings Regressions, Maintenance, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.351 (86.95)	-0.356 (85.13)	-0.356 (85.21)
Hispanic	-0.254 (75.18)	-0.253 (74.00)	-0.254 (75.20)
Asian	-0.130 (22.01)	-0.128 (21.17)	-0.130 (21.96)
Native American	-0.356 (29.30)	-0.355 (28.94)	-0.356 (29.32)
Two or more races	-0.240 (28.59)	-0.240 (28.13)	-0.239 (28.56)
Nonminority Female	-0.331 (123.90)	-0.333 (122.54)	-0.333 (122.71)
Age	0.160 (221.53)	0.160 (221.51)	0.160 (221.50)
Age <sup>2</sup>	-0.002 (195.29)	-0.002 (195.26)	-0.002 (195.26)
MDMA	0.485 (29.83)	0.465 (26.51)	0.454 (27.32)
MDMA*African American		0.101 (5.10)	0.109 (5.58)
MDMA*Hispanic		-0.028 (1.37)	n/a
MDMA*Asian		-0.050 (1.63)	n/a
MDMA*Native American		-0.097 (0.89)	n/a
MDMA*Two or more races		0.035 (0.70)	n/a
MDMA*Nonminority Female		0.076 (4.25)	0.083 (4.78)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	607,296	607,296	607,296
Adj. R <sup>2</sup>	.2357	.2357	.2357

Source and Notes: See Table 4.1.

**Table 4.5. Annual Wage Earnings Regressions, IT, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.425 (91.23)	-0.435 (88.83)	-0.435 (88.88)
Hispanic	-0.282 (73.89)	-0.282 (72.61)	-0.282 (73.91)
Asian	-0.095 (18.45)	-0.089 (16.52)	-0.089 (16.55)
Native American	-0.396 (28.39)	-0.395 (28.07)	-0.396 (28.43)
Two or more races	-0.261 (29.48)	-0.264 (29.07)	-0.265 (29.08)
Nonminority Female	-0.289 (98.09)	-0.291 (95.92)	-0.291 (96.05)
Age	0.170 (202.59)	0.169 (202.55)	0.169 (202.56)
Age <sup>2</sup>	-0.002 (179.39)	-0.002 (179.36)	-0.002 (179.36)
MDMA	0.528 (33.66)	0.515 (30.19)	0.514 (30.81)
MDMA*African American		0.168 (8.09)	0.169 (8.25)
MDMA*Hispanic		-0.007 (0.32)	n/a
MDMA*Asian		-0.081 (4.22)	-0.080 (4.21)
MDMA*Native American		-0.057 (0.47)	n/a
MDMA*Two or more races		0.095 (2.11)	0.096 (2.14)
MDMA*Nonminority Female		0.036 (2.41)	0.037 (2.54)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	536,994	536,994	536,994
Adj. R <sup>2</sup>	.3052	.3053	.3053

Source and Notes: See Table 4.1.

**Table 4.6. Annual Wage Earnings Regressions, Services, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.379 (142.53)	-0.382 (138.44)	-0.382 (138.69)
Hispanic	-0.263 (108.35)	-0.262 (106.57)	-0.263 (108.27)
Asian	-0.154 (44.94)	-0.150 (42.32)	-0.150 (42.43)
Native American	-0.382 (42.52)	-0.382 (42.22)	-0.382 (42.52)
Two or more races	-0.281 (53.00)	-0.282 (52.18)	-0.280 (52.97)
Nonminority Female	-0.304 (178.88)	-0.304 (175.56)	-0.304 (178.89)
Age	0.188 (393.22)	0.188 (393.24)	0.188 (393.23)
Age <sup>2</sup>	-0.002 (342.64)	-0.002 (342.66)	-0.002 (342.66)
MDMA	0.449 (42.40)	0.460 (37.98)	0.455 (41.79)
MDMA*African American		0.054 (4.22)	0.058 (4.84)
MDMA*Hispanic		-0.018 (1.24)	n/a
MDMA*Asian		-0.074 (4.98)	-0.070 (4.95)
MDMA*Native American		0.044 (0.48)	n/a
MDMA*Two or more races		0.058 (1.87)	n/a
MDMA*Nonminority Female		-0.009 (0.88)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	1,390,754	1,390,754	1,390,754
Adj. R <sup>2</sup>	.4299	.4299	.4299

Source and Notes: See Table 4.1.

**Table 4.7. Annual Wage Earnings Regressions, CSE, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.366 (149.19)	-0.367 (144.33)	-0.366 (149.25)
Hispanic	-0.250 (116.83)	-0.250 (115.34)	-0.250 (116.72)
Asian	-0.154 (51.93)	-0.151 (49.44)	-0.151 (49.46)
Native American	-0.356 (43.85)	-0.356 (43.58)	-0.356 (43.84)
Two or more races	-0.259 (53.79)	-0.259 (52.78)	-0.259 (53.78)
Nonminority Female	-0.290 (190.64)	-0.290 (187.57)	-0.290 (190.65)
Age	0.195 (467.92)	0.195 (467.93)	0.195 (467.93)
Age <sup>2</sup>	-0.002 (406.12)	-0.002 (406.13)	-0.002 (406.13)
MDMA	0.399 (42.06)	0.406 (38.11)	0.410 (42.27)
MDMA*African American		0.016 (1.37)	n/a
MDMA*Hispanic		0.001 (0.05)	n/a
MDMA*Asian		-0.063 (4.65)	-0.066 (5.07)
MDMA*Native American		0.039 (0.46)	n/a
MDMA*Two or more races		0.019 (0.68)	n/a
MDMA*Nonminority Female		0.002 (0.23)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	1,668,823	1,668,823	1,668,823
Adj. R <sup>2</sup>	.4483	.4483	.4483

Source and Notes: See Table 4.1.

#### 4. Findings: Race and Gender Disparities in Business Owner Earnings

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and gender disparities in business owner earnings. Table 4.8 focuses on the economy as a whole, Table 4.9 on Construction, Table 4.10 on AE-CRS, Table 4.11 on Maintenance, Table 4.12 on IT, Table 4.13 on Services, and Table 4.14 on CSE.<sup>82</sup> The numbers shown in each table indicate the percentage difference in that sector between the average annual self-employment earnings of a given race/gender group and comparable nonminority males.

##### a. Specification 1 - the Basic Model<sup>83</sup>

Specification 1 in Table 4.8 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 41.8 percent lower than for comparable nonminority males; for Hispanics, they are 23.4 percent lower; for Asians, they are 8.1 percent lower; for Native Americans, they are 43.8 percent lower; for persons reporting two or more races, they are 37.1 percent lower; and for nonminority women, they are 39.1 percent lower.

Turning to Construction, Specification 1 in Table 4.9 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 41.9 percent lower than for comparable nonminority males; for Hispanics, they are 11.0 percent lower; for Asians, they are 18.9 percent lower; for Native Americans, they are 40.6 percent lower; for persons reporting two or more races, they are 32.2 percent lower; and for nonminority women, they are 39.0 percent lower.

For AE-CRS, Specification 1 in Table 4.10 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 45.5 percent lower than for comparable nonminority males; for Hispanics, they are 14.1 percent lower; for Asians, they are 20.2 percent lower; for Native Americans, they are 34.2 percent lower; for persons reporting two or more races, they are 30.7 percent lower; and for nonminority women, they are 38.1 percent lower.

For Maintenance, Specification 1 in Table 4.11 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the

<sup>82</sup> Procurement categories for Tables 4.9 through 4.14 are based on the top 95 percent of industries relevant to State of Maryland procurement, as described above in Tables 2.7 through 2.12.

<sup>83</sup> See above, section B.3.a., for a detailed description of Specification 1.

presence of discrimination in these markets. Business earnings for African Americans are 40.4 percent lower than for comparable nonminority males; for Hispanics, they are 14.0 percent lower; for Asians, they are 15.1 percent lower; for Native Americans, they are 36.7 percent lower; for persons reporting two or more races, they are 28.4 percent lower; and for nonminority women, they are 38.3 percent lower.

For IT, Specification 1 in Table 4.12 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 47.6 percent lower than for comparable nonminority males; for Hispanics, they are 13.2 percent lower; for Asians, they are 16.1 percent lower; for Native Americans, they are 33.9 percent lower; for persons reporting two or more races, they are 31.6 percent lower; and for nonminority women, they are 27.1 percent lower.

For Services, Specification 1 in Table 4.13 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 46.6 percent lower than for comparable nonminority males; for Hispanics, they are 15.2 percent lower; for Asians, they are 5.1 percent lower; for Native Americans, they are 39.9 percent lower; for persons reporting two or more races, they are 33.9 percent lower; and for nonminority women, they are 37.0 percent lower.

For CSE, Specification 1 in Table 4.14 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Native Americans, persons reporting two or more races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 42.5 percent lower than for comparable nonminority males; for Hispanics, they are 15.7 percent lower; for Native Americans, they are 37.9 percent lower; for persons reporting two or more races, they are 31.6 percent lower; and for nonminority women, they are 37.9 percent lower.

### **b. Specifications 2 and 3 - the Full Model Including State of Maryland-Specific Interaction Terms<sup>84</sup>**

Next, we turn to Specifications 2 and 3 in Tables 4.8 through 4.14. Specification 2 is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification 3 drops any MDMA interaction terms that are not statistically significant.

For the economy as a whole in 2010-2014, Table 4.8 shows that none of the MDMA interaction terms is statistically significant at a 95 percent level or better, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

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<sup>84</sup> See above, section B.3.b., for a detailed description of Specifications 2 and 3.

For Construction, Table 4.9 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

For AE-CRS, Table 4.10 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

For Maintenance, Table 4.11 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

For IT, Table 4.12 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

For Services, Table 4.13 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

For CSE, Table 4.14 shows that none of the MDMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the MDMA than what is observed for the nation as a whole.

### **c. Conclusions**

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. The situation, in general, differs little in the State of Maryland Market Area from that which is observed for the nation as a whole. These disparities are consistent with the presence of discrimination in commercial markets that adversely affects M/WBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to that of similarly situated nonminority males, then capital reinvestment and growth rates may slow, business failure rates may increase and, as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would be observed in a race- and gender-neutral market area, since discrimination depresses business owner earnings for minority and female entrepreneurs. Business owner earnings, however, are often directly related to whether an owner has the capital to reinvest (firm size), how long a firm survives (firm age), and how much money a firm takes in (individual firm revenues). These observations illustrate why employment size, years in business, and individual firm revenues are especially inappropriate factors to consider when attempting to determine if discrimination has diminished opportunities for M/WBEs.<sup>85</sup>

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<sup>85</sup> For more on this topic, see “Understanding Capacity,” in Chapter III, section B.5, *supra*.

**Table 4.8. Annual Business Owner Earnings Regressions, All Industries, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.418 (38.87)	-0.415 (37.04)	-0.418 (38.87)
Hispanic	-0.234 (25.46)	-0.237 (25.44)	-0.234 (25.46)
Asian	-0.081 (6.18)	-0.086 (6.40)	-0.081 (6.18)
Native American	-0.438 (14.64)	-0.436 (14.48)	-0.438 (14.64)
Two or more races	-0.371 (21.31)	-0.370 (20.87)	-0.371 (21.31)
Nonminority Female	-0.391 (71.56)	-0.390 (70.44)	-0.391 (71.56)
Age	0.185 (102.23)	0.185 (102.23)	0.185 (102.23)
Age <sup>2</sup>	-0.002 (88.88)	-0.002 (88.89)	-0.002 (88.88)
MDMA	0.278 (7.28)	0.271 (6.25)	0.278 (7.28)
MDMA*African American		-0.066 (1.29)	n/a
MDMA*Hispanic		0.113 (1.81)	n/a
MDMA*Asian		0.098 (1.53)	n/a
MDMA*Native American		-0.185 (0.59)	n/a
MDMA*Two or more races		-0.041 (0.36)	n/a
MDMA*Nonminority Female		-0.025 (0.73)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	407,509	407,509	407,509
Adj. R <sup>2</sup>	.1414	.1414	.1414

Source: NERA calculations from the 2010-2014 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.4.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all persons in the private sector with positive business earnings between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual business earnings between a given group and nonminority men; (4) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) "MDMA" is shorthand for "State of Maryland Market Area," which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (7) "n/a" in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.4.b.

**Table 4.9. Business Owner Earnings Regressions, Construction, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.419 (19.82)	-0.419 (19.30)	-0.419 (19.82)
Hispanic	-0.110 (6.87)	-0.114 (7.01)	-0.110 (6.87)
Asian	-0.189 (5.54)	-0.202 (5.80)	-0.189 (5.54)
Native American	-0.406 (7.76)	-0.403 (7.65)	-0.406 (7.76)
Two or more races	-0.322 (9.11)	-0.323 (9.04)	-0.322 (9.11)
Nonminority Female	-0.390 (27.27)	-0.389 (26.82)	-0.390 (27.27)
Age	0.180 (51.18)	0.180 (51.18)	0.180 (51.18)
Age <sup>2</sup>	-0.002 (46.41)	-0.002 (46.42)	-0.002 (46.41)
MDMA	0.296 (4.02)	0.258 (3.29)	0.296 (4.02)
MDMA*African American		0.028 (0.23)	n/a
MDMA*Hispanic		0.131 (1.34)	n/a
MDMA*Asian		0.362 (1.77)	n/a
MDMA*Native American		-0.351 (0.69)	n/a
MDMA*Two or more races		0.076 (0.28)	n/a
MDMA*Nonminority Female		-0.042 (0.43)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	94,180	94,180	94,180
Adj. R <sup>2</sup>	.0842	.0842	.0842

Source and Notes: See Table 4.8.

**Table 4.10. Business Owner Earnings Regressions, AE-CRS, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.455 (17.03)	-0.448 (15.92)	-0.455 (17.03)
Hispanic	-0.141 (7.34)	-0.143 (7.34)	-0.141 (7.34)
Asian	-0.202 (5.57)	-0.206 (5.50)	-0.202 (5.57)
Native American	-0.342 (5.27)	-0.338 (5.18)	-0.342 (5.27)
Two or more races	-0.307 (7.31)	-0.308 (7.20)	-0.307 (7.31)
Nonminority Female	-0.381 (22.87)	-0.380 (22.35)	-0.381 (22.87)
Age	0.141 (32.48)	0.141 (32.48)	0.141 (32.48)
Age <sup>2</sup>	-0.001 (29.29)	-0.001 (29.29)	-0.001 (29.29)
MDMA	0.308 (3.98)	0.303 (3.68)	0.308 (3.98)
MDMA*African American		-0.142 (1.20)	n/a
MDMA*Hispanic		0.074 (0.65)	n/a
MDMA*Asian		0.067 (0.42)	n/a
MDMA*Native American		-0.380 (0.62)	n/a
MDMA*Two or more races		0.052 (0.20)	n/a
MDMA*Nonminority Female		-0.011 (0.12)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	70,271	70,271	70,271
Adj. R <sup>2</sup>	.0504	.0504	.0504

Source and Notes: See Table 4.8.

**Table 4.11. Business Owner Earnings Regressions, Maintenance, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.404 (17.03)	-0.408 (16.68)	-0.404 (17.03)
Hispanic	-0.140 (7.88)	-0.143 (7.99)	-0.140 (7.88)
Asian	-0.151 (4.29)	-0.155 (4.31)	-0.151 (4.29)
Native American	-0.367 (6.29)	-0.363 (6.18)	-0.367 (6.29)
Two or more races	-0.284 (7.25)	-0.285 (7.19)	-0.284 (7.25)
Nonminority Female	-0.383 (23.98)	-0.382 (23.65)	-0.383 (23.98)
Age	0.140 (35.15)	0.140 (35.15)	0.140 (35.15)
Age <sup>2</sup>	-0.001 (31.93)	-0.001 (31.92)	-0.001 (31.93)
MDMA	0.307 (3.91)	0.275 (3.29)	0.307 (3.91)
MDMA*African American		0.118 (0.92)	n/a
MDMA*Hispanic		0.154 (1.34)	n/a
MDMA*Asian		0.108 (0.58)	n/a
MDMA*Native American		-0.436 (0.82)	n/a
MDMA*Two or more races		0.077 (0.28)	n/a
MDMA*Nonminority Female		-0.029 (0.29)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	85,358	85,358	85,358
Adj. R <sup>2</sup>	.0648	.0648	.0648

Source and Notes: See Table 4.8.

**Table 4.12. Business Owner Earnings Regressions, IT, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.476 (20.04)	-0.471 (18.78)	-0.476 (20.04)
Hispanic	-0.132 (6.94)	-0.134 (6.94)	-0.132 (6.94)
Asian	-0.161 (5.39)	-0.162 (5.21)	-0.161 (5.39)
Native American	-0.339 (5.24)	-0.336 (5.16)	-0.339 (5.24)
Two or more races	-0.316 (8.27)	-0.322 (8.28)	-0.316 (8.27)
Nonminority Female	-0.271 (17.97)	-0.269 (17.43)	-0.271 (17.97)
Age	0.150 (36.47)	0.150 (36.47)	0.150 (36.47)
Age <sup>2</sup>	-0.001 (32.03)	-0.001 (32.02)	-0.001 (32.03)
MDMA	0.252 (3.63)	0.263 (3.49)	0.252 (3.63)
MDMA*African American		-0.105 (1.00)	n/a
MDMA*Hispanic		0.069 (0.62)	n/a
MDMA*Asian		0.003 (0.03)	n/a
MDMA*Native American		-0.254 (0.40)	n/a
MDMA*Two or more races		0.216 (0.89)	n/a
MDMA*Nonminority Female		-0.061 (0.83)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	87,523	87,523	87,523
Adj. R <sup>2</sup>	.0526	.0525	.0526

Source and Notes: See Table 4.8.

**Table 4.13. Business Owner Earnings Regressions, Services, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.466 (28.88)	-0.467 (27.74)	-0.466 (28.88)
Hispanic	-0.152 (10.82)	-0.154 (10.82)	-0.152 (10.82)
Asian	-0.051 (2.40)	-0.055 (2.51)	-0.051 (2.40)
Native American	-0.399 (8.52)	-0.399 (8.46)	-0.399 (8.52)
Two or more races	-0.339 (12.23)	-0.347 (12.34)	-0.339 (12.23)
Nonminority Female	-0.370 (41.04)	-0.369 (40.32)	-0.370 (41.04)
Age	0.192 (66.00)	0.192 (65.99)	0.192 (66.00)
Age <sup>2</sup>	-0.002 (57.31)	-0.002 (57.30)	-0.002 (57.31)
MDMA	0.236 (4.34)	0.220 (3.68)	0.236 (4.34)
MDMA*African American		0.013 (0.16)	n/a
MDMA*Hispanic		0.073 (0.85)	n/a
MDMA*Asian		0.066 (0.73)	n/a
MDMA*Native American		-0.047 (0.09)	n/a
MDMA*Two or more races		0.352 (1.74)	n/a
MDMA*Nonminority Female		-0.025 (0.46)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	166,082	166,082	166,082
Adj. R <sup>2</sup>	.1078	.1077	.1078

Source and Notes: See Table 4.8.

**Table 4.14. Business Owner Earnings Regressions, CSE, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.425 (22.93)	-0.420 (21.71)	-0.425 (22.93)
Hispanic	-0.157 (10.44)	-0.158 (10.39)	-0.157 (10.44)
Asian	0.052 (2.23)	0.050 (2.06)	0.052 (2.23)
Native American	-0.379 (8.23)	-0.377 (8.13)	-0.379 (8.23)
Two or more races	-0.316 (10.44)	-0.325 (10.61)	-0.316 (10.44)
Nonminority Female	-0.379 (36.93)	-0.380 (36.47)	-0.379 (36.93)
Age	0.169 (55.19)	0.169 (55.18)	0.169 (55.19)
Age <sup>2</sup>	-0.002 (47.99)	-0.002 (47.98)	-0.002 (47.99)
MDMA	0.267 (4.46)	0.245 (3.78)	0.267 (4.46)
MDMA*African American		-0.083 (0.96)	n/a
MDMA*Hispanic		0.042 (0.43)	n/a
MDMA*Asian		0.043 (0.44)	n/a
MDMA*Native American		-0.298 (0.62)	n/a
MDMA*Two or more races		0.427 (1.87)	n/a
MDMA*Nonminority Female		0.047 (0.70)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	155,521	155,521	155,521
Adj. R <sup>2</sup>	.1015	.1015	.1015

Source and Notes: See Table 4.8.

## C. Race and Gender Disparities in Business Formation

As discussed in the two previous sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In this section, we turn to an analysis of race and gender disparities in business formation.<sup>86</sup> We compare self-employment rates by race and gender to determine whether minorities or women are as likely to become entrepreneurs as are similarly situated nonminority males. We find that in most cases they are not as likely to do so, and that minority and female business formation rates would be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

Discrimination in the labor market, symptoms of which are evidenced in Section B.3 above, might cause wage and salary workers to turn to self-employment in hopes of encountering less discrimination from customers and suppliers than from employers and co-workers. Other things equal, and assuming minority and female workers did not believe that discrimination pervaded commercial markets as well, this would lead minority and female business formation rates to be higher than would otherwise be expected.

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by individuals who were once employed as foremen or in related positions for other contractors, fewer by those who were employed instead as laborers. Moreover, discrimination in wages and salaries earned in labor markets inhibits the accumulation of capital necessary for business formation. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents minorities and women from acquiring the financial credit and capital that are so often prerequisites to starting or expanding a business. Other things being equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against M/WBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for M/WBEs. This discrimination leads to higher rates of failure for some minority- and women-owned firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.<sup>87</sup> All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

### 1. Methods and Data

To see if minorities or nonminority women are as likely to be business owners as are comparable nonminority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized

<sup>86</sup> We use the phrases “business formation rates” and “self-employment rates” interchangeably in this Study.

<sup>87</sup> See also the materials cited at fn. 66 *supra*.

in terms of a “yes” or a “no” response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of “yes” (for example, she is in the labor force) or “no” (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.<sup>88</sup> In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2010-2014 ACS PUMS.

## 2. Findings: Race and Gender Disparities in Business Formation

As a reference point, Tables 4.15 and 4.16 summarize rates of business ownership during 2010-2014 by race and gender. A notable feature of both tables is how much higher, on average, rates are for nonminority males than for all other groups. Table 4.15, for example, shows a 5.98 percentage point difference between the overall self-employment rate of African Americans and nonminority males in the MDMA ( $11.55 - 5.57 = 5.98$ ). As shown in the rightmost column of that table, this 5.98 percentage point gap translates into an African American business formation rate in the MDMA that is 51.8 percent lower than the nonminority male business formation rate (*i.e.*,  $5.57 - 11.55 \div 11.55 \approx -51.8\%$ ). For Hispanics, the business formation rate is 24.8 percent lower. For Asians, it is 6.6 percent lower. For Native Americans, it is 22.9 percent lower. For persons reporting two or more races, it is 36.5 percent lower. For minorities as a group, it is 34.9 percent lower. For nonminority women, it is 28.1 percent lower; and for M/WBEs overall, it is 32.1 percent lower.

Table 4.16 provides similar information for each of the State of Maryland’s major procurement categories: Construction, AE-CRS, Maintenance, IT, Services and CSE. Large deficits are observed in all six categories and for all groups.

A portion of the group differences documented in Tables 4.15 and 4.16 may be associated with differences in the distribution of individual productivity characteristics and preferences between minorities, women and nonminority males. It is well known, for example, that earnings tend to increase with labor market experience (*i.e.*, age). It is also true that the propensity toward self-employment increases with labor market experience.<sup>89</sup> Since most minority populations in the United States have a lower median age than the nonminority population, it is important to test whether the disparities in business ownership evidenced in Tables 4.15 and 4.16 can be fully explained by differences in the age distribution or in other factors such as education, geographic

<sup>88</sup> For a detailed discussion, see G.S. Maddala (1983). Probit analysis is performed here using the “dprobit” command in the statistical program STATA.

<sup>89</sup> Wainwright (2000), p. 86.

location or the industry preferences of minorities and nonminority women compared to nonminority males.

**Table 4.15. Self-Employment Rates in 2010-2014 for Selected Race and Gender Groups: United States and the State of Maryland Market Area, All Procurement Categories**

<b>Race/Gender</b>	<b>U.S. (%)</b>	<b>State of Maryland Market Area (%)</b>	<b>Percent Difference from Nonminority Male in Column (2)</b>
	(1)	(2)	(3)
African American	5.21	5.57	-51.8
Hispanic	8.45	8.69	-24.8
Asian	9.74	10.79	-6.6
Native American	8.04	8.91	-22.9
Two or more races	8.42	7.33	-36.5
Minority	7.73	7.52	-34.9
Nonminority Female	8.08	8.30	-28.1
M/WBE	7.90	7.84	-32.1
Nonminority Male	12.66	11.55	

Source: NERA calculations from the 2010-2014 ACS Public Use Microdata Sample.

**Table 4.16. Self-Employment Rates in 2010-2014 for Selected Race and Gender Groups: United States and the State of Maryland Market Area, By Procurement Category**

<b>Race/Gender</b>	<b>U.S. (%)</b>	<b>State of Maryland Market Area (%)</b>	<b>Percent Difference from Nonminority Male in Column (2)</b>
	(1)	(2)	(3)
<i>Construction</i>			
African American	12.91	9.58	-46.0
Hispanic	16.61	12.57	-29.1
Asian	14.91	17.38	-2.0
Native American	15.53	13.72	-22.7
Two or more races	17.65	14.40	-18.8
Minority	15.75	11.97	-32.5
Nonminority Female	14.40	10.69	-39.7
M/WBE	15.39	11.66	-34.3
Nonminority Male	21.44	17.74	
<i>AE-CRS</i>			
African American	17.21	12.50	-33.0
Hispanic	17.21	12.09	-35.2
Asian	16.70	13.22	-29.2
Native American	17.52	13.99	-25.0
Two or more races	20.87	15.37	-17.6
Minority	17.34	12.56	-32.7
Nonminority Female	17.81	13.07	-30.0
M/WBE	17.48	12.73	-31.8
Nonminority Male	25.57	18.66	
<i>Maintenance</i>			
African American	8.14	7.83	-48.2
Hispanic	13.51	11.64	-23.0
Asian	9.20	12.71	-15.9
Native American	12.68	14.25	-5.7
Two or more races	13.14	11.84	-21.6
Minority	11.64	10.10	-33.2
Nonminority Female	10.34	9.50	-37.1
M/WBE	11.24	9.95	-34.1
Nonminority Male	17.63	15.11	
<i>IT</i>			
African American	9.89	8.56	-43.2
Hispanic	14.25	11.17	-25.8
Asian	8.18	9.10	-39.6
Native American	14.92	10.50	-30.3
Two or more races	14.70	11.26	-25.2
Minority	12.11	9.70	-35.6
Nonminority Female	13.37	11.01	-26.9
M/WBE	12.55	10.13	-32.7
Nonminority Male	21.00	15.06	

Race/Gender	U.S. (%)	State of Maryland Market Area (%)	Percent Difference from Nonminority Male in Column (2)
<i>Services</i>			
African American	6.14	6.12	-54.9
Hispanic	10.16	8.54	-37.0
Asian	10.43	11.16	-17.7
Native American	9.77	6.21	-54.2
Two or more races	9.64	7.98	-41.2
Minority	9.11	7.96	-41.3
Nonminority Female	8.65	9.21	-32.1
M/WBE	8.90	8.41	-38.0
Nonminority Male	16.70	13.56	
<i>CSE</i>			
African American	4.83	5.15	-51.5
Hispanic	7.77	7.05	-33.6
Asian	8.12	8.60	-18.9
Native American	8.94	7.84	-26.1
Two or more races	7.42	7.02	-33.8
Minority	7.10	6.60	-37.8
Nonminority Female	6.11	6.32	-40.4
M/WBE	6.70	6.50	-38.7
Nonminority Male	12.42	10.61	

Source: NERA calculations from the 2010-2014 ACS Public Use Microdata Sample.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse and statistically significant race and gender disparities for minorities and women remain when such other factors are held constant. Table 4.17 focuses on the economy as a whole, Table 4.18 on Construction, Table 4.19 on AE-CRS, Table 4.20 on Maintenance, Table 4.21 on IT, Table 4.22 on Services, and Table 4.23 on CSE.<sup>90</sup> The numbers shown in each of these tables indicate the percentage point difference between the probability of business ownership for a given race/gender group compared to similarly situated nonminority males.

#### a. Specification 1 - the Basic Model<sup>91</sup>

Specification 1 in Table 4.17 shows large, adverse, and statistically significant business formation disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting two or more races and nonminority women consistent with the presence of discrimination in these markets. Specification 1 in Tables 4.18 through 4.23 shows large, negative, and statistically significant business formation disparities for each of these groups in the Construction, AE-CRS, Maintenance, IT, Services, and CSE sectors, respectively.

<sup>90</sup> Procurement categories for Tables 4.18 through 4.23 are based on the top 95 percent of industries relevant to State of Maryland procurement, as described above in Tables 2.7 through 2.12.

<sup>91</sup> See above, section C.2.a., for a detailed description of Specification 1.

**b. Specifications 2 and 3 - the Full Model Including State of Maryland-Specific Interaction Terms<sup>92</sup>**

Several of the MDMA interaction terms included in Specification 2 were significant. The final results are shown in Specification 3 for Tables 4.17 through 4.23.

To summarize for the economy-wide results (Table 4.17):

- For African Americans, business formation rates are 2.4 percentage points lower than what would be expected in a race- and gender-neutral market area.<sup>93</sup>
- For Hispanics, business formation rates are 1.4 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 0.1 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.4 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 1.2 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for Construction (Table 4.18):

- For African Americans, business formation rates are 8.1 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 4.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 3.3 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 6.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

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<sup>92</sup> See above, section C.2.b., for a detailed description of Specifications 2 and 3.

<sup>93</sup> Recall that the net business formation rate is equal to the value direct coefficient (on the African American indicator variable in this case) plus the value of the statistically significant coefficient on the MDMA\*African American interaction term. In this example, the 2.4 percent figure is the net result of the direct coefficient for African Americans, with a value of -3.7 percent, and the coefficient for African Americans interacted with the MDMA indicator, which is positive 1.3 percent.

## Market-Based Disparities in Business Formation and Business Owner Earnings

- For persons reporting two or more races, business formation rates are 2.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 5.2 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for AE-CRS (Table 4.19):

- For African Americans, business formation rates are 8.4 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 5.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 7.1 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 8.6 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 2.4 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 6.2 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for Maintenance (Table 4.20):

- For African Americans, business formation rates are 4.5 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 3.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 1.3 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 4.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 4.0 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for IT (Table 4.21):

- For African Americans, business formation rates are 7.0 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 2.6 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 6.0 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for Services (Table 4.22):

- For African Americans, business formation rates are 3.6 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 1.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 1.0 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 3.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 0.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize the results for CSE (Table 4.23):

- For African Americans, business formation rates are 2.1 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Hispanics, business formation rates are 1.1 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 0.6 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.3 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting two or more races, business formation rates are 1.0 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 1.0 percentage points lower than what would be expected in a race- and gender-neutral market area.

**Table 4.17. Business Formation Regressions, All Industries, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.037 (95.00)	-0.037 (92.65)	-0.037 (92.64)
Hispanic	-0.029 (87.55)	-0.029 (87.59)	-0.029 (87.57)
Asian	-0.013 (28.54)	-0.014 (28.99)	-0.014 (28.97)
Native American	-0.028 (23.81)	-0.029 (23.85)	-0.028 (23.9)
Two or more races	-0.014 (17.73)	-0.014 (17.64)	-0.014 (17.71)
Nonminority Female	-0.026 (101.24)	-0.026 (101.38)	-0.026 (101.37)
Age	0.008 (124.51)	0.008 (124.48)	0.008 (124.48)
Age <sup>2</sup>	-0.000 (82.14)	-0.000 (82.12)	-0.000 (82.12)
MDMA	-0.006 (4.91)	-0.013 (9.49)	-0.012 (9.36)
MDMA*African American		0.013 (6.07)	0.013 (5.95)
MDMA*Hispanic		0.016 (6.23)	0.015 (6.12)
MDMA*Asian		0.015 (6.27)	0.015 (6.16)
MDMA*Native American		0.014 (0.94)	n/a
MDMA*Two or more races		0.007 (1.37)	n/a
MDMA*Nonminority Female		0.015 (9.59)	0.014 (9.46)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	4,366,874	4,366,874	4,366,874
Pseudo R <sup>2</sup>	.2104	.2105	.2105

Source: NERA calculations from the 2010-2014 ACS Public Use Microdata Sample.

Notes: (1) See above, section C.2.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all private sector labor force participants between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number represents the percentage point probability difference in business ownership rates between a given group and nonminority men, evaluated at the mean business ownership rate for the estimation sample; (4) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (5) Geography is defined based on place of residence; (6) “MDMA” is shorthand for “State of Maryland Market Area,” which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (7) “n/a” in Specification 3 indicates that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section C.2.b.

**Table 4.18. Business Formation Regressions, Construction, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.081 (39.65)	-0.081 (38.04)	-0.081 (39.62)
Hispanic	-0.047 (30.98)	-0.048 (30.69)	-0.047 (31.03)
Asian	-0.036 (11.05)	-0.039 (11.68)	-0.039 (11.70)
Native American	-0.067 (12.23)	-0.067 (12.20)	-0.067 (12.23)
Two or more races	-0.022 (5.41)	-0.022 (5.30)	-0.022 (5.44)
Nonminority Female	-0.052 (35.66)	-0.052 (34.75)	-0.052 (35.66)
Age	0.016 (51.21)	0.016 (51.20)	0.016 (51.21)
Age <sup>2</sup>	-0.000 (33.01)	-0.000 (33.01)	-0.000 (33.01)
MDMA	-0.034 (6.08)	-0.035 (5.82)	-0.037 (6.56)
MDMA*African American		-0.012 (1.23)	n/a
MDMA*Hispanic		0.004 (0.43)	n/a
MDMA*Asian		0.069 (4.09)	0.072 (4.30)
MDMA*Native American		0.031 (0.54)	n/a
MDMA*Two or more races		-0.009 (0.36)	n/a
MDMA*Nonminority Female		-0.014 (1.72)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	617,717	617,717	617,717
Pseudo R <sup>2</sup>	.0970	.0970	.0970

Source and Notes: See Table 4.17.

**Table 4.19. Business Formation Regressions, AE-CRS, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.085 (25.38)	-0.085 (24.11)	-0.084 (25.31)
Hispanic	-0.052 (23.67)	-0.053 (23.60)	-0.052 (23.67)
Asian	-0.071 (17.88)	-0.072 (17.62)	-0.071 (17.84)
Native American	-0.086 (11.36)	-0.086 (11.36)	-0.086 (11.36)
Two or more races	-0.024 (4.21)	-0.024 (4.16)	-0.024 (4.21)
Nonminority Female	-0.078 (39.41)	-0.079 (38.90)	-0.079 (38.85)
Age	0.019 (43.19)	0.019 (43.19)	0.019 (43.20)
Age <sup>2</sup>	-0.000 (25.70)	-0.000 (25.69)	-0.000 (25.70)
MDMA	-0.062 (9.22)	-0.068 (9.60)	-0.064 (9.41)
MDMA*African American		0.005 (0.39)	n/a
MDMA*Hispanic		0.018 (1.52)	n/a
MDMA*Asian		0.030 (1.82)	n/a
MDMA*Native American		0.046 (0.61)	n/a
MDMA*Two or more races		0.006 (0.20)	n/a
MDMA*Nonminority Female		0.022 (2.31)	0.017 (1.90)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	400,424	400,424	400,424
Pseudo R <sup>2</sup>	.0744	.0744	.0744

Source and Notes: See Table 4.17.

**Table 4.20. Business Formation Regressions, Maintenance, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.060 (37.73)	-0.061 (36.91)	-0.061 (36.89)
Hispanic	-0.032 (25.53)	-0.032 (25.39)	-0.032 (25.57)
Asian	-0.023 (9.49)	-0.024 (9.90)	-0.024 (9.87)
Native American	-0.049 (11.68)	-0.050 (11.77)	-0.049 (11.69)
Two or more races	-0.017 (5.18)	-0.017 (5.19)	-0.017 (5.20)
Nonminority Female	-0.040 (35.54)	-0.040 (35.14)	-0.040 (35.53)
Age	0.013 (52.40)	0.013 (52.39)	0.013 (52.40)
Age <sup>2</sup>	-0.000 (35.46)	-0.000 (35.45)	-0.000 (35.46)
MDMA	-0.019 (4.26)	-0.023 (4.95)	-0.021 (4.74)
MDMA*African American		0.019 (2.38)	0.016 (2.13)
MDMA*Hispanic		0.006 (0.87)	n/a
MDMA*Asian		0.040 (3.11)	0.037 (2.94)
MDMA*Native American		0.064 (1.38)	n/a
MDMA*Two or more races		0.008 (0.43)	n/a
MDMA*Nonminority Female		0.007 (1.11)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	696,914	696,914	696,914
Pseudo R <sup>2</sup>	.1281	.1281	.1281

Source and Notes: See Table 4.17.

**Table 4.21. Business Formation Regressions, IT, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.070 (34.74)	-0.071 (33.34)	-0.070 (34.55)
Hispanic	-0.041 (26.66)	-0.041 (26.71)	-0.041 (26.66)
Asian	-0.065 (31.38)	-0.067 (31.49)	-0.067 (31.46)
Native American	-0.059 (11.18)	-0.060 (11.18)	-0.060 (11.20)
Two or more races	-0.019 (5.26)	-0.020 (5.32)	-0.019 (5.28)
Nonminority Female	-0.033 (25.92)	-0.033 (25.88)	-0.033 (25.83)
Age	0.014 (45.97)	0.014 (45.95)	0.014 (45.96)
Age <sup>2</sup>	-0.000 (26.39)	-0.000 (26.37)	-0.000 (26.37)
MDMA	-0.046 (10.59)	-0.054 (11.66)	-0.052 (11.52)
MDMA*African American		0.014 (1.68)	n/a
MDMA*Hispanic		0.018 (2.05)	0.015 (1.81)
MDMA*Asian		0.051 (5.31)	0.049 (5.12)
MDMA*Native American		0.021 (0.38)	n/a
MDMA*Two or more races		0.014 (0.79)	n/a
MDMA*Nonminority Female		0.017 (2.78)	0.015 (2.46)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	622,458	622,458	622,458
Pseudo R <sup>2</sup>	.1102	.1103	.1103

Source and Notes: See Table 4.17.

**Table 4.22. Business Formation Regressions, Services, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.051 (62.79)	-0.052 (61.02)	-0.052 (61.01)
Hispanic	-0.033 (47.13)	-0.033 (47.18)	-0.033 (47.17)
Asian	-0.016 (16.04)	-0.017 (16.79)	-0.017 (16.77)
Native American	-0.037 (14.40)	-0.037 (14.39)	-0.037 (14.47)
Two or more races	-0.018 (10.96)	-0.019 (11.05)	-0.018 (10.97)
Nonminority Female	-0.031 (58.48)	-0.032 (59.03)	-0.032 (59.01)
Age	0.011 (80.45)	0.011 (80.45)	0.011 (80.45)
Age <sup>2</sup>	-0.000 (50.76)	-0.000 (50.75)	-0.000 (50.75)
MDMA	-0.019 (8.36)	-0.028 (11.42)	-0.027 (11.33)
MDMA*African American		0.016 (3.89)	0.016 (3.78)
MDMA*Hispanic		0.015 (3.33)	0.014 (3.23)
MDMA*Asian		0.027 (5.82)	0.027 (5.72)
MDMA*Native American		0.003 (0.12)	n/a
MDMA*Two or more races		0.015 (1.53)	n/a
MDMA*Nonminority Female		0.026 (8.44)	0.025 (8.32)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	1,557,982	1,557,982	1,557,982
Pseudo R <sup>2</sup>	.1607	.1608	.1608

Source and Notes: See Table 4.17.

**Table 4.23. Business Formation Regressions, CSE, 2010-2014**

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.032 (48.74)	-0.033 (47.58)	-0.033 (47.57)
Hispanic	-0.021 (39.80)	-0.021 (39.88)	-0.021 (39.86)
Asian	-0.007 (9.26)	-0.008 (9.83)	-0.008 (9.81)
Native American	-0.023 (12.10)	-0.023 (12.19)	-0.023 (12.14)
Two or more races	-0.010 (8.06)	-0.011 (8.16)	-0.010 (8.06)
Nonminority Female	-0.021 (49.61)	-0.021 (49.58)	-0.021 (49.57)
Age	0.009 (84.20)	0.009 (84.19)	0.009 (84.19)
Age <sup>2</sup>	-0.000 (55.38)	-0.000 (55.36)	-0.000 (55.36)
MDMA	-0.016 (9.36)	-0.020 (11.01)	-0.020 (10.90)
MDMA*African American		0.012 (3.50)	0.012 (3.40)
MDMA*Hispanic		0.011 (2.99)	0.010 (2.89)
MDMA*Asian		0.014 (3.99)	0.014 (3.89)
MDMA*Native American		0.027 (1.17)	n/a
MDMA*Two or more races		0.010 (1.32)	n/a
MDMA*Nonminority Female		0.011 (4.47)	0.011 (4.34)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	1,835,894	1,835,894	1,835,894
Pseudo R <sup>2</sup>	.1945	.1945	.1945

Source and Notes: See Table 4.17.

### c. Conclusions

This section has demonstrated that minorities and women in general are substantially and statistically significantly less likely to own their own businesses than would be expected based upon their observable demographic characteristics including age, education, geographic location, industry and trends over time. Moreover, as demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males whether they work as wage and salary employees or as entrepreneurs.<sup>94</sup> These findings are consistent with results that would be observed in a discriminatory market area.

### D. Expected Business Formation Rates—Implications for Current M/WBE Availability<sup>95</sup>

In Table 4.24, the Probit regression results for the State of Maryland Market Area from Tables 4.17 through 4.23, for the overall economy, Construction, AE-CRS, Maintenance, IT, Services, and CSE, respectively, are combined with weighted average self-employment rates by race and gender from the 2010-2014 ACS PUMS (Tables 4.15 and 4.16) to determine the disparity between baseline availability and expected availability in a race- and gender-neutral market area. These figures appear in column (3) of each panel in Table 4.24.

In Table 4.24, the business formation rate in the MDMA for African Americans in AE-CRS, for example, is 12.50 percent. According to the regression specification underlying Table 4.18, however, that rate would be 20.90 percent, or 67.2 percent higher, in a race- and gender-neutral market area. Put differently, the disparity ratio of the actual business formation rate to the expected business formation rate for African Americans in AE-CRS in the MDMA is 59.81. Disparity indices are adverse and statistically significant in AE-CRS for African Americans, Asians, Hispanics, Native Americans, persons reporting two or more races, minorities as a group, nonminority women, and minorities and women combined.<sup>96</sup>

In Construction, the largest disparities observed are for African Americans (54.19), followed in descending order by M/WBEs as a group (67.17), Native Americans (67.19), nonminority women (67.28), minorities as a group (67.74), Hispanics (72.79), and persons reporting two or more races (86.75).

In AE-CRS, the largest disparities observed are for African Americans (59.81), followed in descending order by Native Americans (61.93), M/WBEs as a group (63.55), Asians (65.06), minorities as a group (66.60), nonminority women (67.83), Hispanics (69.92), and persons reporting two or more races (86.49).

<sup>94</sup> Although business formation disparities were not observed for Asians in the State of Maryland Market Area, wage and salary earnings disparities and business owner earnings disparities for Asians *were* observed.

<sup>95</sup> In addition to quantifying how discrimination may have depressed current measured levels of M/WBE availability, this exercise also addresses the requirements of 49 C.F.R. 26.45 (“Step 2”) for the United States Department of Transportation Disadvantaged Business Enterprise Program.

<sup>96</sup> Results are adverse because they are less than 100, and they are statistically significant because the corresponding coefficient(s) from the Probit regression are statistically significant.

In Maintenance, the largest disparities observed are for African Americans (56.21), followed in descending order by Asians (67.57), M/WBEs as a group (70.32), nonminority women (70.37), minorities as a group (71.63), Native Americans (74.41), Hispanics (78.44), and persons reporting two or more races (87.44).

In IT, the largest disparities observed are for African Americans (55.01), followed in descending order by Native Americans (63.64), minorities as a group (70.80), M/WBEs as a group (75.43), Hispanics (81.12), Asians (83.49), persons reporting two or more races (85.56), and nonminority women (85.95).

In Services, the largest disparities observed are for Native Americans (62.66), followed in descending order by African Americans (62.96), minorities as a group (78.35), M/WBEs as a group (81.57), persons reporting two or more races (81.60), Hispanics (81.80), and nonminority women (92.94).

In CSE, the largest disparities observed are for African Americans (71.03), followed in descending order by Native Americans (77.32), M/WBEs as a group (83.33), minorities as a group (85.71), nonminority women (86.34), Hispanics (86.50), and persons reporting two or more races (87.53).

In the economy as a whole, the largest disparities observed are for African Americans (69.89), followed in descending order by Native Americans (76.09), M/WBEs as a group (80.91), minorities as a group (81.21), persons reporting two or more races (83.96), Hispanics (86.12), and nonminority women (87.37).

Given the disparities observed in the economy for the presumptively disadvantaged groups in the State MBE statute, goal-setters might consider adjusting baseline estimates of M/WBE availability upward to partly account for the depressing effects of discrimination on current measured levels of availability. The business formation rate disparities documented in Table 4.24 can be combined with the estimates of current M/WBE availability documented in Table 3.15 and elsewhere to provide estimates of expected availability. Such estimates appear in Table 6.6, below. Expected M/WBE availability exceeds actual current M/WBE availability overall and in each major procurement category.

Table 4.24. Actual and Potential Business Formation Rates in the State of Maryland Market Area

Race/Gender	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Ratio
<i>All Industries</i>	(1)	(2)	(3)
African American	5.57	7.97	69.89
Hispanic	8.69	10.09	86.12
Asian	10.79	10.69	
Native American	8.91	11.71	76.09
Two or more races	7.33	8.73	83.96
Minority	7.52	9.26	81.21
Nonminority Female	8.30	9.50	87.37
M/WBE	7.84	9.69	80.91
<i>Construction</i>	(1)	(2)	(3)
African American	9.58	17.68	54.19
Hispanic	12.57	17.27	72.79
Asian	17.38	14.08	
Native American	13.72	20.42	67.19
Two or more races	14.40	16.60	86.75
Minority	11.97	17.67	67.74
Nonminority Female	10.69	15.89	67.28
M/WBE	11.66	17.36	67.17
<i>AE-CRS</i>	(1)	(2)	(3)
African American	12.50	20.90	59.81
Hispanic	12.09	17.29	69.92
Asian	13.22	20.32	65.06
Native American	13.99	22.59	61.93
Two or more races	15.37	17.77	86.49
Minority	12.56	18.86	66.60
Nonminority Female	13.07	19.27	67.83
M/WBE	12.73	20.03	63.55
<i>Maintenance</i>	(1)	(2)	(3)
African American	7.83	13.93	56.21
Hispanic	11.64	14.84	78.44
Asian	12.71	18.81	67.57
Native American	14.25	19.15	74.41
Two or more races	11.84	13.54	87.44
Minority	10.10	14.10	71.63
Nonminority Female	9.50	13.50	70.37
M/WBE	9.95	14.15	70.32

Race/Gender	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Ratio
<b><i>IT</i></b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
African American	8.56	15.56	55.01
Hispanic	11.17	13.77	81.12
Asian	9.10	10.90	83.49
Native American	10.50	16.50	63.64
Two or more races	11.26	13.16	85.56
Minority	9.70	13.70	70.80
Nonminority Female	11.01	12.81	85.95
M/WBE	10.13	13.43	75.43
<b><i>Services</i></b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
African American	6.12	9.72	62.96
Hispanic	8.54	10.44	81.80
Asian	11.16	10.16	
Native American	6.21	9.91	62.66
Two or more races	7.98	9.78	81.60
Minority	7.96	10.16	78.35
Nonminority Female	9.21	9.91	92.94
M/WBE	8.41	10.31	81.57
<b><i>CSE</i></b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
African American	5.15	7.25	71.03
Hispanic	7.05	8.15	86.50
Asian	8.60	8.00	
Native American	7.84	10.14	77.32
Two or more races	7.02	8.02	87.53
Minority	6.60	7.70	85.71
Nonminority Female	6.32	7.32	86.34
M/WBE	6.50	7.80	83.33

Source: 2010-2014 ACS Public Use Microdata Sample. See Tables 4.15 through 4.22.

Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Figures in column (1) are average self-employment rates weighted using ACS population-based person weights, as also shown in Tables 4.15 and 4.16. (C) Figures in column (2) are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 4.17, 4.18, 4.19, 4.20, 4.21 4.22, or 4.23, respectively. Minority and M/WBE figures were derived from similar regression analyses, not reported separately. (D) Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100. (E) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

## E. Evidence from the Survey of Business Owners

As a final check on the statistical findings in this chapter, we present evidence from a Census Bureau data collection effort dedicated to M/WBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO), formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE), collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Census* program. Data from the 2012 SBO, the most recent available, were released in December 2015.

The SBO estimates are created by matching data collected from income tax returns by the Internal Revenue Service with Social Security Administration data on race and ethnicity, and supplementing this information using statistical sampling methods. The unique field for conducting this matching is the Social Security Number (SSN) or the Employer Identification Number (EIN), as reported on the tax return.

The SBO covers women and five groups of minorities: (1) African Americans, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Pacific Islanders, and (5) American Indians and Alaskan Natives. Comparative information for nonminority male-owned firms is also included.<sup>97</sup>

The SBO provides aggregate estimates of the number of minority-owned and women-owned firms and their annual sales and receipts. The SBO distinguishes employer firms (*i.e.*, firms with one or more paid employees) from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Compared to the ACS PUMS, the SBO is more limited in the scope of industrial and geographic detail it provides. Nonetheless, it contains a wealth of information on the character of minority and female business enterprise in the U.S as a whole as well as in the State of Maryland Market Area ("MDMA").<sup>98</sup> In the remainder of this section, we present SBO statistics for the United States as a whole and in the MDMA and calculate disparity indices from them. We observe results in the SBO regarding disparities that are consistent with our findings above using the ACS PUMS.

Tables 4.25 and 4.26 contain data for all industries combined. Table 4.25 is for the U.S. as a whole, Table 4.26 is for the MDMA. Panel A in these two tables summarizes the SBO results for each race and/or gender grouping. For example, Panel A of Table 4.25 shows a total of 27.18 million firms in the U.S. in 2012 (column 1) with overall sales and receipts of \$11.964 trillion (column 2). Of these 27.18 million firms, 5.14 million had one or more employees (column 3)

<sup>97</sup> In the ACS PUMS data, discussed above, the unit of analysis is the business owner, or self-employed person. In the SBO data, the unit of analysis is the business rather than the business owner. Furthermore, unlike most other business statistics, including the other components of the *Economic Census*, the unit of analysis in the SBO is the firm, rather than the establishment.

<sup>98</sup> We performed a custom tabulation of SBO data in order to examine the State of Maryland Market Area, which is defined as the States of Maryland and Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria DC-VA-MD-WV Metropolitan Statistical Area.

and these 5.14 million firms had overall sales and receipts of \$10.965 trillion (column 4). Column (5) shows a total of 56.059 million employees on the payroll of these 5.14 million firms and a total annual payroll expense of \$2.096 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for nonminority male-owned, women-owned, and minority-owned firms. For example, Table 4.25 shows that there were 2.6 million African American-owned firms counted in the SBO, and that these 2.6 million firms registered \$150.2 billion in sales and receipts. It also shows that 109,137 of these African American-owned firms had one or more employees, and that they employed a total of 975,052 workers with an annual payroll total of \$27.69 billion.

Panel A of Table 4.26 provides comparable information for the MDMA. The SBO counted 918,009 firms in the MDMA, of which 360,045 were female-owned; 178,828 were African American-owned; 77,478 were Hispanic-owned; 91,812 were Asian-owned; 5,924 were Native American-owned; and 952 were Native Hawaiian- or Pacific Islander-owned.

Panel B in each table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 4.26 shows that African American-owned firms were 19.46 percent of all firms in the MDMA and female-owned firms were 39.18 percent. Additionally, 8.43 percent of firms were Hispanic-owned, 9.99 percent were Asian-owned, 0.64 percent were Native American-owned, and 0.10 percent were Native Hawaiian- or Pacific Islander-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 4.26, for example, shows that although African American-owned firms were 19.46 percent of all firms in the MDMA, they accounted for only 4.05 percent of all sales and receipts. Although female-owned firms accounted for 39.18 percent, they earned only 13.88 percent of all sales and receipts. For Hispanic-owned firms, the figures are 8.43 percent and 3.03 percent, respectively. For Asian-owned firms, they are 9.99 percent and 8.29 percent, respectively. For Native American-owned firms, they are 0.64 percent and 0.19 percent, respectively; and for Native Hawaiian- or Pacific Islander-owned firms, they are 0.10 percent and 0.02 percent, respectively. In contrast, the figures for nonminority male-owned firms are 26.98 percent and 49.71 percent, respectively.

Similar results are obtained when the survey results are restricted to firms with one or more paid employees. Column (3) in Table 4.26, for example, shows that although nonminority male-owned firms were 38.34 percent of all employer firms, they accounted for 51.01 percent of all employer firm sales and receipts. African American-owned firms, in contrast, were 5.71 percent of all employer firms, but they accounted for only 3.43 percent of all employer firm sales and receipts. Hispanic-owned firms were 4.16 percent of all employer firms, but they accounted for only 2.69 percent of all employer firm sales and receipts. Asian-owned firms were 14.48 percent of all employer firms, but they accounted for only 8.20 percent of all employer firm sales and receipts. Native American-owned firms were 0.32 percent of all employer firms but accounted for only 0.17 percent of all employer firm sales and receipts. Native Hawaiian- and Pacific Islander-owned firms were 0.05 percent of all employer firms but accounted for 0.02 percent of all employer firm sales and receipts. Finally, women-owned firms accounted for 22.41 percent of all employer firms, but earned only 12.76 percent of all employer firm sales and receipts.

**Table 4.25. Disparity Ratios from the 2012 Survey of Business Owners, United States, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	27,179,380	11,964,077,871	5,136,203	10,964,584,749	56,058,563	2,096,442,212
Nonminority Male	12,280,591	8,787,915,377	2,933,198	8,221,010,815	37,750,711	1,531,662,394
Female	9,878,397	1,419,834,295	1,035,655	1,190,586,438	8,431,614	263,720,252
African American	2,584,403	150,203,163	109,137	103,451,510	975,052	27,689,957
Hispanic	3,305,873	473,635,944	287,501	379,994,999	2,329,553	70,855,704
Asian	1,917,902	699,492,422	481,026	627,532,399	3,572,577	110,543,615
Native Hawaiian/Pac. Islander	54,749	8,136,445	4,706	6,469,957	39,001	1,430,591
Am. Indian & Alaska Native	272,919	38,838,125	26,179	31,654,165	208,178	6,994,509
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	45.18%	73.45%	57.11%	74.98%	67.34%	73.06%
Female	36.35%	11.87%	20.16%	10.86%	15.04%	12.58%
African American	9.51%	1.26%	2.12%	0.94%	1.74%	1.32%
Hispanic	12.16%	3.96%	5.60%	3.47%	4.16%	3.38%
Asian	7.06%	5.85%	9.37%	5.72%	6.37%	5.27%
Native Hawaiian/Pac. Islander	0.20%	0.07%	0.09%	0.06%	0.07%	0.07%
Am. Indian & Alaska Native	1.00%	0.32%	0.51%	0.29%	0.37%	0.33%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		162.56		131.29	117.92	127.93
Female		32.65		53.85	74.59	62.39
African American		13.20		44.40	81.86	62.16
Hispanic		32.55		61.91	74.24	60.38
Asian		82.85		61.11	68.05	56.30
Native Hawaiian/Pac. Islander		33.76		64.40	75.93	74.48
Am. Indian & Alaska Native		32.33		56.64	72.86	65.46

Source: NERA calculations using 2012 SBO. Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Excludes publicly-owned, foreign-owned, and not-for-profit firms. (C) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

Disparities between the fraction of firms that are minority- or women-owned and their fraction of sales and receipts in the MDMA are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women, both for employer firms and nonemployer firms. The disparity indices are presented in Panel C of each table. Disparity indices of approximately 80 percent or less are consistent with business discrimination (0 percent being complete disparity and 100 percent being full parity).<sup>99</sup> In the MDMA (Table 4.26), the sales and receipts disparity indices (in columns 2 and 4) fall at or below the 80 percent threshold in 11 out of 12 instances for minorities and women. All of the disparity indices in this table are statistically significant within a 95 percent confidence interval.<sup>100</sup>

<sup>99</sup> See Appendix A below, "Constitutional significance or substantive significance."

<sup>100</sup> This is true for each table in Section E.

**Table 4.26. Disparity Ratios from the 2012 Survey of Business Owners, State of Maryland Market Area, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	918,909	397,013,822	172,217	362,949,202	1,988,787	88,522,803
Nonminority Male	247,907	197,366,518	66,033	185,135,698	880,015	40,235,729
Female	360,045	55,124,577	38,594	46,310,707	347,590	13,807,496
African American	178,828	16,059,898	9,834	12,434,774	102,995	3,971,763
Hispanic	77,478	12,042,158	7,169	9,753,652	71,276	2,735,040
Asian	91,812	32,925,222	24,945	29,753,839	197,654	7,941,162
Native Hawaiian/Pac. Islander	952	70,098	89	57,807	657	26,348
Am. Indian & Alaska Native	5,924	755,731	551	605,023	4,764	188,921
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	26.98%	49.71%	38.34%	51.01%	44.25%	45.45%
Female	39.18%	13.88%	22.41%	12.76%	17.48%	15.60%
African American	19.46%	4.05%	5.71%	3.43%	5.18%	4.49%
Hispanic	8.43%	3.03%	4.16%	2.69%	3.58%	3.09%
Asian	9.99%	8.29%	14.48%	8.20%	9.94%	8.97%
Native Hawaiian/Pac. Islander	0.10%	0.02%	0.05%	0.02%	0.03%	0.03%
Am. Indian & Alaska Native	0.64%	0.19%	0.32%	0.17%	0.24%	0.21%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		184.27		133.03	115.40	118.54
Female		35.44		56.94	77.99	69.60
African American		20.79		60.00	90.69	78.57
Hispanic		35.97		64.56	86.09	74.22
Asian		83.00		56.60	68.61	61.93
Native Hawaiian/Pac. Islander		17.04		30.82	63.92	57.59
Am. Indian & Alaska Native		29.53		52.10	74.87	66.70

Source and Notes: See Table 4.25.

Table 4.27 shows comparable SBO data for the Construction and Construction-related Professional Services (“AE-CRS”) sector in the U.S. as a whole. Here, large and adverse disparities are evident in most instances for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women. For example, although African Americans account for 5.06 percent of all firms in the Construction and AE-CRS sector, they earned only 1.29 percent of all sales and receipts in that sector. Hispanics account for 11.09 percent of firms but only 4.30 percent of sales and receipts. For Asians, the figures are 5.21 percent and 4.00 percent, respectively. For Native Americans, the figures are 0.98 percent and 0.51 percent, respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.17 percent and 0.12 percent, respectively. Finally, women account for 23.55 percent of all Construction and AE-CRS firms but earned only 11.15 percent of all sales and receipts.

Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Native Americans and women. Overall, disparities in this category are slightly less

acute than among firms as a whole. However, they remain far larger than the comparable figure for nonminority male-owned firms. This is evident in that the fraction of employer firms compared to the fraction of all firms is far higher among nonminority males than among other race and gender groups. In Table 4.27, for example, nonminority males represent 60.30 percent of all firms but 67.41 percent of employer firms. For all other groups, the direction of this ratio is reversed. That is, each group's fraction among employer firms is substantially smaller than its fraction among firms as a whole, whereas for nonminority males it is larger.

**Table 4.27. Disparity Ratios from the 2012 Survey of Business Owners, United States, Construction and AE-CRS**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	6,796,672	2,077,651,539	1,385,740	1,825,720,151	9,417,271	502,212,138
Nonminority Male	4,098,217	1,588,153,063	934,173	1,418,932,123	6,918,815	380,577,855
Female	1,600,294	231,672,089	219,948	187,668,757	1,210,435	58,325,262
African American	343,671	26,824,886	21,416	19,607,626	121,053	6,165,077
Hispanic	753,538	89,355,188	68,286	64,485,132	393,114	17,294,719
Asian	353,843	83,128,886	61,401	71,585,506	399,780	25,539,672
Native Hawaiian/Pac. Islander	11,843	2,439,922	1,324	2,018,181	8,483	494,869
Am. Indian & Alaska Native	66,935	10,569,706	8,463	8,317,526	47,582	2,116,501
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	60.30%	76.44%	67.41%	77.72%	73.47%	75.78%
Female	23.55%	11.15%	15.87%	10.28%	12.85%	11.61%
African American	5.06%	1.29%	1.55%	1.07%	1.29%	1.23%
Hispanic	11.09%	4.30%	4.93%	3.53%	4.17%	3.44%
Asian	5.21%	4.00%	4.43%	3.92%	4.25%	5.09%
Native Hawaiian/Pac. Islander	0.17%	0.12%	0.10%	0.11%	0.09%	0.10%
Am. Indian & Alaska Native	0.98%	0.51%	0.61%	0.46%	0.51%	0.42%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		126.77		115.29	108.98	112.41
Female		47.36		64.76	80.98	73.17
African American		25.53		69.49	83.18	79.43
Hispanic		38.79		71.68	84.71	69.88
Asian		76.85		88.49	95.81	114.77
Native Hawaiian/Pac. Islander		67.40		115.70	94.28	103.13
Am. Indian & Alaska Native		51.66		74.60	82.73	69.01

Source and Notes: See Table 4.25.

Table 4.28 shows results for the Construction and AE-CRS sector in the MDMA. Among all firms in Construction and AE-CRS, large disparities are observed for African Americans, Hispanics, Native Americans, Native Hawaiians and Pacific Islanders, and women. Among firms with paid employees, large disparities are observed for African Americans, Hispanics, Native Americans and women. As in Table 4.26, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women.

**Table 4.28. Disparity Ratios from the 2012 Survey of Business Owners, State of Maryland Market Area, Construction and AE-CRS**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	268,069	129,171,203	58,601	116,799,139	557,979	36,898,322
Nonminority Male	91,833	59,327,931	25,059	54,834,137	239,658	15,286,818
Female	75,608	18,308,510	11,322	15,779,225	91,131	5,859,950
African American	32,470	4,800,474	2,822	3,997,472	27,455	1,545,830
Hispanic	27,880	5,330,311	2,876	4,263,575	22,716	1,279,615
Asian	22,007	11,348,002	5,820	10,615,752	57,245	4,290,200
Native Hawaiian/Pac. Islander	235	56,614	31	55,136	448	26,108
Am. Indian & Alaska Native	1,635	372,014	213	330,081	1,828	106,893
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	34.26%	45.93%	42.76%	46.95%	42.95%	41.43%
Female	28.20%	14.17%	19.32%	13.51%	16.33%	15.88%
African American	12.11%	3.72%	4.82%	3.42%	4.92%	4.19%
Hispanic	10.40%	4.13%	4.91%	3.65%	4.07%	3.47%
Asian	8.21%	8.79%	9.93%	9.09%	10.26%	11.63%
Native Hawaiian/Pac. Islander	0.09%	0.04%	0.05%	0.05%	0.08%	0.07%
Am. Indian & Alaska Native	0.61%	0.29%	0.36%	0.28%	0.33%	0.29%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		134.07		109.79	100.44	96.88
Female		50.25		69.92	84.53	82.20
African American		30.68		71.07	102.18	87.00
Hispanic		39.68		74.38	82.95	70.66
Asian		107.01		91.52	103.30	117.07
Native Hawaiian/Pac. Islander		50.00		89.24	151.78	133.76
Am. Indian & Alaska Native		47.22		77.75	90.13	79.70

Source and Notes: See Table 4.25.

Table 4.29 shows comparable SBO data for the Goods and Services sector in the U.S. as a whole. Here, adverse disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. African Americans, for example, account for 10.99 percent of all firms in the Goods and Services sector, but they earned only 1.25 percent of all sales and receipts in that sector. Hispanics account for 12.52 percent of firms but only 3.89 percent of sales and receipts. For Asians, the figures are 7.67 percent and 6.23 percent, respectively. For Native Americans, the figures are 1.01 percent and 0.29 percent,

respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.21 percent and 0.06 percent, respectively. Finally, women account for 40.61 percent of all Goods and Services firms but earned only 12.02 percent of all sales and receipts. Comparable, though slightly smaller, disparities are observed as well among firms with paid employees in the Goods and Services sector.<sup>101</sup>

**Table 4.29. Disparity Ratios from the 2012 Survey of Business Owners, United States, Goods and Services**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	20,382,708	9,886,426,332	3,750,463	9,138,864,598	46,641,292	1,594,230,074
Nonminority Male	8,182,374	7,199,762,314	1,999,025	6,802,078,692	30,831,896	1,151,084,539
Female	8,278,103	1,188,162,206	815,707	1,002,917,681	7,221,179	205,394,990
African American	2,240,732	123,378,277	87,721	83,843,884	853,999	21,524,880
Hispanic	2,552,335	384,280,756	219,215	315,509,867	1,936,439	53,560,985
Asian	1,564,059	616,363,536	419,625	555,946,893	3,172,797	85,003,943
Native Hawaiian/Pac. Islander	42,906	5,696,523	3,382	4,451,776	30,518	935,722
Am. Indian & Alaska Native	205,984	28,268,419	17,716	23,336,639	160,596	4,878,008
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	40.14%	72.82%	53.30%	74.43%	66.10%	72.20%
Female	40.61%	12.02%	21.75%	10.97%	15.48%	12.88%
African American	10.99%	1.25%	2.34%	0.92%	1.83%	1.35%
Hispanic	12.52%	3.89%	5.85%	3.45%	4.15%	3.36%
Asian	7.67%	6.23%	11.19%	6.08%	6.80%	5.33%
Native Hawaiian/Pac. Islander	0.21%	0.06%	0.09%	0.05%	0.07%	0.06%
Am. Indian & Alaska Native	1.01%	0.29%	0.47%	0.26%	0.34%	0.31%
<b>Panel C. Disparity Ratios</b>						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		181.41		139.64	124.02	135.46
Female		29.59		50.46	71.18	59.24
African American		11.35		39.22	78.28	57.73
Hispanic		31.04		59.07	71.03	57.48
Asian		81.25		54.37	60.80	47.66
Native Hawaiian/Pac. Islander		27.37		54.02	72.56	65.09
Am. Indian & Alaska Native		28.29		54.06	72.89	64.78

Source and Notes: See Table 4.25.

<sup>101</sup> The exception being Asian-owned firms, for which the disparity facing firms with paid employees is substantially more acute than for Asian firms overall.

Finally, Table 4.30 shows comparable results for the Goods and Services sector in the MDMA. Among all firms in Goods and Services, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. As in Table 4.29, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women.<sup>102</sup> In the MDMA Goods and Services sector, the sales and receipts disparity indices fall at or below the 80 percent threshold in 12 out of 12 cases. All of the disparity indices, throughout this Section, are statistically significant within a 95 percent confidence interval.

**Table 4.30. Disparity Ratios from the 2012 Survey of Business Owners, State of Maryland Market Area, Goods and Services**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	650,840	267,842,619	113,616	246,150,063	1,430,808	51,624,481
Nonminority Male	156,074	138,038,587	40,974	130,301,561	640,357	24,948,911
Female	284,437	36,816,067	27,272	30,531,482	256,459	7,947,546
African American	146,358	11,259,424	7,012	8,437,302	75,540	2,425,933
Hispanic	49,598	6,711,847	4,293	5,490,077	48,560	1,455,425
Asian	69,805	21,577,220	19,125	19,138,087	140,409	3,650,962
Native Hawaiian/Pac. Islander	717	13,484	58	2,671	209	240
Am. Indian & Alaska Native	4,289	383,717	338	274,942	2,936	82,028
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	23.98%	51.54%	36.06%	52.94%	44.75%	48.33%
Female	43.70%	13.75%	24.00%	12.40%	17.92%	15.39%
African American	22.49%	4.20%	6.17%	3.43%	5.28%	4.70%
Hispanic	7.62%	2.51%	3.78%	2.23%	3.39%	2.82%
Asian	10.73%	8.06%	16.83%	7.77%	9.81%	7.07%
Native Hawaiian/Pac. Islander	0.11%	0.01%	0.05%	0.00%	0.01%	0.00%
Am. Indian & Alaska Native	0.66%	0.14%	0.30%	0.11%	0.21%	0.16%
Panel C. Disparity Ratios						
		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		214.91		146.78	124.10	134.01
Female		31.45		51.67	74.67	64.14
African American		18.69		55.54	85.54	76.14
Hispanic		32.88		59.03	89.82	74.61
Asian		75.11		46.19	58.30	42.01
Native Hawaiian/Pac. Islander		4.57		2.13	28.61	0.91
Am. Indian & Alaska Native		21.74		37.55	68.98	53.41

Source and Notes: See Table 4.25.

<sup>102</sup> The exception being Asian-owned firms with paid employees.

## V. Statistical Disparities in Capital Markets

### A. Introduction

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. Among such characteristics, the most commonly considered are race, ethnicity and gender. In labor markets, this might translate into equally productive workers in similar jobs being paid different salaries because of their race, ethnicity or gender. In commercial credit markets, it might translate into small business loan approvals differing across racial or gender groups with otherwise similar financial backgrounds.

In this chapter, we examine whether there is evidence consistent with the presence of discrimination against M/WBEs in the commercial credit market. Discrimination in the credit market against such small businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market can even prevent businesses from opening in the first place, and can negatively impact the size a firm can obtain, and/or shorten its longevity in the market.<sup>103</sup>

In our analyses in this chapter, we use data from a variety of sources. First and foremost are data from the Federal Reserve Board that allow us to examine whether discrimination exists in the small business credit market for the key years of 1993, 1998 and 2003, as these are the primary years of availability for the most important data source of small business finance by race and gender that has ever been produced. These surveys were based on a large representative sample of firms with fewer than 500 employees and were administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms, but the 2003 survey did not.<sup>104</sup> Unfortunately, the much anticipated continuation of this survey series in 2008 (and presumably in 2013) never materialized due to the Federal Reserve Board's cancellation of this important effort.<sup>105</sup>

Next, in addition to the 1993, 1998 and 2003 Federal Reserve data, this chapter also analyzes similar datasets collected through NERA's own surveys conducted from 1999 through 2007, that mirrored the relevant sections of the earlier Federal Reserve Board surveys. Results from the NERA credit surveys are consistent with the results obtained from the 1993-2003 Federal Reserve Board data.

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<sup>103</sup> Again, as noted in Chapter IV, these factors also illustrate why, in a disparity study intended to answer the question of whether discrimination is present in business enterprise, adjusting availability for "capacity" factors such as firm age, firm size or firm revenues, is not a legitimate practice when there is evidence that suggests that these factors themselves are tainted by discrimination. To do so would be to inappropriately introduce one or more endogenous variables into the analysis.

<sup>104</sup> The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, see National Opinion Research Center (2005), p. 11.

<sup>105</sup> For more on this, see fn. 148 below.

Finally, we review the results of the most recent available research on commercial credit market discrimination, spanning the time period from 2008 forward. Much of this review focuses on the work of Dr. Alicia Robb and her colleagues with data from the Kauffman Firm Survey, the largest and longest longitudinal survey of new businesses in the world. Analyses of the Kauffman data are, as well, consistent with those obtained from the 1993-2003 Federal Reserve Board data and the 1999-2007 NERA credit survey data.

Taken as a whole, these data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms, are substantially and statistically significantly more likely to be denied credit than are nonminority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied (*see* Tables 5.15, 5.22, 5.29);
- When minority-owned firms applied for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history (*see* Tables 5.8, 5.9, 5.18, 5.19, 5.25, 5.26);
- When minority-owned firms *did* receive a loan, they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (*see* Tables 5.13, 5.14, 5.21, 5.27);
- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern (*see* Tables 5.3, 5.4, 5.5, 5.6, 5.7, 5.17, 5.24);
- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year (*see* Tables 5.5, 5.6);
- There is no evidence that discrimination in the market for credit is significantly different in the South Atlantic census division or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole (various tables);
- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003 (various tables);

- Evidence from NERA’s own 1999-2007 credit surveys, which contained questions similar to the relevant portions of the SSBF, is fully consistent with the findings drawn from the earlier SSBF data (*see* Tables 5.30, 5.31); and
- Post 2007 evidence from non-SSBF sources, particularly the Kauffman Firm Survey, yield results that are fully consistent with those drawn from the earlier SSBF data (*see* Section L, below).

The structure of this chapter is as follows. First, we outline the main theories of business credit discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the Federal Reserve Board data files used in the chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we describe comparable analyses and results using NERA’s own credit surveys conducted between 1999-2007. Fifth, we provide a series of answers to potential criticisms and present our conclusions. Finally, we provide an overview of the results of others’ research, with a focus on the most recent time period from 2008 forward and draw conclusions about its consistency with our own results.

## **B. Theoretical Framework and Review of the Literature**

Most economic studies of discrimination draw on the analyses contained in Gary Becker’s (1957) *The Economics of Discrimination*. Becker’s main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group, or (b) requiring better characteristics (*i.e.*, a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or be given less favorable terms on the loan, or both.

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ “statistical discrimination”—a concept first put forth by economists Kenneth Arrow (1973) and Edmund Phelps (1972)—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would, rather, reflect an attempt to minimize costs. Empirically, the racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

In the public policy realm, there has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of “redlining”—that is, not granting loans for properties located in certain geographic areas. To analyze that issue, the Home Mortgage Disclosure Act was passed by Congress in 1975 to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell, *et al.*, 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, nonminorities had 10 percent of their loans rejected, whereas rejection rates were 28 percent for both African Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, *etc.*) were controlled for, African Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (*See, e.g.*, Horne, 1994; Day and Liebowitz, 1998; and Harrison, 1998), most alleging various errors in the Munnell, *et al.* (1996) data. Responses to these criticisms are found in Browne and Tootell (1995) and Tootell (1996). Carr and Megbolugbe (1993) and Glennon and Stengle (1994) undertook independent examinations of the Munnell, *et al.* (1996) data that addressed Horne’s (1994) major criticisms and reached similar conclusions as Munnell, *et al.* (1996). As Ardalan (2006, p. 123) notes, “Overall, Munnell *et al.* (1996) paid a great deal of attention to their data and no one has provided credible evidence that the results of the study are influenced by data errors.”

In addition to the type of statistical analysis done in the Munnell, *et al.* (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution’s files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired “identical” applicants. Such studies have also found evidence of discrimination (*See, e.g.* Cloud and Galster, 1993; Smith and Cloud, 1996; and Yinger, 1998), although the audit approach is not without its critics (Heckman, 1998, arguing that theoretical tester heterogeneity invalidates the conclusions of paired testing). Subsequent research has shown Heckman’s theoretical critique is not borne out when tested empirically (*See* Ross, *et al.* 2008). Hanson, *et al.* (2016) went a step further and designed a testing experiment that is not subject to Heckman’s critique at all, by using e-mail correspondence with mortgage loan originators, and concludes there is a continuing presence of racial discrimination in mortgage markets.

Another relevant subset of the literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly 20 percent of U.S. families are liquidity-constrained (*See* Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and

Simon, 1997). Using data from the *Survey of Consumer Finances*, Dogra and Gorbachev (2016) document that despite an increase in household debt between 1983 and 2007, the proportion of liquidity-constrained households did not decline. Using data from the 2010-2013 *Consumer Expenditure Surveys*, Chénier, *et al.* (2015) confirm that liquidity constraints remain significantly more severe for minority households than for similarly-situated nonminority households.

We turn next to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.<sup>106</sup> Liquidity constraints can be a problem in starting a business as well as in running it.<sup>107</sup> Discrimination in the credit market against minority- and women-owned small businesses can have a devastating effect on their success, and may even prevent them from opening in the first place.<sup>108</sup> In his report for *Builders Association of Greater Chicago v. the City of Chicago*,<sup>109</sup> Professor Tim Bates (2002) wrote “from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and

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<sup>106</sup> Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Similar findings with more recent data have been made, in the US and abroad, by numerous researchers, including Meyer (1990), Holtz-Eakin, Joulfaian, and Rosen (1994), Lindh and Ohlsson (1996), Lindh and Ohlsson (1998), Blanchflower and Oswald (1998), Fairlie (1999), Dunn and Holtz-Eakin (2000), Johansson (2000), Taylor (2001), Giannetti and Simonov (2004), Gentry and Hubbard (2005), Holtz-Eakin and Rosen (2005), Nykvist (2005), Cagetti and DeNardi (2006), Zissimopoulos and Karoly (2007), Fairlie and Robb (2008), Zissimopoulos and Karoly (2009), and Lofstrom and Bates (2013). Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Holtz-Eakin, *et al.* (1994a, 1994b) examine flows in and out of self-employment and also find that inheritances both raise entry and slow exit. Similarly, Lindh and Ohlsson (1996) suggest that the probability of being self-employed increases when people receive windfall gains in the form of lottery winnings and inheritances. Further confirmation of the positive effect of inheritances on reducing liquidity constraints is found, *e.g.*, in Disney and Gathergood (2009) and Sauer and Wilson (2016). Housing equity also plays an important role in shaping the supply of entrepreneurs (*See, e.g.*, Black, de Meza and Jeffreys (1996), Cavalluzzo and Walken (2005), and Adelino, *et al.* (2015). Additionally, Blanchflower and Oswald (1998) present evidence that potential entrepreneurs, when directly questioned in interview surveys, say that raising capital is one of their principal problems. The liquidity constraint interpretation has been challenged by Hurst and Lusardi (2004), who argue, using data from 1989 and 1994 waves of the *Panel Study of Income Dynamics*, that business entry rates are essentially flat across the asset distribution except above the 95<sup>th</sup> percentile. However, Fairlie and Krashinsky (2012) find that when the sample is stratified according to job losers and non-job losers, the data show evidence consistent with the liquidity constraints hypothesis—that of generally increasing rates of entry into self-employment throughout the asset distribution.

<sup>107</sup> *See e.g.*, Fan and White (2003), Fairlie and Krashinsky (2012), Corradin and Popov (2013), and Fort, *et al.* (2013), Kleiner (2013). Schmalz, *et al.* (2013) found similar results for France, as did Black, *et al.* (1996) and Kleiner (2013), for the UK.

<sup>108</sup> For further evidence regarding the latter effect, *see* Chapter IV.

<sup>109</sup> 298 F.Supp. 2d 725 (N.D. Ill. 2003).

nonminority stereotypes about suitable roles for minorities in society.”<sup>110</sup> As Bates points out, almost 60 years prior Gunnar Myrdal had observed,

The Negro businessman ... encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down.”<sup>111</sup>

Available evidence indicates that capital constraints for M/WBEs are particularly large. A survey conducted by the U.S. Chamber of Commerce (2005, p. 55) found that although 19 percent of nonminority male business owners reported that obtaining credit was the biggest problem for their business, the corresponding figure for nonminority women was 23 percent. For Asian/Pacific Islanders the figure was 34 percent; for Native Americans it was 43 percent; for African Americans it was 46 percent, and for Hispanics it was 52 percent.<sup>112</sup>

Bates (1989) finds that racial differences in levels of financial capital have a significant effect upon racial patterns in business failure rates. Fairlie and Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper, Fairlie (1999) uses data from the 1968-1989 *Panel Study of Income Dynamics* to examine why African American men are one-third as likely to be self-employed as nonminority men. Fairlie finds that the large discrepancy is due to an African American transition rate into self-employment that is approximately one half the nonminority rate and an African American transition rate out of self-employment that is twice the nonminority rate. He finds that capital constraints—measured by interest income and lump-sum cash payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for self-employed African Americans than for nonminority self-employed persons. Fairlie then attempts to decompose the racial gap in the transition rate into self-employment into a part due to differences in the distributions of individual characteristics and a part due to differences in the processes generating the transitions. He finds that differences in the distributions of characteristics between African Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father, provide important contributions to the gap. He concludes, however, that “the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks” (Fairlie, 1999, p. 14).

Using 2002 data from the *Characteristics of Business Owners* survey, Fairlie and Robb (2008) document a strong positive relationship between the availability and amount of startup capital and business outcomes for African American and Hispanic firms. They conclude: “Firms with higher levels of startup capital are less likely to close and are more likely to have higher profits and sales and to hire employees. The estimated positive relationship is consistent with the

<sup>110</sup> See also Bates (1991a); Bates (1991b); Bates (1993); Bates (1997), and Fairlie and Robb (2008).

<sup>111</sup> Myrdal (1944), p. 308. See also Bates (1973).

<sup>112</sup> See also Table 5.7 below.

inability of some entrepreneurs to obtain the optimal level of startup capital because of liquidity constraints” (Fairlie and Robb, 2008, p.11). Further evidence for liquidity constraints affecting the formation of Hispanic-owned businesses has been documented, *e.g.*, by Fairlie and Woodruff (2010) and Lofstrom and Wang (2009).

There is also research on racial differences in access to credit among small businesses—the main subject of this chapter. Cavalluzzo and Cavalluzzo (1998) used data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Federal Reserve Board, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported below in this chapter. They documented a large discrepancy in credit access between nonminority- and minority-owned firms that could not be explained by available firm financial characteristics. Unfortunately, this earliest NSSBF data did not over-sample minority-owned firms and contained only limited information on a firm’s credit history and that of its owner, thus reducing the ability to provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions.

Cole (1999) and Cavaluzzo, *et al.* (2002), using data from the 1993 NSSBF, found higher loan application rejection rates for minority-owned businesses than similarly-situated nonminority businesses, and higher loan denial rates for African American-owned and Asian-owned businesses. Blanchflower, Levine and Zimmerman (2003), using data from the 1993 NSSBF and the 1998 Survey of Small Business Finances (SSBF), find that African American-owned small businesses were about twice as likely to be denied credit even after controlling for a wide variety of balance sheet, creditworthiness and other factors. They find similar results for firms owned by Asians, Hispanics, and women, although at smaller magnitudes than for African Americans. They conclude that the racial disparity is likely to be caused by discrimination. Cavaluzzo and Wolken (2005), using data from the 1998 SSBF, find that large disparities exist in denial rates for African American-, Hispanic-, and Asian-owned firms when compared to similarly-situated nonminority-owned firms.

The main analyses in the present chapter take advantage of the three most recent waves of the Survey of Small Business Finances: the 1993 NSSBF data, the 1998 SSBF data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier (1988-1989) NSSBF data, and the 1993 and 1998 surveys have a larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

## **C. Empirical Framework and Description of the Data**

### **1. Introduction**

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African American-owned firms compared to nonminority-owned firms is consistent with discrimination, it is necessary to compare African American- and nonminority-owned firms that have similar risks of default; that is, the fraction of the African American firms’ loans that would be approved if they had the same creditworthiness as the nonminority-owned firms. A standard approach to this problem is to

statistically control for firms' characteristics relevant to the loan decision. If African American-owned firms with the same likelihood of default as nonminority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell, *et al.* (1996) we estimated the following loan denial equation:

$$(1) \quad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

where  $D_i$  represents an indicator variable for loan denial for firm  $i$  (that is, 1 if the loan is denied and 0 if accepted),  $CW$  represents measures of creditworthiness,  $X$  represents other firm characteristics,  $R$  represents the race, ethnicity or gender of the firm's ownership, and  $\Phi$  is the cumulative normal probability distribution.<sup>113</sup> This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors. Within the framework of this model, a positive estimate of  $\beta_3$  is consistent with the presence of discrimination.<sup>114</sup>

We begin with the 1993 NSSBF dataset and will continue chronologically through the 2003 dataset and then proceed to evidence from NERA's own comparable surveys conducted in various geographies between 1999 and 2007. This chronological progression allows the reader to see the consistency of the main findings over time. This approach serves as well to demonstrate the value of over-sampling minority and female small business owners, as was the case in the 1993 and 1998 surveys, but not the 2003 survey. Unfortunately, the much anticipated 2008 SSBF results never materialized because the Federal Reserve cancelled this important survey effort.<sup>115</sup>

## 2. 1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.<sup>116</sup> In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (*i.e.*, Asians/Pacific Islanders, Native Americans).<sup>117</sup>

<sup>113</sup> Additional discussion of Probit regression appears in Chapter IV, Section C.1.

<sup>114</sup> The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

<sup>115</sup> For more on this, see fn. 148 below.

<sup>116</sup> The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

<sup>117</sup> There were also two firms in the "Other race" category in 1993 that reported multiple or mixed race.

Table 5.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African American-owned firms are almost 2.5 times more likely to have a loan application rejected as are nonminority firms (65.9 percent versus 26.9 percent).<sup>118</sup> Other minority groups are denied at rates higher than nonminorities as well, but the magnitude of the African American-to- nonminority differential is particularly large.

Minority-owned firms, however, do have characteristics that are different from those of nonminority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their nonminority counterparts. Minority firms were also less creditworthy, on average, than their nonminority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to nonminority-owned firms, African American-owned firms were also more likely, on average, to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than nonminority-owned firms. This was particularly true for African American-owned firms, who requested loans that were, on average, about 60 percent smaller than those requested by nonminority-owned firms, and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by nonminority-owned firms.

The NSSBF database does not identify the specific city or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 5.2 presents evidence for the South Atlantic (SATL) division, which includes the State of Maryland and eight surrounding states.<sup>119</sup> This SATL sample includes the owners of 773 firms, of which 342 owners (44.2%) said that they had applied for a loan over the preceding three-year period.

The overall denial rate of 29.2 percent in the SATL is slightly higher than the national rate of 28.8 percent reported in Table 5.1. The difference in the denial rates between African American-owned firms and nonminority-owned firms is also higher in the SATL (43.5 percentage points) than in the nation as a whole (39.0 percentage points). On balance, however, the weighted

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<sup>118</sup> Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. Nonminority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African Americans, 36 percent for Hispanics, and 24 percent for other races, which are broadly similar to the differences reported here. These estimates for minority groups are estimated with less precision, however, because of the smaller number of minority-owned firms in the 1987 sample.

<sup>119</sup> In addition to Maryland, the SATL includes Delaware, the District of Columbia, Florida, Georgia, North Carolina, South Carolina, Virginia and West Virginia.

sample means are not significantly different in the SATL than in the nation as a whole—either overall or by race, ethnicity or gender.

**Table 5.1. Selected Population-Weighted Sample Means of Loan Applicants from 1993 NSSBF Data**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	39.9
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.8	4.1	16.9	5.2	15.2
% Firms Delinquent in Business Obligations	24.2	23.1	49.0	25.1	31.6
% Owners Delinquent on Personal Obligations	14.0	12.6	43.4	14.8	24.5
% Owners Declared Bankruptcy in Past 7yrs	2.4	2.4	5.3	2.0	0.8
<i>Other Firm Characteristics</i>					
% Female-Owned	17.9	18.1	18.2	9.7	23.1
Sales (in 1,000s of 1992 \$)	1795.0	1870.6	588.6	1361.3	1309.1
Profits (in 1,000s of 1992 \$)	86.7	84.5	59.9	189.5	54.0
Assets (in 1,000s of 1992 \$)	889.4	922.5	230.3	745.6	747.3
Liabilities (in 1,000s of 1992 \$)	547.4	572.8	146.2	308.6	486.0
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% ≤ 8 <sup>th</sup> Grade Education	0.8	0.7	0.0	3.4	1.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.8
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8
% Existing Relationship with Lender	24.6	24.7	12.8	29.6	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
<i>Characteristics of Loan Application</i>					
Amount Requested (in 1,000s of 1992 \$)	300.4	310.8	126.5	179.1	310.5
% Loans to be Used for Working Capital	8.4	8.8	4.9	4.6	5.5
% Loans to be Used for Equipment/Machinery	2.3	2.4	1.7	0.2	0.6
% Loans to be Used for Land/Buildings	0.4	0.4	0.9	0.0	0.0
% Loans to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Source: NERA calculations from 1993 NSSBF.

Notes: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses.  
 (2) Sample restricted to firms that applied for a loan over the preceding three years.

**Table 5.2. Selected Sample Means of Loan Applicants—SATL**

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	29.2	26.3	69.8	50.9	33.4
<i>Credit History of Firm/Owners</i>					
% Owners with Judgments Against Them	4.8	3.9	14.9	0.0	22.5
% Firms Delinquent in Business Obligations	23.3	21.4	49.2	33.4	33.6
% Owners Delinquent on Personal Obligations	11.4	8.5	41.1	16.5	51.3
% Owners Declared Bankruptcy in Past 7yrs	2.3	2.2	6.6	0.0	0.0
<i>Other Firm Characteristics</i>					
% Female-Owned	18.3	17.8	29.9	9.7	28.6
Sales (in 1,000s of 1992 \$)	1727.7	1778.4	776.3	2363.0	635.8
Profits (in 1,000s of 1992 \$)	74.5	62.5	17.5	460.1	6.8
Assets (in 1,000s of 1992 \$)	1022.3	1074.2	277.8	815.9	752.9
Liabilities (in 1,000s of 1992 \$)	645.4	675.5	197.4	650.0	340.3
Owner's Years of Experience	19.1	19.7	15.2	10.9	16.6
Owner's Share of Business	73.8	73.5	84.8	62.3	82.9
% ≤ 8 <sup>th</sup> Grade Education	0.3	0.4	0.0	0.0	0.0
% 9 <sup>th</sup> -11 <sup>th</sup> Grade Education	1.9	1.6	6.7	3.9	0.0
% High School Graduate	16.4	16.2	21.3	27.0	0.0
% Some College	28.2	29.6	25.7	18.6	0.0
% College Graduate	32.5	31.6	31.4	29.5	67.3
% Postgraduate Education	20.7	20.6	14.8	21.0	32.7
% Line of credit	47.4	48.5	32.8	53.0	28.6
Total Full-time Employment in 1990	12.4	12.8	10.9	8.0	8.2
Total Full-time Employment in 1992	14.1	14.5	14.2	9.6	8.2
Firm age, in years	13.2	13.6	10.3	9.3	10.1
% New Firm Since 1990	4.4	3.9	11.2	12.0	0.0
% Firms Located in MSA	80.6	80.0	89.6	92.0	72.4
% Sole Proprietorship	23.1	23.0	45.0	4.5	20.8
% Partnership	6.3	6.7	0.7	3.5	5.1
% S Corporation	29.7	30.3	22.8	23.9	28.6
% C Corporation	40.9	40.0	31.4	68.0	45.5
% Existing Relationship with Lender	24.0	23.8	21.7	15.9	43.6
% Firms with Local Sales Market	49.8	50.3	42.7	30.2	72.5
<i>Characteristics of Loan Application</i>					
Amount Requested (in 1,000s of 1992 \$)	342.9	352.9	183.1	440.0	126.3
% Loans to be Used for Working Capital	6.9	7.4	1.3	3.5	5.3
% Loans to be Used for Equipment/Machinery	3.0	3.4	0.0	0.0	0.0
% Loans to be Used for Land/Buildings	0.4	0.4	0.0	0.0	0.0
% Loans to be Backed by Real Estate	24.6	23.9	38.5	34.4	14.7
Total Sample Size (unweighted)	342	270	45	19	8

Source: See Table 5.1.

Notes: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses. (2) Some variable means are computed from slightly smaller samples because of missing values. (3) "Other Races" are not reported separately due to small sample size.

## D. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves say are their main problems. While this evidence is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding discrimination in obtaining credit. That African American-owned firms and other minorities report greater difficulty in obtaining commercial credit than do nonminority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 5.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African Americans and Hispanics were much more likely to say that it had been a “serious” problem (31.3 percent and 22.9 percent, respectively) than nonminorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas: (1) training costs; (2) worker’s compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) The American with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) The Family and Medical Leave Act. Differences between African American-owned firms and Hispanic-owned firms, on the one hand, and nonminority-owned firms, on the other, are much less pronounced in these eight areas than they are in relation to credit market conditions.<sup>120</sup> The finding that minority-owned firms are largely indistinguishable from nonminority-owned firms in reporting a variety of problems, except for the case of credit, indicates that these firms perceive credit availability to be a particular problem for them.

Results are similar in Table 5.4 for the SATL division—with African American, Hispanic and other minority-owned firms being more likely than nonminority-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

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<sup>120</sup> We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African American-owned firms were more likely to report that credit market conditions were especially serious.

**Table 5.3. Problems Firms Experienced During Preceding 12 Months—USA**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	66.2	67.3	43.1	58.9	65.8
Percent reporting somewhat of a problem	20.1	19.9	25.6	18.2	21.3
Percent reporting serious problem	13.7	12.7	31.3	22.9	12.9
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.6	7.2	6.3	4.3
Worker's compensation costs	21.7	21.0	19.3	30.6	28.7
Health insurance costs	32.5	31.6	38.1	44.3	35.0
IRS regulation or penalties	12.3	11.8	17.1	17.9	13.2
Environmental regulations	8.5	8.5	5.6	7.4	11.0
Americans with Disabilities Act	2.7	2.6	3.6	2.7	3.9
Occupational Safety and Health Act	4.5	4.5	3.9	3.6	6.2
Family and Medical Leave Act	2.7	2.5	4.5	3.1	4.8
Number of observations (unweighted)	2,007	1,648	170	96	93

Source: See Table 5.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

**Table 5.4. Problems Firms Experienced During Preceding 12 Months—SATL**

	All	Non-minority	African American	Hispanic	Other Races
<i>Credit Market Conditions</i>					
Percent reporting not a problem	65.3	66.8	38.4	58.9	69.2
Percent reporting somewhat of a problem	20.9	20.9	28.8	14.2	18.4
Percent reporting serious problem	13.7	12.3	32.8	26.9	12.4
<i>Other Potential Problems (% reporting problem is serious)</i>					
Training costs	6.5	6.5	5.4	4.8	8.4
Worker's compensation costs	21.5	20.5	25.1	44.0	20.1
Health insurance costs	29.8	27.7	39.4	44.6	50.6
IRS regulation or penalties	12.7	12.3	19.1	24.3	5.0
Environmental regulations	9.3	10.1	6.1	2.9	2.5
Americans with Disabilities Act	2.1	2.0	6.6	0.0	1.2
Occupational Safety and Health Act	3.4	3.2	5.7	5.3	2.7
Family and Medical Leave Act	2.5	2.3	7.8	1.6	1.2
Number of observations (unweighted)	773	573	112	47	41

Source: See Table 5.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Tables 5.5 and 5.6 report the views of NSSBF respondents for the U.S. as a whole and the SATL division, respectively, on the most important issues businesses expected to face over the following year. Nationally, credit availability and cash flow again appear to be more important issues for African American-owned firms than for nonminority-owned firms. Nonminority-owned firms were especially worried about health care costs. Hispanic and other minority-owned firms were especially worried about general business conditions.

In the SATL, credit availability and cash flow are far more important issues for African American-owned firms than for nonminority-owned firms. Almost four times as many African American-owned firms reported credit availability as the most important issue than nonminority-owned firms. In contrast, in the SATL, health care costs were a large concern for all types of firms.

**Table 5.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—USA**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	5.9	5.5	20.5	5.3	4.3
Health care, health insurance	21.1	22.1	12.3	13.7	14.8
Taxes, tax policy	5.7	5.7	2.6	8.7	3.3
General U.S. business conditions	11.8	11.5	8.9	14.4	17.4
High interest rates	5.4	5.7	1.8	3.5	3.4
Costs of conducting business	3.3	3.3	3.8	3.8	3.6
Labor force problems	3.5	3.3	3.9	5.5	3.6
Profits, cash flow, expansion, sales	10.3	9.9	20.3	9.8	11.9
Number of observations (unweighted)	4,388	3,383	424	262	319

Source: See Table 5.1.

**Table 5.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—SATL**

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	7.1	6.5	25.1	7.2	0.0
Health care, health insurance	19.4	19.6	13.2	17.2	21.6
Taxes, tax policy	6.8	7.2	2.1	9.5	0.0
General U.S. business conditions	10.2	10.1	5.3	15.9	13.3
High interest rates	5.5	5.8	0.7	1.6	6.1
Costs of conducting business	4.0	4.0	5.8	5.3	1.6
Labor force problems	3.9	3.7	4.3	9.3	2.9
Profits, cash flow, expansion, sales	8.5	7.9	14.0	6.1	19.0
Number of observations (unweighted)	729	544	106	41	38

Source: See Table 5.1.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the Census Bureau's 1992 Characteristics of Business Owners (CBO) Survey, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African American-owned firms reporting an answer indicated that lack of financial capital had a strong negative impact—compared to only 17.3 percent among nonminority male-owned firms. Hispanic-owned firms and other minority-owned firms also

reported higher percentages than nonminority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than nonminority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by nonminority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African Americans, 8.8 percent for Hispanics, 6.1 percent for Other minorities, and 9.3 percent for women. Another 2.7 percent of nonminority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African Americans, 5.8 percent for Hispanics, 6.4 percent for Other minorities, and 3.3 percent for women.<sup>121</sup>

A later study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.<sup>122</sup> The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. This survey showed that minority-owned businesses rely heavily on credit cards to fund their businesses; often do not apply for credit, even though they need it, for fear of being denied; and were especially likely to need working capital. In particular, as shown in Table 5.7, minority-owned firms report that availability of credit is their top problem. The biggest difference in responses between minorities and nonminority men and women was availability of credit: 19 percent of nonminority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and nonminority women. In no other category is there more than an 11 percentage point difference for men or women.

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<sup>121</sup> Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

<sup>122</sup> Although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). However, questions relating to the importance of access to financial loans and credit to business success were not included in SBO.

**Table 5.7. Types of Problems Facing Your Business, by Race and Gender**

	<b>Non-minority Male</b>	<b>Non-minority Female</b>	<b>Minority Male</b>	<b>Minority Female</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian/Pacific Islander</b>	<b>Native American</b>
Availability of credit	19	23	54	38	46	52	34	43
Rising health care costs	60	49	50	41	31	42	66	50
Excessive tax burden	49	46	48	42	46	34	51	50
Lack of qualified workers	37	28	33	17	22	20	34	14
Rising energy costs	37	35	36	35	29	34	44	29
Rising costs of materials	44	47	36	47	53	42	32	43
Legal reform	21	15	15	12	11	10	17	29
Number of firms	415	356	80	81	55	50	41	14

Source: U.S. Chamber of Commerce (2005), p. 55.

Note: Percentages may total to more than 100% because respondents had the option to select multiple choices.

In summary, African American-owned and Hispanic-owned firms in particular reported that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions reflect actual discrimination can be tested in the econometric analyses to follow.

## **E. Differences in Loan Denial Rates by Race, Ethnicity or Gender**

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this question, we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 5.8 and Table 5.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the SATL

division.<sup>123</sup> As indicated earlier, the 1993-2003 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables such as race, ethnicity and gender, estimates show differences in loan denial probabilities between the indicated group and the base group.<sup>124</sup> In Column (1) of Table 5.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African American indicator indicates that the denial rate for African American-owned businesses is 44.3 percentage points higher than that for nonminority male-owned firms.<sup>125</sup>

The remainder of Table 5.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.<sup>126</sup> In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability. Even after controlling for these differences in creditworthiness, however, African American-owned firms remain 28.8 percentage points more likely than nonminority-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 5.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry groups. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which

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<sup>123</sup> Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are nonminority firms owned 50-50 by women and men.

<sup>124</sup> For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 5.8, the estimated coefficient of -0.003 on owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

<sup>125</sup> This estimate largely replicates the raw difference in denial rates between African American-owned and nonminority-owned businesses reported in Table 5.1. The raw differential observed there ( $0.659 - 0.269 = 0.39$ ) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a White Female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included, the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 5.8 and subsequent tables we report only unweighted estimates.

<sup>126</sup> In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between nonminorities and African Americans. The F-Test conducted to determine whether parameter estimates were the same for African Americans and nonminorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between African Americans and nonminorities and using the coefficient on the African Americans indicator variable to measure the gap between groups. In this chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

the firm applied.<sup>127</sup> In total, these three columns add 176 variables to the more parsimonious specification reported in Column (2).<sup>128</sup> Nevertheless, the estimated disadvantage experienced by African American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African American-owned firms are 24 percentage points more likely than nonminority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than nonminority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly different from the denial rates of firms owned by nonminorities; or that denial rates for firms owned by nonminority women were significantly different from those for firms owned by nonminority men.<sup>129</sup>

In Table 5.9, we see results for the SATL division similar to those reported in Table 5.8 for the nation as a whole. The table shows that the results of our loan denial model in the SATL are not substantially different from the nationwide results reported in Table 5.8. The indicator variable for the SATL division is insignificantly different from zero; as are the interaction terms between race/ethnicity/gender and the SATL region.<sup>130</sup>

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<sup>127</sup> Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall, seventeen different types of financial institutions were tabulated, although only the following accounted for more than 1% of the (weighted) total: Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

<sup>128</sup> One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A paper by Cavalluzzo, Cavalluzzo and Wolken (2002) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 5.8 (see Tables 5.27 and 5.28).

<sup>129</sup> It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the tables in Chapter V, or elsewhere in this Study, as a lack of adverse disparity. While tests for statistical significance are very useful for assessing whether chance can explain disparities that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It merely means that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (*e.g.*, discrimination). In the particular statistical application presented in this chapter, the chance that a test for statistical significance will incorrectly attribute to chance disparities that are due to discrimination becomes greater when relatively small sample sizes are present for an affected group. *See also* Appendix A, "Constitutional Significance," "Statistical Significance," and "Substantive Significance."

<sup>130</sup> The number of Native Americans in the SATL sample was too small to yield statistical results.

**Table 5.8. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.443 (11.21)	0.288 (6.84)	0.237 (5.57)	0.235 (5.22)	0.241 (5.13)
Asian/Pacific Islander	0.225 (4.21)	0.171 (3.18)	0.140 (2.56)	0.121 (2.15)	0.119 (2.07)
Native American	-0.016 (0.11)	-0.141 (1.06)	-0.097 (0.71)	-0.052 (0.35)	-0.083 (0.56)
Hispanic	0.129 (2.62)	0.070 (1.42)	0.067 (1.36)	0.035 (0.70)	0.031 (0.63)
Nonminority female	0.088 (2.65)	0.048 (1.45)	0.047 (1.45)	0.036 (1.06)	0.033 (0.94)
Judgments		0.143 (2.84)	0.129 (2.56)	0.124 (2.40)	0.121 (2.29)
Firm delinquent		0.176 (6.50)	0.178 (6.43)	0.195 (6.77)	0.208 (7.00)
Personally delinquent		0.161 (4.45)	0.128 (3.56)	0.124 (3.38)	0.119 (3.17)
Bankrupt past 7 years		0.208 (3.11)	0.179 (2.68)	0.162 (2.37)	0.167 (2.33)
\$1992 profits (*10 <sup>8</sup> )		-0.000 (0.89)	-0.000 (1.64)	-0.000 (1.78)	-0.000 (1.83)
\$1992 sales (*10 <sup>8</sup> )		-0.000 (3.08)	-0.000 (3.38)	-0.000 (3.28)	-0.000 (3.38)
\$1992 assets (*10 <sup>8</sup> )		0.000 (0.51)	0.000 (0.60)	0.000 (0.40)	0.000 (0.37)
\$1992 liabilities (*10 <sup>8</sup> )		0.000 (0.61)	0.000 (1.11)	0.000 (1.04)	0.000 (1.17)
Owner years of experience		-0.003 (2.59)	-0.001 (1.30)	-0.002 (1.55)	-0.002 (1.72)
Owner share of business		0.001 (1.91)	0.000 (0.71)	0.000 (0.26)	0.000 (0.30)
Owner Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month/Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,007	2,007	2,006	1,985	1,973
Pseudo R <sup>2</sup>	.0608	.1412	.2276	.2539	.2725
Chi <sup>2</sup>	143.6	333.4	537.3	595.4	635.8
Log likelihood	-1108.8	-1013.8	-911.6	-874.8	-848.7

Source: See Table 5.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm’s inventory, the level of wages and salaries paid to workers, the firm’s cash holdings, and the value of land held by the firm. (3) “Characteristics of the loan” include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

**Table 5.9. Determinants of Loan Denial Rates—SATL Division**

	(1)	(2)	(3)	(4)	(5)
African American	0.452 (9.85)	0.289 (5.94)	0.239 (4.88)	0.235 (4.61)	0.252 (4.72)
Asian/Pacific Islander	0.223 (3.98)	0.180 (3.19)	0.142 (2.51)	0.123 (2.11)	0.125 (2.11)
Native American	0.007 (0.05)	-0.132 (0.94)	-0.094 (0.67)	-0.047 (0.31)	-0.079 (0.52)
Hispanic	0.104 (1.91)	0.047 (0.88)	0.051 (0.95)	0.021 (0.40)	0.014 (0.25)
Nonminority female	0.089 (2.45)	0.055 (1.51)	0.060 (1.65)	0.044 (1.18)	0.042 (1.10)
African American*SATL	-0.027 (0.35)	-0.009 (0.11)	-0.013 (0.16)	0.002 (0.02)	-0.030 (0.39)
Asian/Pacific Islander*SATL	0.011 (0.06)	-0.069 (0.44)	-0.011 (0.06)	-0.018 (0.10)	-0.052 (0.31)
Native American*SATL					
Hispanic*SATL	0.114 (0.94)	0.107 (0.85)	0.079 (0.61)	0.073 (0.56)	0.095 (0.71)
Nonminority female*SATL	-0.006 (0.07)	-0.035 (0.43)	-0.062 (0.80)	-0.042 (0.51)	-0.050 (0.61)
SATL division	-0.009 (0.270)	0.012 (0.34)	0.015 (0.43)	0.042 (0.98)	0.046 (1.07)
Creditworthiness Controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month/Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2006	2,006	2,005	1,984	1,972
Pseudo R <sup>2</sup>	.0612	.1416	.2280	.2540	.2728
Chi <sup>2</sup>	144.54	334.27	537.91	595.43	636.45
Log likelihood	-1107.9	-1013.1	-910.9	-874.4	-848.1

Source: See Table 5.1.

Notes: See Table 5.8. Creditworthiness controls are those used in Table 5.8 above.

Although the results provided so far strongly indicate that financial institutions treat African American-owned and nonminority male-owned small businesses differently in lending, other considerations may limit our ability to interpret this finding as discrimination. Of perhaps greatest concern is the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African American-owned firms are less creditworthy and we have failed to sufficiently capture those differences, then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, if financial institutions discriminate against African American-owned firms, then the greater likelihood of denial for African Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.<sup>131</sup>

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match quite closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The only shortcoming that we have identified in the 1993 NSSBF data is that less detail is available on the finances of the owner of the firm, as opposed to the firm itself.<sup>132</sup> Although our creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income (as opposed to those of the firm). These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter

<sup>131</sup> An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

<sup>132</sup> This is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition in the 1993 NSSBF dataset may introduce a bias into our analysis if African American business owners have fewer resources than nonminority business owners. As we will see below, however, and as noted in the previous footnote, this deficiency is rectified in the 1998 and 2003 SSBF datasets, with little change in the main findings.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.<sup>133</sup> Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for one of these other purposes are at least partially collateralized because the financial institution could sell them, albeit at a potentially somewhat reduced rate, should the small business default.<sup>134</sup>

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 5.8 and 5.9. Estimates presented in row numbers 1 through 8 of Table 5.10 indicate that African American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African American-owned firms are 18, 25, and 16 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

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<sup>133</sup> As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. Fourteen percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the SATL, the mean and median size of firms is 6.0 and 34.3 full-time equivalent workers, respectively. Twelve percent of firms have one or fewer employees and 26 percent have two or fewer employees.

<sup>134</sup> As indicated earlier, greater personal wealth may improve a small business's chances of obtaining credit because it provides collateral should the loan go bad and because wealthy owners can use their own resources to weather bad times, improving the likelihood of repayment. Our separate analysis of corporations and proprietorships and of large and small firms does not account for this second reason because corporations and large businesses may still need to draw on the owner's personal wealth to help it survive short-term shocks. Businesses that have been in existence for several years, however, are less likely to experience these shocks, making them less likely to require infusions from the owner's personal wealth. A loan used to purchase equipment that can be sold if the firm defaults similarly insulates the bank from the need to seek repayment directly from the owner.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributable to differences in the geographic location of African American- and nonminority-owned firms. If, for example, African American-owned firms are more likely to be located in the central city, and a central city location is negatively correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in rejecting the loan applications of African American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled “statistical discrimination.” In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.<sup>135</sup>

To identify whether lenders’ behavior is consistent with this hypothesis, we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan approval rates should be greater in the firms that sell in the local market area. The results of this test, reported in row numbers 9 and 10 of Table 5.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates indicate that African American-owned firms that sell to the local market are 11 percentage points more likely to have their loan applications denied compared to a 20 percent excess denial rate for firms selling primarily to regional, national, or international markets. In the SATL, however, the figures are reversed, indicating that statistical discrimination may in fact be occurring in this region.

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<sup>135</sup> A strong test to distinguish between statistical discrimination and “Becker-Type” discrimination (referring to the standard economic model of discrimination first expounded by University of Chicago economist Gary Becker) would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this chapter applies a definition that incorporates both.

**Table 5.10. Alternative Models of Loan Denials**

<b>Specification</b>	<b>African American</b>	<b>African American* SATL</b>	<b>Asian/Pacific Islander</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Sample Size</b>
All	0.222 (4.76)	0.080 (0.85)	0.080 (1.37)	0.055 (0.97)	0.044 (1.25)	2,006
<i>Organization Type</i>						
1) Proprietorships and Partnerships	0.278 (3.03)	0.039 (0.24)	0.177 (1.51)	-0.021 (0.21)	-0.020 (0.29)	536
2) Corporations	0.181 (3.36)	0.175 (1.17)	0.050 (0.73)	0.092 (1.25)	0.069 (1.66)	1,457
<i>Age of Firm</i>						
3) 12 Years or Under	0.243 (3.80)	0.117 (1.02)	0.150 (1.41)	-0.001 (0.01)	0.029 (0.56)	1,074
4) Over 12 Years	0.180 (2.56)	-0.006 (0.54)	0.068 (0.08)	0.114 (1.39)	0.087 (1.69)	926
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	0.193 (2.97)	0.078 (1.71)	0.251 (0.92)	-0.019 (0.24)	-0.018 (0.34)	868
6) 10 or More Employees	0.245 (3.39)	0.077 (0.65)	-0.082 (0.85)	0.145 (1.61)	0.111 (2.18)	1,132
<i>Intended Use of Loan</i>						
7) Working Capital	0.241 (4.21)	0.176 (1.22)	0.035 (0.47)	0.039 (0.51)	0.041 (0.85)	1,086
8) Other Use	0.158 (1.93)	0.037 (0.27)	0.167 (1.74)	0.081 (0.94)	0.045 (0.87)	917
<i>Scope of Sales Market</i>						
9) Local	0.108 (1.50)	0.348 (2.06)	0.097 (1.26)	0.007 (0.10)	0.041 (0.78)	875
10) Regional, National, or International	0.199 (4.94)	-0.013 (0.24)	0.031 (0.65)	0.071 (1.34)	0.031 (1.19)	1,129
<i>Creditworthiness</i>						
11) No Past Problems	0.244 (4.08)	-0.005 (0.05)	0.113 (1.92)	0.039 (0.71)	0.071 (2.06)	1,386
12) One Past Problem	0.282 (2.53)	-0.072 (0.36)	-0.092 (0.53)	0.181 (1.10)	0.038 (0.37)	376
13) More Than One Problem	0.273 (2.55)	0.080 (0.85)	0.180 (0.67)	0.257 (1.70)	-0.018 (0.09)	231

Source: See Table 5.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 5.8. (3) The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. (4) Control for SATL also included.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 5.1 and 5.2, African American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 5.8 and 5.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 5.10, we separated firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African American- and nonminority-owned firms is statistically indistinguishable within each of these groups. Asian/Pacific Islander-owned firms and nonminority female-owned firms with clean credit histories, are also at a significant disadvantage relative to nonminority-male owned firms.

Finally, we considered whether African American-owned firms are treated differently from nonminority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is more likely that the race of the applicant is unknown to the financial institution, at least in the case of African American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about minority status. On the other hand, for Asian/Pacific Islander and Hispanic applicants, it is possible that surname does provide such a signal, albeit a somewhat noisy one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African American- and nonminority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African Americans in providing small business loans, we may even expect to see African Americans use credit cards more often than nonminorities since they have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.<sup>136</sup>

In Tables 5.11 and 5.12, we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other differences across firms.<sup>137</sup> There is no evidence, either for the U.S. as a whole or for the SATL,

<sup>136</sup> It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzzo, Cavalluzzo and Wolken (2002) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are sometimes lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of minority- and women-owned businesses for merging with Dun & Bradstreet's data.

<sup>137</sup> On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the SATL division, the figures are 29 percent and 36 percent, respectively.

that African American-owned firms are less likely to access either business or personal credit cards for business expenses. On the other hand, there is evidence in the SATL and in the nation as a whole that Asian- and Pacific Islander-owned firms are less likely to access business credit cards.

**Table 5.11. Models of Credit Card Use–USA**

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.035 (1.35)	-0.096 (3.23)	0.085 (1.00)	0.024 (0.79)	0.018 (0.83)	4,633
2) Personal Credit Card	0.019 (0.74)	-0.019 (0.63)	0.019 (0.23)	-0.042 (1.40)	0.028 (1.28)	4,633

Source: *See Table 5.1.*

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 5.8 but excluding the loan characteristics. (3) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (4) In all specifications, the sample size is all firms. (5) Other races are excluded due to sample size limitations.

**Table 5.12. Models of Credit Card Use–SATL**

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.028 (0.96)	-0.087 (2.78)	0.098 (1.07)	0.028 (0.83)	0.009 (0.37)	4,633
2) Personal Credit Card	-0.014 (0.48)	-0.034 (1.08)	0.024 (0.26)	-0.029 (0.87)	0.028 (1.17)	4,633

Source: *See Table 5.1.*

Notes: *See Table 5.11.* Control for SATL included.

## F. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and nonminority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and nonminority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

$$(2) \quad I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i,$$

where  $I$  represents the interest rate charged on the loan,  $LC$  represents characteristics of the loan (*See* Table 5.8 notes for a full list of the variables included in this set),  $\varepsilon_i$  is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since African American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in interest rate to be even greater if those firms were included in the sample. We overlook this implication in the results reported below, but its impact should be kept in mind.

The results obtained from estimating equation (2) are reported in Row 1 of Table 5.13, which includes the complete set of control variables comparable to those in Column 5 of Table 5.8. Estimates indicated that African American-owned firms pay rates of interest that are roughly one percent (100 basis points) higher than similarly situated nonminority-owned firms. Row 2 shows that even African American-owned firms with good credit histories are charged higher interest rates relative to nonminority-owned firms.<sup>138</sup>

The remainder of the table presents similar specification checks to those reported in Table 5.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African Americans, and to a lesser extent Hispanics and Asians/Pacific Islanders, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

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<sup>138</sup> Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

**Table 5.13. Models of Interest Rate Charged—USA**

<b>Specification</b>	<b>African American</b>	<b>Asian/Pacific Islander</b>	<b>Native American</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Sample Size</b>
1) All loans (controls as in Column 5, Table 5.8)	1.034 (3.72)	0.413 (1.37)	-0.427 (0.63)	0.517 (1.97)	0.025 (0.14)	1,454
<i>Creditworthiness</i>						
2) No credit problems	1.187 (3.27)	0.485 (1.33)	0.910 (1.07)	0.435 (1.48)	0.129 (0.66)	1,137
<i>Organization Type</i>						
3) Proprietorships and Partnerships	1.735 (2.57)	0.826 (1.03)	2.589 (0.90)	1.008 (1.74)	-0.239 (0.53)	364
4) Corporations	0.660 (2.04)	0.359 (1.07)	-0.585 (0.86)	0.491 (1.53)	0.127 (0.66)	1,090
<i>1993 Firm Size</i>						
5) Fewer than 10 Employees	1.200 (2.58)	-0.247 (0.41)	-0.010 (0.01)	0.783 (1.75)	-0.311 (1.02)	574
6) 10 or More Employees	0.450 (1.15)	0.446 (1.21)	-0.197 (0.25)	0.515 (1.37)	0.164 (0.77)	880
<i>Scope of Sales Market</i>						
7) Local	0.751 (1.55)	-0.073 (0.13)	1.773 (1.12)	0.805 (2.05)	0.324 (1.08)	633
8) Regional, National, or International	1.544 (4.26)	1.185 (2.93)	-1.368 (1.85)	0.392 (0.96)	-0.163 (0.73)	821

Source: See Table 5.1.

Notes: (1) Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Each line of this table represents a separate regression with all of the control variables as Column 5 of Table 5.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. (3) The sample consists of firms that had applied for a loan and had their application approved. (4) “No credit problems” means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years, and the owner had not been bankrupt in the preceding 7 years.

Table 5.14 shows results for the SATL. Findings are similar to those observed for the nation as a whole.

**Table 5.14. Models of Interest Rate Charged—SATL**

Specification	African American	African American * SATL	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 5.8)	0.974 (3.02)	0.206 (0.35)	0.528 (1.69)	-0.959 (1.32)	0.211 (0.73)	-0.017 (0.09)	1,454
<i>Creditworthiness</i>							
2) No credit problems	0.928 (2.20)	0.927 (1.18)	0.512 (1.39)	0.227 (0.24)	0.008 (0.03)	0.068 (0.32)	1,137
<i>Organization Type</i>							
3) Proprietorships and Partnerships	1.338 (1.93)	6.556 (2.23)	0.772 (0.94)	2.284 (0.80)	0.979 (1.69)	-0.391 (0.83)	364
4) Corporations	0.716 (1.76)	-0.119 (0.19)	0.399 (1.16)	-1.193 (1.63)	0.027 (0.07)	0.107 (0.50)	1,090
<i>1993 Firm Size</i>							
5) Fewer than 10 Employees	1.076 (2.10)	0.746 (0.64)	0.048 (0.08)	-1.371 (0.92)	0.458 (0.97)	-0.488 (1.45)	574
6) 10 or More Employees	0.369 (0.69)	0.152 (0.20)	0.454 (1.23)	-0.200 (0.25)	0.535 (1.23)	0.200 (0.87)	880
<i>Scope of Sales Market</i>							
7) Local	1.154 (2.10)	-1.663 (1.52)	0.189 (0.33)	-1.081 (0.48)	0.541 (1.29)	0.346 (1.06)	633
8) Regional, National, or International	1.227 (2.79)	0.943 (1.27)	1.153 (2.82)	-1.403 (1.90)	0.003 (0.01)	-0.132 (0.54)	821

Source: See Table 5.1.

Notes: See Table 5.13.

## G. Loan Approval Rates and Access to Credit

The results presented so far may be biased toward finding too small a disparity between nonminority- and African American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by nonminorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African American- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because

they thought they would be rejected. Table 5.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other characteristics of firms, and the results indicate that African American- and Hispanic-owned firms are 41 and 24 percentage points more likely than nonminority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 5.15 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among African American- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26, 5, and 16 percentage points still exists for African American-owned, Asian/Pacific Islander-owned and Hispanic-owned firms relative to nonminority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, African American-owned firms and Hispanic-owned firms were far more likely to report prejudice as the reason (19 percent and 8 percent, respectively, compared to less than 3 percent for nonminority-owned firms).<sup>139</sup> Results obtained in section (b) of Table 5.15 for the SATL division are very similar to those found for the nation as a whole. As section (c) of Table 5.15 shows, African American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.<sup>140</sup>

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 5.8 and 5.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

More formally, suppose that loan denial rates for equally creditworthy nonminority- and minority-owned firms that applied for credit are  $\theta^w$  and  $\theta^m$ , respectively; the measure of discrimination employed in the previous analysis is  $\theta^m - \theta^w$ . Now suppose that firms that are equally creditworthy, but chose not to apply for a loan because they feared rejection, would have been denied at the rates  $\theta^w$  and  $\psi^m$  for nonminority- and minority-owned firms, respectively. Among the nonminority-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the

<sup>139</sup> Other reasons given, including “too little collateral,” “poor credit history,” and “poor balance sheet,” are comparable across groups. Firms could report more than one reason.

<sup>140</sup> It was not possible to report separate construction results in earlier tables because of small sample sizes.

correct representation of the disadvantage faced by minority-owned firms is  $[\eta\theta^m + (1-\eta)\psi^m] - \theta^w$ , where  $\eta$  represents the share of minority-owned firms desiring credit that submitted an application. Our earlier findings are biased if  $\theta^m$  is not equal to  $\psi^m$ .

**Table 5.15. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=4,637)	0.405 (16.65)	0.099 (3.61)	0.134 (1.72)	0.235 (8.28)	0.031 (1.54)
Full Set of Control Variables (same as Table 5.8, Column 3 except for loan characteristics) (n=4,633)	0.257 (10.02)	0.054 (1.98)	0.019 (0.27)	0.164 (5.69)	-0.008 (0.38)
<b>b) SATL</b>					
No Other Control Variables, except for SATL dummy and race*SATL interactions (n=4,637)	0.405 (14.53)	0.096 (3.27)	0.154 (1.83)	0.241 (7.77)	0.037 (1.67)
Full Set of Control Variables (same as Table 5.8, Column 3 except for loan characteristics) (n=4,633)	0.248 (8.52)	0.054 (1.85)	0.069 (0.85)	0.168 (5.35)	-0.002 (0.07)
<b>c) Construction</b>					
No Other Control Variables (n=781)	0.350 (6.74)	0.109 (1.27)	-0.087 (0.54)	0.150 (2.22)	-0.007 (0.12)
Full Set of Control Variables (same as Table 5.8, Column 3 except for loan characteristics) (n=781)	0.181 (3.67)	0.064 (0.78)	-0.132 (1.00)	0.039 (0.65)	-0.063 (1.32)

Source: See Table 5.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Sample consists of all firms. (3) Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

One approach that is frequently employed to address such a problem is to estimate a “Heckman-correction” that would formally model the application process in conjunction with the loan outcome for those who applied. The difficulty with this methodology in the present context is that it is only correctly implemented when some variable is present that is correlated with a firm’s decision to apply for a loan, but is independent of the financial institution’s decision to approve or deny the request. Unfortunately, the NSSBF data do not appear to contain any variables that would satisfy these conditions, so we are unable to implement this methodology.<sup>141</sup>

<sup>141</sup> The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm’s information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

As an alternative that answers a different, but related, question, we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 5.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 5.16, are consistent with the previous analysis; we find that selection is not much of an issue for African American-owned firms nationally, Asian/Pacific Islander-owned firms nationally, or in the SATL division. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (*See, e.g.*, Table 5.8, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 17 percentage points more likely to be denied access to credit, and 16 percentage points more likely in the SATL, and these differences are statistically significant.

**Table 5.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit**

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=2,647)	0.455 (14.84)	0.298 (6.82)	0.188 (1.57)	0.297 (7.76)	0.126 (4.01)
Full Set of Control Variables (same as Table 5.8, Column 3 except for loan characteristics) (n=2,644)	0.276 (6.93)	0.180 (3.42)	-0.008 (0.06)	0.165 (3.51)	0.049 (1.38)
<b>b) SATL</b>					
No Other Control Variables (n=2,647)	0.461 (13.02)	0.288 (6.19)	0.191 (1.49)	0.299 (7.13)	0.142 (4.19)
Full Set of Control Variables (same as Table 5.8, Column 3 except for loan characteristics) (n=2,644)	0.268 (5.85)	0.175 (3.16)	-0.018 (0.12)	0.159 (3.10)	0.083 (2.15)

Source: *See* Table 5.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. (3) Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. (4) Dependent variable is set to one if the firm failed to obtain credit and to zero if the firm applied for credit and had their loan application approved.

## H. Analysis of Credit Market Discrimination in the U.S. in 1998

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the Federal Reserve System.<sup>142</sup> This section updates the estimates obtained above using the 1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear—African American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

### 1. Qualitative Evidence

Consistent with the 1993 survey, African American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is “financing and interest rates.” (Table 5.17). In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 5.3 and 5.4) and over the next 12 months (Tables 5.5 and 5.6). Interestingly, even though credit availability was by far the most important category for African Americans (21 percent in Table 5.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

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<sup>142</sup> The target population of the survey was for-profit businesses with fewer than 500 employees that were either a single establishment or the headquarters of a multiple establishment company, and were not agricultural firms, financial institutions, or government entities. These firms also had to be in business during December 1998. Data were collected for fiscal year-end 1998. Like its 1993 counterpart, the purpose of this survey was to gather information about small business financial behavior and the use of financial services and financial service providers by these firms. The objectives of the survey were to collect information that can inform researchers and policy makers on the availability of credit to small businesses; the location of the sources of financial services; the types of financial services used, including checking accounts, savings accounts, various types of credit, credit cards, trade credit, and equity injections; as well as the firm’s recent credit acquisition experiences. The survey also investigated the level of debt held by these firms and their accessibility to credit. Additionally, the survey collected information on firm and owner demographics, as well as the firm’s recent income statement and balance sheet.

**Table 5.17. What is the Most Important Problem Facing Your Business Today?**

	<b>Non-minority Male</b>	<b>African American</b>	<b>Other</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Total</b>
Financing and interest rates	5.8%	18.2%	10.6%	8.1%	6.2%	6.8%
Taxes	7.7%	1.9%	5.3%	3.1%	6.6%	6.9%
Inflation	0.4%	0.6%	0.0%	1.0%	0.4%	0.4%
Poor sales	7.0%	5.9%	11.6%	7.0%	8.3%	7.5%
Cost/availability of labor	3.9%	3.3%	2.4%	3.5%	4.5%	3.9%
Government regulations/red tape	7.1%	3.0%	4.8%	8.1%	6.5%	6.8%
Competition (from larger firms)	11.1%	10.7%	10.6%	18.4%	10.2%	11.3%
Quality of labor	14.4%	11.0%	9.4%	8.7%	9.1%	12.6%
Cost and availability of insurance	2.6%	1.0%	0.8%	0.0%	2.3%	2.2%
Other	11.4%	10.0%	8.3%	16.0%	12.7%	11.7%
Cash flow	4.6%	10.9%	6.3%	3.5%	3.3%	4.6%
Capital other than working capital	1.1%	1.7%	4.1%	0.8%	1.3%	1.3%
Acquiring and retaining new customers	3.1%	3.9%	5.0%	1.8%	3.3%	3.2%
Growth of firm/industry	0.9%	1.0%	1.2%	0.1%	0.4%	0.8%
Overcapacity of firm/industry	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Marketing/advertising	2.1%	3.9%	2.5%	2.8%	3.6%	2.5%
Technology	1.4%	1.2%	1.6%	2.6%	1.3%	1.5%
Costs, other than labor	2.7%	1.8%	2.5%	3.6%	3.8%	2.9%
Seasonal/cyclical issues	1.3%	1.2%	0.7%	0.4%	0.7%	1.1%
Bill collection	2.8%	2.2%	2.4%	2.6%	2.8%	2.8%
Too much work/not enough time	3.6%	2.2%	4.3%	1.4%	5.7%	3.9%
No problems	4.6%	4.3%	5.6%	5.8%	6.4%	5.1%
Not ascertainable	0.4%	0.0%	0.0%	0.0%	0.7%	0.4%

Source: NERA calculations from the 1998 SSBF (n=3,561).

Note: Results are weighted.

## 2. Differences in Loan Denial Rates by Race/Ethnicity

In 1998 as in 1993, in comparison with firms owned by nonminority males, minority- and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African American-owned firms in particular, were much less likely to be classified as having a “low risk” credit rating by Dun & Bradstreet.<sup>143</sup>

In the 1993 survey, respondents were asked: “During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?” In 1998, a narrower question limited to new loans was asked: “Did the firm apply for new loans in the last three years?” In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and gender is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

Percentage of Loan Applications Denied		
	1993	1998
Nonminority males	26.2%	24.4%
African Americans	65.9%	62.3%
Asians/Pacific Islanders, Native Americans, <i>etc.</i>	39.9%	47.0%
Hispanics	35.9%	49.9%
Nonminority females	30.1%	23.5%
Overall	28.8%	28.6%

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity, and gender across the two survey years. More than half of African American owners did not apply for a loan for fear of being denied compared with only one out of five nonminority males.

Percentage Not Applying for Fear of Denial		
	1993	1998
Nonminority males	22.5%	20.2%
African Americans	60.7%	53.9%
Asians/Pacific Islanders, Native Americans, <i>etc.</i>	27.5%	23.1%
Hispanics	41.5%	34.3%
Nonminority females	22.7%	24.2%
Overall	24.7%	23.3%

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

- a) Prejudice on a racial/ethnic basis.

<sup>143</sup> Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

- b) Prejudice against women.
- c) Prejudice against the business location.
- d) Prejudice against the business type.
- e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among nonminorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of nonminorities stated prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 5.8 and 5.9, the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that African American-owned firms were almost twice as likely to have their loans denied than nonminority male-owned firms, even after controlling for a host of variables included primarily to control for the possibility that minority-owned firms are smaller and less creditworthy than those owned by nonminority men.

A similar exercise is performed below in Tables 5.18 and 5.19 using data from the 1998 SSBF. Column 1 in Table 5.18 shows that African American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993, the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African Americans to 21.8 in column 5 as the full set of controls is added. For 1993, the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 5.18, Column 5, Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than nonminority male-owned firms. In Table 5.8, by contrast, denial probabilities for Hispanic-owned firms were *not* significantly different from those of nonminority male-owned firms. If anything, discrimination in the small business credit market appears to have worsened during the late 1990s.

**Table 5.18. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.422 (7.94)	0.254 (5.36)	0.217 (5.05)	0.192 (4.52)	0.218 (4.74)
Asian/Pacific Islander	0.148 (2.54)	0.129 (2.52)	0.049 (1.25)	0.023 (0.65)	0.028 (0.77)
Hispanic	0.353 (6.44)	0.269 (5.37)	0.211 (4.69)	0.183 (4.21)	0.171 (4.00)
Nonminority female	0.087 (2.22)	0.049 (1.55)	0.024 (0.96)	0.016 (0.66)	0.011 (0.44)
Judgments		0.272 (4.28)	0.249 (4.32)	0.272 (4.47)	0.262 (4.20)
Firm delinquent		0.081 (2.88)	0.115 (4.20)	0.103 (3.88)	0.111 (4.01)
Personally delinquent		0.092 (2.85)	0.039 (1.59)	0.042 (1.69)	0.045 (1.76)
Bankrupt past 7 years		0.504 (4.48)	0.406 (3.83)	0.392 (3.67)	0.395 (3.64)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (2.47)	-0.000 (0.26)	0.000 (0.02)	0.000 (0.03)
\$1998 firm equity (*10 <sup>8</sup> )		0.000 (1.40)	0.000 (0.46)	0.000 (0.20)	0.000 (0.06)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.52)	0.000 (1.47)	0.000 (0.96)	0.000 (0.90)
Owner net worth (*10 <sup>8</sup> )		-0.000 (1.25)	-0.000 (1.28)	-0.000 (1.19)	-0.000 (1.24)
Owner years of experience		-0.002 (1.42)	-0.001 (0.49)	-0.000 (0.34)	-0.000 (0.21)
Owner share of business		0.000 (0.75)	-0.000 (0.12)	0.000 (0.03)	-0.000 (0.33)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	924	924	924	924	905
Pseudo R <sup>2</sup>	.1061	.2842	.3714	.3910	.4015
Chi <sup>2</sup>	90.0	241.1	315.1	331.8	337.8
Log likelihood	-379.3	-303.7	-266.7	-258.3	-251.7

Source: See Table 5.17.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign or international), the value of the firm’s inventory, the firm’s cash holdings, and the value of land held by the firm. (3) “Characteristics of the loan” includes the size of the loan applied for.

**Table 5.19. Determinants of Loan Denial Rates—SATL**

	(1)	(2)	(3)	(4)	(5)
African American	0.471 (7.46)	0.318 (5.38)	0.236 (4.59)	0.217 (4.16)	0.243 (4.35)
Asian/Pacific Islander	0.189 (3.00)	0.162 (2.89)	0.072 (1.65)	0.041 (1.05)	0.048 (1.17)
Hispanic	0.381 (6.27)	0.309 (5.46)	0.251 (4.79)	0.223 (4.32)	0.209 (4.13)
Nonminority Female	0.074 (1.69)	0.049 (1.39)	0.021 (0.75)	0.012 (0.45)	0.004 (0.16)
African American*SATL	-0.092 (1.42)	-0.072 (1.65)	-0.029 (0.63)	-0.028 (0.64)	-0.027 (0.60)
Asian/Pacific Islander*SATL					
Hispanic*SATL	-0.080 (0.96)	-0.070 (1.32)	-0.051 (1.28)	-0.047 (1.20)	-0.046 (1.20)
Nonminority female*SATL	0.050 (0.53)	-0.011 (0.18)	0.001 (0.02)	0.006 (0.11)	0.017 (0.29)
SATL division	0.043 (0.94)	0.041 (1.05)	0.040 (1.19)	0.006 (0.13)	0.011 (0.22)
Creditworthiness Controls (8 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	918	918	918	918	899
Pseudo R <sup>2</sup>	0.1119	0.2893	0.3750	0.3941	0.4052
Chi <sup>2</sup>	94.67	244.85	317.33	333.51	339.91
Log likelihood	-375.8	-300.7	-264.5	-256.4	-249.5

Source: See Table 5.17.

Notes: (1) t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Other creditworthiness controls are the four other variables included in Column 2 of Table 5.18.

Table 5.19 focusing on the SATL division yields similar results—showing significantly larger denial probabilities for African American- and Hispanic-owned firms (24.3 percent and 20.9 percent, respectively) than for nonminority male-owned firms. The SATL indicator was not significant in Table 5.19. None of the interaction terms between SATL and race, ethnicity or gender were significant either, indicating that the loan denial results for the SATL are not significantly different than for the nation as a whole.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an

improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

- a) The value of the equity, if any, in the owner's home.
- b) The owner's net worth excluding home equity and equity in the firm.
- c) The firm's Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.<sup>144</sup>

Despite the fact that these new variables do help to predict loan denials,<sup>145</sup> the estimated race differences including these variables are unchanged from those reported above.<sup>146</sup> This suggests that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

### 3. Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans, including renewals. Responses in 1998 were as follows:

Applied for New Loans Last Three Years	Number	Percent
Did not apply	2,599	73.0%
Always approved	713	20.0%
Always denied	166	4.7%
Sometimes approved/sometimes denied	83	2.3%
Total	3,561	100.0%

The dependent variable used in Tables 5.18 and 5.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable—*DenyAlt*—is set to one if the application is always denied, set to zero if always approved. Those responding “sometimes approved/sometimes denied” are excluded from the analysis. Column (1) of Table 5.20 replicates Column 1 of Table 5.18 using *DenyAlt* as the dependent variable with the smaller sub-sample. African Americans, Hispanics, Asians/Pacific Islanders, and nonminority females are all confirmed to face higher denial rates than nonminority males using this specification. For

<sup>144</sup> The D&B Commercial Credit Score Report predicts the likelihood of a company paying in a delinquent manner (90+ days past terms) during the next 12 months based on the information in D&B's file. The score is intended to help firms decide quickly whether to accept or reject accounts, adjust terms or credit limits, or conduct a more extensive review based on the report D&B provides. Firms can also determine the company's relative ranking among other businesses in the D&B database.

<sup>145</sup> The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk = .228 (2.45); average risk = .295 (3.25); significant risk = .319 (3.28); high risk = .391 (3.53);  $n = 924$ ; pseudo  $r^2 = .0253$ . Excluded category “low risk.” Results were essentially the same when a control for SATL was also included.

<sup>146</sup> This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (2002) who performed a similar exercise with the 1993 data.

African Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians/Pacific Islanders, the difference is 19 percentage points, and for nonminority females, 8 percentage points.

**Table 5.20. More Loan Denial Probabilities**

	(1)	(2)	(3)	(4)
	<i>DenyAlt</i>	<i>DenyAlt</i>	<i>DenyAlt</i>	<i>DenyAlt</i>
African American	0.457 (8.00)	0.246 (4.76)	0.499 (7.42)	0.271 (4.32)
Asian/Pacific Islander	0.185 (2.81)	0.027 (0.65)	0.231 (3.25)	0.043 (0.93)
Hispanic	0.360 (6.28)	0.171 (3.67)	0.385 (6.07)	0.206 (3.79)
Nonminority female	0.083 (2.00)	0.005 (0.20)	0.068 (1.48)	0.001 (0.04)
African American*SATL			-0.091 (1.21)	-0.028 (0.53)
Asian/Pacific Islander*SATL				
Hispanic*SATL			-0.078 (0.82)	-0.051 (1.06)
Nonminority female*SATL			0.058 (0.57)	0.011 (0.16)
SATL			0.043 (0.87)	0.025 (0.43)
Creditworthiness Controls	No	Yes	No	Yes
Owner's Education	No	Yes	No	Yes
Other Firm Characteristics	No	Yes	No	Yes
Characteristics of the Loan	No	Yes	No	Yes
Geographic Division	No	Yes	No	Yes
Industry	No	Yes	No	Yes
N	846	846	841	841
Pseudo R <sup>2</sup>	0.1112	0.4265	0.1168	0.4284
Chi <sup>2</sup>	90.94	348.71	95.23	349.41
Log likelihood	-363.3	-234.5	-360.1	-233.1

Source: See Table 5.18.

Results consistent with discrimination are confirmed for African American-owned firms and Hispanic-owned firms in Column (2) of Table 5.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the SATL division are added to the model as in Columns (3) and (4), results for African Americans and Hispanics remain statistically significant throughout. The SATL indicator is not significant in any of the specifications, nor are the interaction terms between SATL and race, ethnicity, or gender.

#### **4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial**

Tables 5.21 through 5.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

Table 5.21, which is similar to Tables 5.13 and 5.14, finds that conditional on obtaining a loan, African American-owned firms are charged a higher price for their credit—on average 1.06 percentage points nationally and 1.18 percentage points in the SATL.

Table 5.22, which is similar to Table 5.15, shows that African American-owned firms are much more likely not to apply for a loan for fear that they will be denied. Based on all of the foregoing evidence, this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as nonminority male-owned firms to have their application rejected. This is evident in the SATL as well and also in the construction sector. There is some evidence of this phenomenon for Hispanic-owned firms nationally as well.

Finally, Table 5.23, which is comparable to Tables 5.11 and 5.12, suggests that when the financial institution does not know the race or ethnicity of the applicant—as is often the case in an application for a credit card—there are no differences by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of any race effects in the use of business credit cards in the SATL region (row 3) or in construction (results not reported here).

The strength of the findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the earlier results. Unfortunately, African Americans continue to be discriminated against in the market for small business credit throughout this time period. By 1998, this discrimination was on the increase for African Americans and expanding to impact other minority groups, such as Hispanics and Asians/Pacific Islanders, as well.

**Table 5.21. Models of Interest Rate Charged**

Specification	African American	African American* SATL	Asian/Pacific Islander	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 5.18) n=765	1.064 (2.66)	–	–	0.559 (1.49)	-0.088 (0.23)
1b) All Loans (as in Column 5 of Table 5.19) n=765	1.177 (2.22)	-0.407 (0.49)	0.251 (0.25)	0.639 (1.50)	-0.152 (0.30)

Source: See Table 5.18.

Notes: (1) Each line of this table represents a separate OLS regression with all of the control variables. (2) t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (3) The sample consists of firms that had applied for a loan and had their application approved.

**Table 5.22. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Hispanic	Non-minority Female
<b>a) U.S.</b>				
No Other Control Variables (n=3,448)	0.353 (11.90)	0.046 (1.48)	0.173 (5.77)	0.051 (2.55)
Full Set of Control Variables (n=3,448)	0.208 (7.04)	-0.012 (0.43)	0.052 (1.87)	0.011 (0.59)
<b>b) SATL division</b>				
No Other Control Variables (n=565)	0.389 (7.00)	-0.001 (0.01)	0.122 (1.71)	0.080 (1.58)
Full Set of Control Variables (n=560)	0.218 (4.21)	-0.024 (0.35)	0.023 (0.40)	0.023 (0.57)
<b>c) Construction</b>				
No Other Control Variables (n=613)	0.371 (5.06)	0.117 (1.43)	0.020 (0.26)	0.122 (2.08)
Full Set of Control Variables (n=609)	0.273 (3.69)	0.099 (1.32)	-0.062 (1.13)	0.038 (0.74)

Source: See Table 5.18.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Full set of control variables as in Column 5 of Table 5.18, except for loan amount, year of application, and type of lender.

**Table 5.23. Models of Credit Card Use**

Specification	African American	Asian/ Pacific Islander	Hispanic	Nonminority Female	Sample Size
1) Business Credit Card	-0.001 (0.02)	-0.038 (1.00)	-0.014 (0.38)	-0.018 (0.72)	3,561
2) Personal Credit Card	-0.018 (0.54)	0.016 (0.44)	-0.050 (1.42)	0.012 (0.52)	3,561
3) Business Credit Card SATL	0.034 (0.49)	-0.198 (1.73)	-0.063 (0.7)	-0.108 (1.71)	641
4) Personal Credit Card SATL	-0.031 (0.47)	0.018 (0.16)	-0.028 (0.32)	0.091 (1.54)	641
3) Business Credit Card Construction & related	0.056 (0.62)	-0.074 (0.70)	0.087 (0.86)	-0.025 (0.35)	624
4) Personal Credit Card Construction & related	0.003 (0.04)	0.047 (0.46)	-0.092 (1.01)	-0.073 (0.99)	624

Source: See Table 5.18.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 5.18, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size includes all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level.

## I. Analysis of Credit Market Discrimination in the U.S. in 2003

The most recent wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System in 2007.<sup>147</sup> This is the fourth and final survey of U.S. small businesses conducted by the Board of Governors since 1987.<sup>148</sup> The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the U.S. at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year-end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun & Bradstreet Market Identifier file. The number of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

<sup>147</sup> See [www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html](http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html).

<sup>148</sup> The Federal Reserve Board cancelled the SSBF subsequent to the completion of the 2003 wave, ostensibly for financial reasons. See Robb (2010).

Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves. According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.<sup>149</sup>

In 1998, almost 8 percent of survey respondents were African American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.<sup>150</sup> Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.<sup>151</sup>

Mach and Wolken (2006) reported using these data that 13.1 percent of firms were owned by nonminority or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African Americans and Asians/Pacific Islanders each held roughly constant at 4 percent; the share of American Indians and Alaska natives held at roughly 1 percent. However, the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent. The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent. Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The remainder of this section presents our findings from this analysis.<sup>152</sup>

## 1. Qualitative Evidence

Table 5.24 reports the results of asking business owners for the most important problem currently facing their firm. Consistent with the surveys in earlier years, firms owned by minority and women-owned firms were more likely to say that their most important problem was “financing and interest rates.” Once again, the African American-nonminority difference was most pronounced—only slightly more than 5 percent of nonminority male business owners reported this as their major problem compared to almost 21 percent of African American business owners.

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<sup>149</sup> See fn. 104, above.

<sup>150</sup> The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For nonminority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

<sup>151</sup> Mach and Wolken (2006, Table 2) report that weighted figures for Blacks were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively; Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively; Native Americans were 0.8 and 1.3 percent, respectively; and women were 24.3 and 22.4 percent, respectively.

<sup>152</sup> The data file provided by the Board of Governors includes five separate observations per firm. That is to say, there are  $4240 \times 5 = 21,200$  observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation: the results presented here are essentially identical whichever imputation is used. Overall, only 1.8 percent of observations in the data file were missing.

**Table 5.24. What is the Most Important Problem Facing Your Business Today?**

	<b>Non-minority Male</b>	<b>African American</b>	<b>Other</b>	<b>Hispanic</b>	<b>Non-minority Female</b>	<b>Total</b>
Financing and interest rates	5.4%	20.7%	9.1%	5.7%	5.8%	6.3%
Taxes	6.3%	2.4%	4.9%	7.7%	4.3%	5.7%
Inflation	2.7%	1.0%	2.3%	0.5%	1.4%	2.3%
Poor sales or profitability	17.8%	38.5%	28.9%	30.0%	22.5%	20.6%
Cost/availability of labor	1.5%	0.0%	0.6%	1.5%	1.5%	1.4%
Government regulations/red tape	4.7%	1.0%	5.4%	9.6%	2.5%	4.5%
Competition from larger firms	4.0%	2.7%	2.7%	3.6%	3.6%	3.8%
Quality of labor	7.9%	6.9%	5.0%	3.8%	6.5%	7.2%
Cost and availability of insurances	10.3%	1.8%	3.1%	5.2%	6.4%	8.6%
Other	2.6%	1.9%	4.0%	2.8%	1.6%	2.5%
None	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Cash flow	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Growth	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Foreign competition	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Competition - other	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Availability of materials/resources	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Labor problems other than cost or quality	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Internal management/administrative problems	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Environmental constraints	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Advertising and public awareness	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Market/economic/industry factors	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
Health care cost and availability	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Energy costs	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Costs other than health care and energy	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Owner's personal problems	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Technology	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
Dealing with insurance companies	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
War and September 11th	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4,072).

Note: Results are weighted.

## 2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 5.25 and 5.26 present estimates of loan denial probabilities for the nation as a whole and for the SATL division using a regression model comparable to that used with the 1993 and 1998 survey waves.<sup>153</sup>

Column (1) in Table 5.25 (comparable to Table 5.8 for 1993 and 5.18 for 1998) shows that African American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than nonminority male-owned firms before taking into account the creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for nonminority females and for Native American and Other minority groups are not significant, however.

Table 5.26 (comparable to Table 5.9 for 1993 and 5.19 for 1998) focuses on the SATL division and yields similar results—showing significantly larger denial probabilities for African American-owned firms than for nonminority male-owned firms, persisting even after the addition of all of the control variables. The SATL indicator as well as the race and gender interaction terms with the SATL are also insignificant when the control variables are added.

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<sup>153</sup> In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

**Table 5.25. Determinants of Loan Denial Rates—USA**

	(1)	(2)	(3)	(4)	(5)
African American	0.459 (8.38)	0.136 (5.47)	0.105 (4.80)	0.091 (5.04)	0.094 (4.95)
Asian/Pacific Islander	0.055 (1.51)	0.020 (1.59)	0.009 (1.01)	0.002 (0.49)	0.001 (0.18)
Hispanic	0.067 (1.74)	0.008 (0.83)	0.004 (0.58)	0.001 (0.30)	0.001 (0.25)
Native American and Other	0.184 (2.22)	0.061 (1.95)	0.032 (1.47)	0.021 (1.43)	0.021 (1.49)
Nonminority female	0.043 (2.17)	0.003 (0.70)	0.002 (0.49)	0.001 (0.57)	0.002 (0.76)
Judgments against owner		0.007 (0.66)	0.003 (0.35)	0.003 (0.54)	0.006 (0.90)
Judgments against firm		0.005 (1.16)	0.005 (1.42)	0.001 (0.54)	0.001 (0.64)
Firm delinquent		0.032 (3.78)	0.021 (3.23)	0.019 (3.89)	0.021 (4.08)
Personally delinquent		-0.007 (0.69)	-0.006 (1.02)	-0.003 (0.82)	-0.002 (0.58)
Owner Bankrupt past 7 years		0.046 (1.36)	0.041 (1.35)	0.052 (1.81)	0.044 (1.66)
Firm Bankrupt past 7 years		0.000 (0.03)	0.003 (0.37)	0.001 (0.17)	-0.001 (0.38)
\$1998 sales (*10 <sup>8</sup> )		-0.000 (1.68)	0.000 (0.04)	0.000 (0.29)	0.000 (0.51)
\$1998 firm equity (*10 <sup>8</sup> )		-0.000 (2.23)	-0.000 (1.03)	-0.000 (1.62)	-0.000 (1.63)
Owner home equity (*10 <sup>8</sup> )		0.000 (0.28)	0.000 (0.02)	-0.000 (0.45)	-0.000 (0.26)
Owner net worth (*10 <sup>8</sup> )		-0.000 (2.97)	-0.000 (2.92)	-0.000 (3.06)	-0.000 (3.26)
Owner years of experience		0.000 (0.31)	0.000 (1.00)	0.000 (0.82)	0.000 (0.62)
Owner share of business		0.000 (0.08)	0.000 (0.61)	0.000 (0.38)	0.000 (0.47)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,664	1,655	1,655	1,655	1,605
Pseudo R <sup>2</sup>	.0850	.2267	.2901	.3336	.3681
Chi <sup>2</sup>	74.1	192.9	246.8	283.8	310.3
Log likelihood	-399.1	-328.9	-301.9	-283.4	-266.4

Source: See Table 5.26. Notes: (1) (1) Reported estimates are Probit derivatives with t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) “Other firm characteristics” include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign or international), the value of the firm’s inventory, the firm’s cash holdings, the value of land held by the firm, and total salaries and wages paid. (3) “Characteristics of the loan” includes the size of the loan applied for.

**Table 5.26. Determinants of Loan Denial Rates—SATL**

	(1)	(2)	(3)	(4)	(5)
African American	0.412 (6.44)	0.111 (4.18)	0.088 (3.74)	0.082 (4.05)	0.083 (4.05)
Asian/Pacific Islander	0.051 (1.31)	0.016 (1.24)	0.007 (0.80)	0.001 (0.26)	-0.000 (0.00)
Hispanic	0.030 (0.70)	-0.002 (0.22)	-0.002 (0.23)	-0.002 (0.59)	-0.002 (0.63)
Native and Other	0.206 (2.34)	0.062 (1.94)	0.035 (1.50)	0.022 (1.43)	0.022 (1.50)
Nonminority female	0.054 (2.39)	0.004 (0.70)	0.002 (0.55)	0.002 (0.63)	0.002 (0.96)
African American*SATL	0.053 (0.78)	0.018 (0.81)	0.011 (0.61)	0.003 (0.34)	0.003 (0.35)
Asian/Pacific Islander*SATL	0.025 (0.27)	0.018 (0.55)	0.010 (0.38)	0.009 (0.49)	0.009 (0.50)
Hispanic-Other*SATL	0.093 (1.04)	0.067 (1.55)	0.032 (1.16)	0.032 (1.39)	0.034 (1.40)
Native-Other*SATL					
Nonminority female*SATL	0.054 (2.39)	0.004 (0.70)	-0.002 (0.19)	-0.001 (0.25)	-0.002 (0.57)
SATL division	0.010 (0.51)	-0.002 (0.35)	-0.001 (0.32)	-0.001 (0.32)	-0.001 (0.38)
Creditworthiness (4 variables)	No	Yes	Yes	Yes	Yes
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Balance Sheet (4 indicator variables)	No	Yes	Yes	Yes	Yes
Owner Experience (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Share of Business (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Geographic Division (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,663	1,654	1,654	1,654	1,604
Pseudo R <sup>2</sup>	0.0897	0.2307	0.2926	0.3367	0.3719
Chi <sup>2</sup>	78.25	196.16	248.84	286.32	313.48
Log likelihood	-397.0	-327.2	-300.8	-282.1	-264.7

Source: See Table 5.24.

Notes: (1) t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations of the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations of the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. (3) Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. (4) For other variables, see notes for Table 5.25.

### 3. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Table 5.27 models the interest rate charged for those minority-owned and nonminority female-owned firms that were able to successfully obtain a loan (comparable to Tables 5.13 and 5.14 for 1993 and Table 5.21 for 1998). As was found in earlier surveys, African American business owners are hurt here as well since they have to pay, on average, 1.04 percentage points more for their loans than nonminority male business owners with identical characteristics. Hispanic business owners, as well, pay 1.01 percentage points more than their nonminority male counterparts.

Table 5.27 shows that the loan price differential is present for African American and Hispanic business owners in the SATL as well. For African American-owned firms, the differential is 1.1 percentage points. For Hispanics, the differential is 1.04 percentage points.

Table 5.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 5.11 and 5.12 for 1993 and Table 5.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. There is some evidence nationally and in the SATL in 2003 that African Americans and Hispanics are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards.

**Table 5.27. Models of Interest Rate Charged**

Specification	African American	African American * SATL	Asian/Pacific Islander	Asian/Pacific Islander * SATL	Hispanic	Hispanic * SATL	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 5.25) n=1,537	1.043 (2.01)		0.445 (1.24)		1.01 (2.76)		0.260 (0.35)	-0.142 (0.72)
1b) All Loans (as in Column 5 of Table 5.26) n=1,537	1.101 (1.72)	-0.187 (0.16)	0.486 (1.16)	-0.436 (0.40)	1.044 (2.22)	1.00 (1.18)	0.480 (0.51)	-0.185 (0.77)

Source: See Table 5.24.

Notes: (1) Each line of this table represents a separate regression with all of the control variables as indicated. (2) t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (3) Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. (4) The sample consists of firms that had applied for a loan and had their application approved.

**Table 5.28. Models of Credit Card Use**

Specification	African American	Asian/ Pacific Islander	Hispanic	Native American and Other	Non- minority Female	Sample Size
1) Business Credit Card	-0.060 (1.13)	0.040 (0.91)	0.004 (0.08)	-0.001 (0.01)	0.002 (0.07)	3,676
2) Personal Credit Card	-0.132 (2.68)	0.036 (0.84)	-0.080 (1.77)	-0.040 (0.48)	0.036 (1.56)	3,676
3) Business Credit Card, SATL	-0.057 (0.57)	0.096 (0.94)	-0.013 (0.13)	—	-0.011 (0.20)	655
4) Personal Credit Card, SATL	-0.185 (2.04)	-0.149 (1.52)	-0.271 (2.86)	—	0.056 (1.00)	646

Source: See Table 5.24.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 5.27, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size is all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level.

Finally, consistent with earlier results, Table 5.29 (comparable to Tables 5.15 for 1993 and 5.22 for 1998) shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic and industry factors, African American business owners are still almost 17 percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit. In the SATL, the phenomenon is evident as well—African American business owners are 15 percentage points more likely to fail to apply for fear of denial. In the construction sector, the trend is even more pronounced at 30 percentage points. Nationally, and in the SATL, there is evidence of this phenomenon for nonminority female business owners as well.

**Table 5.29. Racial Differences in Failing to Apply for Loans Fearing Denial**

Specification	African American	Asian/Pacific Islander	Hispanic	Native American and Other	Non-minority Female
<b>a) USA</b>					
No Other Control Variables (n=3,704)	0.385 (9.48)	0.059 (1.95)	0.138 (4.01)	0.138 (2.14)	0.072 (4.47)
Full Set of Control Variables (n=3,676)	0.166 (4.73)	0.038 (1.40)	0.050 (1.82)	0.052 (1.01)	0.035 (2.46)
<b>b) SATL division</b>					
No Other Control Variables (n=3,694)	0.357 (7.22)	0.060 (1.80)	0.115 (2.98)	0.126 (1.91)	0.088 (4.93)
Full Set of Control Variables (n=3,666)	0.152 (3.59)	0.036 (1.19)	0.033 (1.06)	0.046 (0.88)	0.046 (2.90)
<b>c) Construction</b>					
No Other Control Variables (n=705)	0.492 (4.34)	-0.022 (0.29)	0.090 (1.22)	0.258 (2.17)	0.026 (0.64)
Full Set of Control Variables (n=695)	0.303 (3.16)	0.002 (0.04)	-0.009 (0.34)	0.137 (1.65)	-0.002 (0.11)

Source: See Table 5.24.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Full set of control variables as in Column 5 of Table 5.27, except for loan amount, year of application, and type of lender. (3) In Panel (b), interaction terms between race, gender, and SATL were all insignificant.

## **J. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007**

NERA has conducted local credit market surveys at nine other times and places since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland in 2000 (Maryland I), the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland (again) in 2005 (Maryland II), the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys, and the Memphis surveys, included other goods and services as well.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF, while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 5.30, and are remarkably similar to results seen in Tables 5.8-5.9, 5.18-5.19, and 5.25-5.26. Denial probabilities for African American-owned firms compared to nonminority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and nonminority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for nonminority female-owned firms than for their nonminority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms (9-19 percentage points higher).

Finally, as shown in Table 5.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 5.13-5.14, 5.21 and 5.27. African Americans pay almost 1.7 percentage points more, on average, for their business credit than do nonminority males, declining to 1.5 percentage points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF and the 2003 SSBF.

**Table 5.30. Determinants of Loan Denial Rates—Nine Jurisdictions**

	(1)	(2)
	<i>Most Recent Application</i>	<i>Last Three Years</i>
African American	0.289 (8.20)	0.293 (7.60)
Hispanic	0.178 (3.86)	0.244 (4.59)
Native American	0.087 (1.69)	0.188 (3.29)
Asian/Pacific Islander	0.042 (0.72)	0.003 (0.05)
Other race	0.313 (3.07)	0.364 (3.15)
Nonminority female	0.046 (1.83)	0.086 (2.96)
Judgments	0.051 (1.23)	0.119 (2.24)
Firm delinquent	0.022 (2.7)	0.057 (5.90)
Personally delinquent	0.076 (7.38)	0.077 (6.03)
Bankrupt past 3 years	0.228 (3.99)	0.328 (4.74)
N	1,855	1,855
Pseudo R <sup>2</sup>	.1905	.1721
Chi <sup>2</sup>	336.0	363.3

Source: NERA Credit Market Surveys, 1999-2007.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Indicator variables are also included for the various jurisdictions.

**Table 5.31. Determinants of Interest Rates—Nine Jurisdictions**

	(1)	(2)
African American	1.683 (3.44)	1.491 (2.98)
Asian/Pacific Islander	1.221 (2.16)	0.789 (1.34)
Hispanic	0.820 (1.48)	0.895 (1.56)
Native American	1.241 (1.52)	1.008 (1.24)
Other race	-1.115 (0.63)	-1.072 (0.61)
Nonminority female	0.046 (0.16)	0.018 (0.06)
Judgments		0.537 (0.85)
Firm delinquent		-0.041 (0.36)
Personally delinquent		0.644 (3.65)
Bankrupt past 3 years		1.184 (1.13)
Creditworthiness, Firm, and Owner Characteristics	No	Yes
Loan Characteristics	Yes	Yes
N	1,490	1,463
Adjusted R <sup>2</sup>	.0831	.1046
F	11.4	11.05

Source: See Table 5.30.

Notes: (1) Reported estimates are OLS regression models, t-statistics are in parentheses. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at an 90 (95) (99) percent confidence level. (2) Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application were included. (3) Seven additional indicators for jurisdiction were also included.

## **K. Conclusions from the 1993, 1998 and 2003 SSBF Analyses**

The results presented in this chapter indicate that African American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian/Pacific Islander-owned firms, Native American-owned firms, and nonminority female-owned firms.

Many of the criticisms levied against the home mortgage loan discrimination study of Munnell, *et al.* (1996) could perhaps be applied to the analyses in this Chapter. Yet, these criticisms have been effectively countered by, *e.g.*, Browne and Tootell (1995) and Tootell (1996). What is important to keep in mind in reference to the analyses in the present Chapter compared with Munnell, *et al.* (1996), is the magnitude of the estimated racial disparities. The absolute size of the raw racial differences found in the mortgage study are considerably smaller than those observed in this study regarding small business credit.<sup>154</sup>

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added “distance” in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p. 6) point out, “economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others.” A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

Clearly, a portion of the difference in denial rates between nonminority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.<sup>155</sup>

Our analysis finds significant evidence that African American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect it to be a problem in the future. In fact, these concerns prevented more African American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African American-owned firms than for nonminority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for nonminority women as well, although not with as much consistency as the findings for African Americans.

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<sup>154</sup> In the Boston Fed study, 10 percent of White mortgage applications were rejected compared with 28 percent for African Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for White males and between 50.0 and 65.9 percent for African American-owned firms (depending on which NSSBF or SSBF survey is used).

<sup>155</sup> The gap in denial rates between African Americans and nonminorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

Overall, the evidence is consistent that African American-owned firms and other M/WBE firms face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are consistent with the presence of discrimination.

## **L. Evidence of Credit Market Discrimination from 2008 and Beyond**

As noted above, the Federal Reserve abolished the SSBF prior to releasing results from 2008, and the most recent NERA survey on credit access was conducted in 2007. Economist Alicia Robb, in her article “Beyond the late, lamented Survey of Small Business Finance,” notes:

A few years ago, the [SSBF], the main source of data on small business financing, was cancelled by the Federal Reserve Board. The SSBF had provided detailed information on the use of credit and other financial services by small businesses every five years beginning in 1987. There are no data available after 2003. The Federal Reserve stated the survey was cancelled for financial reasons and the survey had been conducted four times in varying economic conditions. Yet, less than a year after the cancellation, the worst financial crisis hit the United States since the Great Depression. Unfortunately, the nation now has no demand-side data to investigate the impact of this financial crisis on small business financing or firm performance. .... It is ironic that a survey that could shed light on the impact of a financial crisis on the state of small business financing was cancelled due to budgetary concerns when the government has spent hundreds of billions of dollars on other matters arising from the crisis. The survey cost about \$6 million dollars over a five-year survey period, more of a rounding error to the Fed than a significant investment. What a pity that we have no data for 2008—a year of great interest for policy purposes.<sup>156</sup>

Given this, what can we say about evidence of M/WBE disparities in access to capital and credit during the period subsequent to 2007? Although the negative impact of the loss of the SSBF cannot be overstated, Dr. Robb and others have worked to fill the void using analyses on a unique data set known as the Kauffman Firm Survey (“KFS”). As mentioned above, the KFS is the largest and longest longitudinal survey of new businesses in the world, and followed a large sample of small businesses for eight years, from their inception in 2004 through 2011.

Robb (2013) uses data from the 2004-2010 cohort of KFS firms to examine the financing patterns of firms during their first years of operation. Key findings from this study include:

- Differences in asset levels are the largest single factor explaining racial disparities in business creation rates. Half of all Hispanic families in 2004 had less than \$13,375 in wealth and half of all African American families in 2004 had less than \$8,650 in wealth. These figures were 12 percent and 8 percent, respectively, of nonminority wealth levels (Robb, 2013, pp. 5-6).

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<sup>156</sup> Robb (2010).

- There is evidence that during times of financial distress, bank lending is curtailed, especially to firms that appear inherently more risky, such as minority-owned and women-owned firms (*Ibid.* at 7, citing Caballero and Krishnamurthy, 2008; Ivashina and Scharfstein, 2010).
- During 2007-2010, young firms owned by African Americans, Hispanics, and women were statistically significantly less likely than similarly situated nonminority firms to apply for credit when they needed it for fear of denial. Robb (2013, p. 23) notes: “This is perhaps the clearest recent evidence of continued borrowing constraints for Black and Hispanic business owners in the United States. Women were also more likely than men to have this fear during the economic crisis.”
- During 2007-2010, when they did apply for credit, young African American- and Hispanic-owned firms were statistically significantly more likely to have their loans denied than nonminority-owned firms with comparable levels of creditworthiness (*Ibid.* at 25).
- Moreover, the magnitude of minority denials “increased dramatically” during the 2007-2010 period and through the financial crisis (*Ibid.*).
- Women-owned firms were also more likely to be denied than nonminority male firms with comparable creditworthiness levels although the differences were not always statistically significant (*Ibid.*).

Robb (2013) concludes:

The analysis...suggests minority owners who did not apply for new loans were significantly more likely than their White counterparts to avoid applying for loans when needed because they were afraid that their loan applications would be declined by lenders. This is even after controlling for credit quality and a host of owner and firm characteristics. Women were also more likely than similar men not to apply for credit when it was needed for fear of having their loan application denied during the years of the economic crisis. The analysis showed that women and minority business owners’ fears of being declined for a loan were not necessarily unwarranted. In particular, in terms of loan application outcomes, even after controlling for such factors as industry, credit score, legal form, and human capital, minority owners of young firms were significantly less likely to have their loan applications approved than were similar White business owners. Similarly, in 2008, women owners of new businesses were significantly less likely than men with similar credit profiles and legal forms of organization to be approved for loans. More generally, the results suggest that in the initial year of startup, Black- and Hispanic-owned businesses faced greater credit constraints than did their White and Asian counterparts. Similarly, women-owned businesses faced greater credit constraints than did similar startups owned by men during the years of the financial crisis (*Ibid.* at 31-32).

Robb, *et al.* (2010) use data from the 2004-2008 KFS cohort to examine differences in external financing among African American- and nonminority-owned firms to determine if African

Americans received smaller loans after starting up. Controlling for both firm and owner characteristics, including credit scores and owner wealth, they found that adverse disparities in the amounts of financing persisted, with race being the strongest single determinant of loan size.

Bates and Robb (2013) provide an overview of the major issues and debates that continue to the present day regarding discrimination in commercial credit access. They conclude:

Limited access to financing restricts the ability of [MBEs] to achieve viability, to generate new jobs, and, generally, to reach their full potential to contribute to the economic development of the communities and regions in which they operate. Although MBEs rely more heavily on financial institutions for loans than all other borrowing sources combined, they experience higher costs than White firms when they borrow, receive smaller loans, and have their loan applications rejected more often. ... The federal government needs to prosecute financial institutions that discriminate against MBEs on the basis of borrower race. Local governments can assist by weighing bank-lending activity in local minority communities when choosing the local banks with which they do business. Prompt payment of MBE vendor invoices by public-sector clients is needed (Bates and Robb, 2013, p. 1).

Noting that urban minority-owned businesses are heavily concentrated in relatively segregated neighborhoods, Bates and Robb (2016) examined whether loan denial disparities were attributable to race, to location, or to both. Using the 2004-2011 cohort from the KFS data to disentangle the interaction of race and location, they conclude that:

[Our] findings suggest that banks engage in discriminatory practices limiting credit availability to MBEs. Controlling for risk factors, however, firm location in a minority or inner-city neighborhood has no apparent impact on loan availability or size. Owner race/ethnicity, in contrast, is important. Subtle processes discourage MBEs from seeking bank loans. Owner race and wealth both powerfully shape loan access: high wealth opens doors, minority ownership closes them (Bates and Robb, 2016, p. 159).

Post-2007 evidence is also provided by sources other than the KFS. In addition to their own findings, Bates and Robb (2016) also report on the findings of Bone, *et al.* (2014) who conducted a paired testing, or audit, study of small business credit access and race. Bates and Robb (2016) summarize:

A common initial objective of firm owners seeking business loans is to identify bank-lending criteria. In their audit study of small business owners seeking bank loans, Bone, [et al. (2014)] focused directly on this inquiry stage and found that Black and Latino owners were treated differently than matched Whites. Typifying audit studies, the White and minority testers were matched regarding age, gender, credit history, personal net worth, characteristics of the loans being sought, and other traits, and their differential treatment was strongly consistent with minority owners being treated worse than Whites. ... In comparison to White testers, minorities were more often asked to provide business financial statements (83% vs. 50%), income tax returns (86% vs. 52%), bank account information (25% vs. 0%), personal financial asset details (60% vs. 22%), and credit card debt (42% vs. 13%). Additionally, minorities were offered less frequent assistance than

Whites in completing loan applications (18% vs. 59%), and loan officers offered business cards to minority testers less often (43% vs. 82%). Overall, minorities were consistently offered less assistance and subjected to greater scrutiny, in comparison with the White testers (Bates and Robb, 2016, p. 160, referencing Bone, *et al.*, 2014).

[These audit] study findings ... indicate that starkly differential treatment [by race] is real in the experiences of minorities investigating small-business financing sources. By themselves, these findings provide no direct evidence of racial reservation price differentials regarding loan terms. What they do provide is audit study evidence of minorities being treated badly, compared with Whites. In this sense, they confirm, with control-group precision, past findings that banks treat MBEs badly, relative to equally creditworthy Whites. Studies using regression analysis to demonstrate disproportionate bank rejection of minority loan applicants, their unfavorable loan terms, and high discouraged-borrower incidence are all subject to omitted variable-bias criticisms .... No such criticisms apply to the [Bone *et al.* 2014] audit study findings (Bates and Robb, 2016, p. 162, referencing Bone, *et al.*, 2014).

The findings of Robb (2013), Robb, *et al.* (2010), Bates and Robb (2013), Bates and Robb (2016), and Bone, *et al.* (2014) are consistent with the findings reported above in this chapter from the SSBF and from NERA's own surveys. There is no evidence to suggest that credit discrimination has lessened in the years since 2007. Indeed, the available evidence suggests that credit discrimination has continued and, if anything, worsened during and subsequent to the recent financial crisis.

## VI. M/WBE Utilization and Disparity in State of Maryland Contracting Activity

### A. Introduction

The *Croson* decision and its progeny have held that statistical evidence of race-based or gender-based disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious or gender-conscious requirements for M/WBE participation in contracting and procurement. Chapters IV and V documented several specific disparities facing minority- and women-owned firms in the private sector of the State of Maryland's market area, where contracting and procurement activity is generally *not* subject to such requirements. In this chapter, we combined the evidence from Chapter III, which estimates M/WBE availability in the State of Maryland Market Area, with the Master Contract/Subcontract Database described in Chapter II, in order to examine whether there is statistical evidence of disparities in the State's own contracting activity.

The statistical evidence reported in Chapter II has already established from which specific industries the State of Maryland procures goods and services as well as from which geographic areas it draws the majority of its prime contractors and subcontractors. In addition, the statistical evidence reported in Chapter III has established what percentage of all firms in the State's geographic and product markets are M/WBEs.

To determine whether M/WBEs have been underutilized on contracting by the State of Maryland, we should ideally examine public expenditures that were *not* subject to goals. The State has a long and well established policy of setting goals on many of its contracting activities, especially in the areas of Construction and AE-CRS. Given this, the data for State contracts with subcontracting goals may not show evidence of underutilization, even if such underutilization exists in the private sector of the State's relevant market area. Instead, the data on such contracts is most informative for examining the effectiveness of the State's efforts during the study time period to encourage M/WBE utilization.

If State of Maryland M/WBE utilization is still significantly less than M/WBE availability, particularly on such contracts for which no subcontracting goals were established, then that data would be consistent with the persistence of discrimination, in conjunction with the private sector data examined in Chapters IV, V and VII.

This chapter, therefore, will document:

- To what extent have M/WBEs been utilized in the contracting and subcontracting activities of the State of Maryland during the study period.
- To what extent does a disparity exist, if any, between M/WBE utilization and M/WBE availability in the relevant market area.
- Whether M/WBE utilization and disparity ratios differ between contracts where M/WBE goals were established and contracts where such goals were not established.

The M/WBE utilization results below are reported using two different, but related, measures—dollars awarded and dollars paid. We report this information for Construction, AE-CRS, Maintenance, IT, Services, CSE, and for all six categories combined. Results for M/WBEs are reported by race and gender as well as for minorities as a group and for all minorities and women combined.

## **B. M/WBE Utilization for All Contracting Dollars**

For this Study, we examined 16,931 prime contracts or purchase orders and 35,675 associated subcontracts active during state fiscal years 2010-2014. These contracts and purchases had a total award value of \$22.27 billion and a total paid value of \$13.41 billion.<sup>157</sup> NAICS codes, M/WBE status, and detailed race and gender status for the prime contractors and subcontractors included in the Master Contract/Subcontract Database were established through extensive computer-assisted cross-referencing of firms in our database with firms in the (a) Maryland Department of Transportation Directory of Certified Firms; (b) the master directory of M/WBEs assembled for this study;<sup>158</sup> (c) Dun & Bradstreet; (d) company profiles drawn from American Business Information, Standard & Poor's, and other sources; and (e) the results of our race/gender misclassification/non-classification surveys.<sup>159</sup>

### **1. Utilization Across All Contracts**

From Tables 6.1 and 6.2 we see that, as a group during the study period, M/WBEs were awarded 19.98 percent and paid 19.15 percent of all contract and subcontract dollars in Construction; awarded 28.58 percent and paid 28.99 percent of all contract and subcontract dollars in AE-CRS; awarded 14.78 percent and paid 18.33 percent of all contract and subcontract dollars in Maintenance; awarded 34.47 percent and paid 41.67 percent of all contract and subcontract dollars in IT; awarded 11.75 percent and paid 11.19 percent of all contract and subcontract dollars in Services; and awarded 7.12 percent and paid 7.26 percent of all contract and subcontract dollars in CSE. Altogether, M/WBEs were awarded 18.57 percent and paid 18.51 percent of all contract and subcontract dollars during the study period. Among M/WBEs, firms owned by nonminority females were awarded the largest fraction of contracting and subcontracting dollars (both awarded and paid), followed in descending order by firms owned by African Americans, Asians, Hispanics, and Native Americans.

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<sup>157</sup> Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals. *See also* footnote 36.

<sup>158</sup> *See* Chapter III, Section B.2, for more information on how NERA's master directory was compiled.

<sup>159</sup> *See* Chapter III, Section B, for more information on the misclassification/non-classification surveys.

**Table 6.1. M/WBE Utilization at the State of Maryland–All Contracts (Dollars Awarded)**

M/WBE Type	Procurement Category						
	Construction (%)	AE-CRS (%)	Maintenance (%)	IT (%)	Services (%)	CSE (%)	Overall (%)
African American	5.20	4.59	4.53	5.12	6.93	0.91	5.14
Hispanic	4.33	1.51	1.48	6.45	0.71	0.83	2.74
Asian	2.60	14.91	0.80	16.71	0.79	2.40	4.65
Native American	0.43	0.06	0.05	0.10	0.01	0.04	0.19
Minority Total	12.55	21.07	6.86	28.39	8.44	4.18	12.72
Nonminority female	7.43	7.51	7.91	6.08	3.31	2.94	5.85
M/WBE Total	19.98	28.58	14.78	34.47	11.75	7.12	18.57
Non-M/WBE Total	80.02	71.42	85.22	65.53	88.25	92.88	81.43
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	8,422,190,102	2,544,538,584	1,427,160,377	1,977,040,832	5,853,224,032	2,048,499,182	22,272,653,109
Prime Contracts	1,900	691	1,456	1,291	2,154	9,439	16,931
Subcontracts	25,030	2,539	2,246	690	3,761	1,409	35,675

Source: NERA Master Contract/Subcontract Database. Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

**Table 6.2. M/WBE Utilization at the State of Maryland –All Contracts (Dollars Paid)**

M/WBE Type	Procurement Category						
	Construction (%)	AE-CRS (%)	Maintenance (%)	IT (%)	Services (%)	CSE (%)	Overall (%)
African American	5.05	4.53	6.81	6.54	7.10	0.99	4.99
Hispanic	3.79	1.47	3.00	9.97	1.25	1.00	3.02
Asian	2.44	15.55	1.34	20.52	0.34	2.44	4.45
Native American	0.38	0.06	0.03	0.00	0.02	0.05	0.21
Minority Total	11.66	21.61	11.18	37.03	8.70	4.47	12.66
Nonminority female	7.49	7.38	7.15	4.64	2.49	2.79	5.84
M/WBE Total	19.15	28.99	18.33	41.67	11.19	7.26	18.51
Non-M/WBE Total	80.85	71.01	81.67	58.33	88.81	92.74	81.49
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total (\$)	6,767,135,431	1,536,406,206	356,061,208	682,925,936	2,440,087,984	1,631,017,251	13,413,634,017
Prime Contracts	1,666	691	1,324	1,191	1,971	9,439	16,282
Subcontracts	22,064	2,539	1,271	410	2,310	1,409	30,003

Source and Notes: See Table 6.1.

Non-M/WBEs were awarded and paid the vast majority of contract and subcontract dollars in all categories. Non-M/WBEs received approximately 80 percent of Construction awards, 71 percent of AE-CRS awards, 85 percent of Maintenance awards, 66 percent of IT awards, 88 percent of Services awards, 93 percent of CSE awards, and 81 percent of awards overall. Measured by payments, non-M/WBEs received approximately 81 percent of Construction payments, 71 percent of AE-CRS payments, 82 percent of Maintenance payments, 58 percent of IT payments, 89 percent of Services payments, 93 percent of CSE payments, and 81 percent of payments overall.

## 2. Contracts With Goals versus Contracts Without Goals

Across and within procurement categories as well as M/WBE groups, M/WBE utilization in general is statistically significantly lower when no M/WBE goals are established for contracts than when they are. The State of Maryland data in this regard strongly suggest that without the State MBE Program, M/WBE participation in State contracting would be greatly diminished.

The prime contract records that NERA received from the State contain fields indicating whether or not an MBE goal was established for a particular contract. However, this information was not always recorded by the respective State agencies in our Study. Of the 16,931 prime contracts in our database, only 50.4 percent included data regarding MBE goals. However, these 50.4 percent of prime contracts accounted for 88.6 percent of all award dollars and 87.8 percent of all paid dollars. A similar pattern was in each major procurement category as well:<sup>160</sup>

- Of 1,655 contracts in Construction with MBE goal data, 1,396 (84.5%) had M/WBE goals, and those contracts accounted for 97.2 percent of dollars awarded and 97.9 percent of dollars paid.
- Of 532 contracts analyzed in AE-CRS with MBE goal data, 391 (73.5%) had M/WBE goals, and those contracts accounted for 99.3 percent of dollars awarded and 99.3 percent of dollars paid.
- Of 1,070 contracts analyzed in Maintenance with MBE goal data, 166 (15.5%) had M/WBE goals, and those contracts accounted for 82.8 percent of dollars awarded and 80.7 percent of dollars paid.
- Of 477 contracts analyzed in IT with MBE goal data, 98 (20.6%) had M/WBE goals, and those contracts accounted for 79.0 percent of dollars awarded and 76.2 percent of dollars paid.
- Of 776 contracts analyzed in Services with MBE goal data, 190 (24.5%) had M/WBE goals, and those contracts accounted for 71.8 percent of dollars awarded and 66.9 percent of dollars paid.

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<sup>160</sup> We also observed two types of contracts where the master contract was made by DGS or DBM and typically had MBE goals, but purchases by other agencies from these master contracts were recorded as if they did not have goals. We removed these records from the analysis so as not to bias the results. We also removed Emergency contracts.

- Of 3,736 contracts analyzed in CSE with MBE goal data, 148 (4.0%) had M/WBE goals, and those contracts accounted for 29.2 percent of dollars awarded and 31.0 percent of dollars paid.
- Of 8,246 contracts analyzed overall with MBE goal data, 2,389 (29.0%) had M/WBE goals, and those contracts accounted for 83.7 percent of dollars awarded and 84.3 percent of dollars paid.

Table 6.3 shows the M/WBE utilization percentage on contracts with goals compared to contracts without goals. The figures are provided overall and for each of the six major procurement categories. They are shown for M/WBEs as a group, minorities as a group, and for each individual M/WBE type. M/WBE utilization is larger on contracts with goals than on contracts without goals in 80 percent of all cases (78 of 97 comparisons). These differences are also statistically significant in 76 percent of all cases (74 of 97 cases), meaning that it is unlikely the differences can be attributed to chance variation alone.

**Table 6.3. M/WBE Utilization at the State of Maryland—Contracts with M/WBE Goals versus Contracts without M/WBE Goals**

M/WBE Type	Dollars Awarded		Dollars Paid	
	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals
<b>OVERALL</b>				
African American	5.6	1.6	5.2	1.5
Hispanic	5.0	1.0	4.7	1.0
Asian	4.8	3.0	4.9	2.9
Native American	0.32	0.05	0.31	0.06
Minority Total	15.8	5.6	15.1	5.5
Nonminority female	10.3	3.2	10.5	3.2
M/WBE Total	26.1	8.9	25.6	8.7
<b>CONSTRUCTION</b>				
African American	5.2	2.2	5.3	2.2
Hispanic	6.6	0.6	6.3	0.7
Asian	2.6	0.1	2.5	0.1
Native American	0.52	0.01	0.49	0.00
Minority Total	15.0	2.9	14.6	2.9
Nonminority female	11.1	6.7	11.1	7.4
M/WBE Total	26.0	9.5	25.7	10.4

# M/WBE Utilization and Disparity in State of Maryland Contracting Activity

M/WBE Type	Dollars Awarded		Dollars Paid	
	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals
<b>AE-CRS</b>				
African American	<b>3.6</b>	<b>1.3</b>	<b>3.4</b>	<b>1.6</b>
Hispanic	2.05	1.80	2.24	2.19
Asian	<b>12.5</b>	<b>19.9</b>	12.9	17.3
Native American	<b>0.04</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>
Minority Total	18.2	23.0	18.5	21.1
Nonminority female	<b>8.6</b>	<b>3.2</b>	<b>9.7</b>	<b>3.6</b>
M/WBE Total	26.8	26.1	28.2	24.7
<b>MAINTENANCE</b>				
African American	<b>10.1</b>	<b>3.8</b>	<b>8.6</b>	<b>3.8</b>
Hispanic	5.2	4.9	4.3	5.2
Asian	2.7	1.3	<b>3.7</b>	<b>1.3</b>
Native American	0.06	0.22	0.10	0.25
Minority Total	<b>18.0</b>	<b>10.3</b>	<b>16.7</b>	<b>10.6</b>
Nonminority female	<b>10.9</b>	<b>3.0</b>	<b>11.8</b>	<b>2.1</b>
M/WBE Total	<b>28.9</b>	<b>13.3</b>	<b>28.5</b>	<b>12.7</b>
<b>IT</b>				
African American	<b>7.6</b>	<b>1.2</b>	<b>9.7</b>	<b>0.7</b>
Hispanic	<b>8.5</b>	<b>1.6</b>	<b>7.6</b>	<b>1.3</b>
Asian	<b>22.7</b>	<b>15.3</b>	<b>22.1</b>	<b>14.2</b>
Native American	0.01	0.00	0.00	0.00
Minority Total	<b>38.8</b>	<b>18.2</b>	<b>39.5</b>	<b>16.1</b>
Nonminority female	<b>8.6</b>	<b>2.6</b>	<b>7.8</b>	<b>1.5</b>
M/WBE Total	<b>47.4</b>	<b>20.8</b>	<b>47.3</b>	<b>17.7</b>
<b>SERVICES</b>				
African American	<b>12.2</b>	<b>2.7</b>	<b>9.6</b>	<b>2.8</b>
Hispanic	1.2	0.5	0.9	0.4
Asian	<b>0.7</b>	<b>2.3</b>	<b>0.3</b>	<b>2.0</b>
Native American	0.03	0.17	0.06	0.20
Minority Total	<b>14.1</b>	<b>5.7</b>	<b>10.9</b>	<b>5.3</b>
Nonminority female	7.3	6.0	4.2	5.8
M/WBE Total	<b>21.5</b>	<b>11.8</b>	<b>15.1</b>	<b>11.2</b>

M/WBE Type	Dollars Awarded		Dollars Paid	
	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals	M/WBE Utilization (%) with goals	M/WBE Utilization (%) without goals
<b>CSE</b>				
African American	0.62	0.79	0.84	0.78
Hispanic	0.2	0.0	0.2	0.0
Asian	<b>0.9</b>	<b>1.8</b>	<b>1.0</b>	<b>1.9</b>
Native American	n/a	n/a	n/a	n/a
Minority Total	<b>1.6</b>	<b>2.7</b>	<b>2.0</b>	<b>2.7</b>
Nonminority female	<b>12.2</b>	<b>2.7</b>	<b>11.9</b>	<b>2.9</b>
M/WBE Total	<b>13.9</b>	<b>5.3</b>	<b>13.9</b>	<b>5.6</b>

Notes: (1) We conducted a series of t-tests on the percentage of dollars awarded and paid on contracts for which the State of Maryland established MBE goals versus those on which no such goals were set. Figures in **boldface** type are statistically significant within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% or better confidence interval. Figures in *italicized* type are significant within an 85% or better confidence interval; (2) “n/a” means no contracts or subcontracts were observed in this category.

When M/WBE goals *are* established, not only is M/WBE utilization greater—in many cases it is *substantially* greater. For example, Table 6.3 shows that M/WBE utilization on Construction contracts is, on average, more than three times greater when goals are established than when they are not. With only a small number of exceptions, similar differences are observed across all procurement categories and across all M/WBE types.

## C. M/WBE Disparity Analysis for All Contracting Dollars

### 1. Results by Major Procurement Category

In this section, we compare our estimates of M/WBE utilization in the State of Maryland’s contracting and subcontracting activities to our estimates of M/WBE availability in the relevant geographic and product market area. Tables 6.4 and 6.5 present the results of this comparison for all prime contracts and purchase orders examined during the study period, using dollars awarded and dollars paid, respectively, as the metric of utilization.

In each of these tables, the figures in the utilization column include both prime contract and subcontract dollars and were derived as described above in this chapter. The figures in the availability column were derived as described in Chapter III. The disparity ratio, which appears in the final column of each table, is derived by dividing utilization by availability and then multiplying the result by 100. A disparity ratio below 100 indicates that M/WBEs did not participate in State of Maryland contracting and subcontracting at a level that is consistent with their estimated availability in the relevant market area. A disparity ratio is said to be substantively significant, or large, if its value is approximately 80 or less. A disparity ratio is said

to be statistically significant if it is unlikely to be caused by chance alone.<sup>161</sup> In the tables below, statistical significance is indicated by one or more asterisks to the right of the disparity ratio.

When all procurement categories are combined, Tables 6.4 and 6.5 show that adverse disparities are observed for firms owned by African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group. These disparities are large for African Americans, Hispanics, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group; and they are statistically significant for African Americans, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group.

In Construction, adverse disparities are observed for firms owned by African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group. These disparities are large for African Americans, Hispanics (paid dollars only), Native Americans, minorities as a group, nonminority females, and M/WBEs as a group; and they are statistically significant for African Americans, Hispanics (paid dollars only), Native Americans (paid dollars only), minorities as a group, nonminority females, and M/WBEs as a group.

In AE-CRS, adverse disparities are observed for firms owned by African Americans, Hispanics, Native Americans, nonminority females, and M/WBEs as a group (award dollars only). These disparities are large for African Americans, Hispanics, Native Americans, and nonminority females; and they are statistically significant for African Americans, Hispanics (paid dollars only), Native Americans, and nonminority females.

In Maintenance, adverse and large disparities are observed for firms owned by African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group. These disparities are statistically significant for African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group.

In IT, adverse disparities are observed for firms owned by African Americans, Native Americans, minorities as a group (award dollars only), nonminority females and M/WBEs as a group. Large disparities are observed for firms owned by African Americans, Native Americans, nonminority females, and M/WBEs as a group (award dollars only). These disparities are statistically significant for African Americans, Native Americans, minorities as a group (award dollars only), nonminority females, and M/WBEs as a group.

In Services, adverse and large disparities are observed for firms owned by African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group. These disparities are statistically significant for African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group.

In CSE, adverse and large disparities are observed for firms owned by African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs

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<sup>161</sup> See Appendix A below, “Constitutional significance or substantive significance.”

as a group. These disparities are statistically significant for African Americans, Hispanics, Asians, Native Americans, minorities as a group, nonminority females, and M/WBEs as a group.

**Table 6.4. Utilization, Availability, and Disparity Results for State of Maryland, Overall and by Contracting Category–All Contracts (Dollars Awarded)**

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	5.14	11.61	44.3 ****
Hispanic	2.74	3.59	76.2
Asian	4.65	5.41	86.0
Native American	0.19	1.04	18.2 ****
Minority-owned	12.72	21.64	58.8 ****
Nonminority female	5.85	14.24	41.1 ****
M/WBE total	18.57	35.89	51.7 ****
CONSTRUCTION			
African American	5.20	10.66	48.7 ****
Hispanic	4.33	4.91	88.2
Asian	2.60	2.65	97.9
Native American	0.43	0.77	56.0
Minority-owned	12.55	18.99	66.1 ****
Nonminority female	7.43	13.94	53.3 ****
M/WBE total	19.98	32.93	60.7 ****
AE-CRS			
African American	4.59	8.61	53.3 ****
Hispanic	1.51	2.22	68.0
Asian	14.91	4.82	
Native American	0.06	1.22	4.8 ****
Minority-owned	21.07	16.87	
Nonminority female	7.51	12.16	61.8 ****
M/WBE total	28.58	29.02	98.5
MAINTENANCE			
African American	4.53	13.87	32.7 ****
Hispanic	1.48	4.78	31.0 ****
Asian	0.80	3.48	23.0 ****
Native American	0.05	1.87	2.6 ****
Minority-owned	6.86	23.99	28.6 ****
Nonminority female	7.91	12.44	63.6 ****
M/WBE total	14.78	36.44	40.6 ****
IT			
African American	5.12	15.55	32.9 ****
Hispanic	6.45	3.53	
Asian	16.71	13.01	
Native American	0.10	1.20	8.6 ****
Minority-owned	28.39	33.29	85.3 **
Nonminority female	6.08	13.26	45.9 ****
M/WBE total	34.47	46.55	74.0 ****

## M/WBE Utilization and Disparity in State of Maryland Contracting Activity

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
<b>SERVICES</b>			
African American	6.93	13.52	51.3 *****
Hispanic	0.71	3.08	23.1 *****
Asian	0.79	5.53	14.3 *****
Native American	0.01	1.06	1.0 *****
Minority-owned	8.44	23.19	36.4 *****
Nonminority female	3.31	17.67	18.7 *****
M/WBE total	11.75	40.86	28.7 *****
<b>CSE</b>			
African American	0.91	10.50	8.7 *****
Hispanic	0.83	3.24	25.6 *****
Asian	2.40	6.10	39.4 *****
Native American	0.04	0.85	4.3 *****
Minority-owned	4.18	20.70	20.2 *****
Nonminority female	2.94	13.02	22.6 *****
M/WBE total	7.12	33.71	21.1 *****

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe.

Notes: (1) “\*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “\*\*” indicates the disparity is significant at a 10% level or better (90% confidence). “\*\*\*” indicates significance at a 5% level or better (95% confidence). “\*\*\*\*\*” indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

**Table 6.5. Utilization, Availability, and Disparity Results for State of Maryland Contracting, Overall and by Contracting Category–All Contracts (Dollars Paid)**

<b>Contracting Category &amp; M/WBE Type</b>	<b>Utilization</b>	<b>Availability</b>	<b>Disparity Ratio</b>
<b>OVERALL</b>			
African American	4.99	11.18	44.6 ****
Hispanic	3.02	3.84	78.5
Asian	4.45	4.65	95.6
Native American	0.21	1.03	20.5 ****
Minority-owned	12.66	20.70	61.2 ****
Nonminority female	5.84	14.04	41.6 ****
M/WBE total	18.51	34.75	53.3 ****
<b>CONSTRUCTION</b>			
African American	5.05	10.26	49.2 ****
Hispanic	3.79	5.10	74.3 **
Asian	2.44	2.68	90.7
Native American	0.38	0.79	48.8 ***
Minority-owned	11.66	18.83	61.9 ****
Nonminority female	7.49	13.65	54.9 ****
M/WBE total	19.15	32.48	59.0 ****
<b>AE-CRS</b>			
African American	4.53	8.46	53.5 ****
Hispanic	1.47	2.21	66.5 *
Asian	15.55	4.83	
Native American	0.06	1.23	4.7 ****
Minority-owned	21.61	16.73	
Nonminority female	7.38	11.93	61.9 ****
M/WBE total	28.99	28.66	
<b>MAINTENANCE</b>			
African American	6.81	16.16	42.1 ****
Hispanic	3.00	5.42	55.4 ****
Asian	1.34	3.52	37.9 ****
Native American	0.03	2.22	1.4 ****
Minority-owned	11.18	27.33	40.9 ****
Nonminority female	7.15	13.49	53.0 ****
M/WBE total	18.33	40.82	44.9 ****
<b>IT</b>			
African American	6.54	15.54	42.1 ****
Hispanic	9.97	3.55	
Asian	20.52	12.67	
Native American	0.00	1.19	0.0 ****
Minority-owned	37.03	32.95	
Nonminority female	4.64	13.43	34.5 ****
M/WBE total	41.67	46.37	89.8 **

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
SERVICES			
African American	7.10	13.92	51.0 *****
Hispanic	1.25	2.91	42.9 *****
Asian	0.34	4.82	7.0 *****
Native American	0.02	1.15	1.5 *****
Minority-owned	8.70	22.79	38.2 *****
Nonminority female	2.49	18.18	13.7 *****
M/WBE total	11.19	40.97	27.3 *****
CSE			
African American	0.99	10.78	9.2 *****
Hispanic	1.00	3.15	31.7 *****
Asian	2.44	6.33	38.5 *****
Native American	0.05	0.83	5.5 *****
Minority-owned	4.47	21.09	21.2 *****
Nonminority female	2.79	13.20	21.1 *****
M/WBE total	7.26	34.29	21.2 *****

Source and Notes: *See* Table 6.4.

## 2. Detailed Industry Level Results

Utilization, availability and disparity results comparable to those presented above in Tables 6.4 and 6.5 have also been produced according to detailed Industry Groups. In the interest of space, these tables are presented in Appendix E.

### D. Current Availability versus Expected Availability

Finally, Table 6.6 provides a comparison between current levels of M/WBE availability for the State of Maryland and levels that we would expect to observe in a race- and gender-neutral market area. The latter, referred to as “expected availability,” is derived by dividing the current availability figures, as documented in Table 3.15, by the disparity ratios documented in column (3) of Table 4.24. If no business formation disparity is present in the relevant market area, the disparity ratio will be equal to 100 and expected availability will be equivalent to current availability. In cases where adverse business formation disparities are present in the relevant market area, the disparity ratio will be less than 100 and, consequently, expected availability will exceed current availability.

Expected M/WBE availability in the State of Maryland’s market area exceeds current M/WBE availability by substantial margins in 88 of 98 cases, or 90 percent.

**Table 6.6. Current Availability and Expected Availability for State of Maryland Contracting**

Contracting Category & M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
<b>OVERALL</b>				
African American	11.61	16.10	11.18	15.50
Hispanic	3.59	4.19	3.84	4.48
Asian	5.41	5.36	4.65	4.61
Native American	1.04	1.45	1.03	1.44
Minority	21.64	26.79	20.70	25.63
Nonminority female	14.24	16.46	14.04	16.23
M/WBE total	35.89	44.72	34.75	43.30
<b>CONSTRUCTION</b>				
African American	10.66	19.67	10.26	18.93
Hispanic	4.91	6.75	5.10	7.01
Asian	2.65	2.15	2.68	2.17
Native American	0.77	1.15	0.79	1.18
Minority	18.99	28.03	18.83	27.80
Nonminority female	13.94	20.72	13.65	20.29
M/WBE total	32.93	49.02	32.48	48.35
<b>AE-CRS</b>				
African American	8.61	14.40	8.46	14.14
Hispanic	2.22	3.18	2.21	3.16
Asian	4.82	7.41	4.83	7.42
Native American	1.22	1.97	1.23	1.99
Minority	16.87	25.33	16.73	25.12
Nonminority female	12.16	17.93	11.93	17.59
M/WBE total	29.02	45.66	28.66	45.10
<b>MAINTENANCE</b>				
African American	13.87	24.68	16.16	28.75
Hispanic	4.78	6.09	5.42	6.91
Asian	3.48	5.15	3.52	5.21
Native American	1.87	2.51	2.22	2.98
Minority	23.99	33.49	27.33	38.15
Nonminority female	12.44	17.68	13.49	19.17
M/WBE total	36.44	51.82	40.82	58.05
<b>IT</b>				
African American	15.55	28.27	15.54	28.25
Hispanic	3.53	4.35	3.55	4.38
Asian	13.01	15.58	12.67	15.18
Native American	1.20	1.89	1.19	1.87
Minority	33.29	47.02	32.95	46.54
Nonminority female	13.26	15.43	13.43	15.63
M/WBE total	46.55	61.71	46.37	61.47

# M/WBE Utilization and Disparity in State of Maryland Contracting Activity

Contracting Category & M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
<b>SERVICES</b>				
African American	13.52	21.47	13.92	22.11
Hispanic	3.08	3.77	2.91	3.56
Asian	5.53	5.03	4.82	4.39
Native American	1.06	1.69	1.15	1.84
Minority	23.19	29.60	22.79	29.09
Nonminority female	17.67	19.01	18.18	19.56
M/WBE total	40.86	50.09	40.97	50.23
<b>CSE</b>				
African American	10.50	14.78	10.78	15.18
Hispanic	3.24	3.75	3.15	3.64
Asian	6.10	5.67	6.33	5.89
Native American	0.85	1.10	0.83	1.07
Minority	20.70	24.15	21.09	24.61
Nonminority female	13.02	15.08	13.20	15.29
M/WBE total	33.71	40.45	34.29	41.15

Source: See Tables 3.15 and 4.24.

## **VII. Anecdotal Evidence of Disparities in the State of Maryland Market Area**

### **A. Introduction**

We have presented a variety of economic and statistical findings above that are consistent with, and indicative of, the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to the State of Maryland's contracting and procurement activities. Chapters IV and V, in particular, have documented large and statistically significant disparities in the State's relevant markets adversely impacting the competitiveness and utilization of minority and female entrepreneurs. In most cases, commercial loan denial rates were higher, the cost of credit was higher, business formation rates are lower, and business owner earnings are lower—even when comparisons are restricted to similarly situated businesses and business owners.

As a complement to these quantitative findings, we gathered anecdotal evidence regarding disparities, perceived barriers, and differences in treatment of business owners on the basis of race and/or gender in the State of Maryland's market area. First, we conducted a large scale survey of business establishments in the market area—both M/WBE and non-M/WBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination. We find that M/WBEs in the State's markets report suffering business-related discrimination in substantial numbers and often with statistically significantly greater frequency than non-M/WBEs (*See* Tables 7.3 and 7.4). These differences tend to remain substantial when firm size and owner characteristics are held constant (*See* Tables 7.5 and 7.6). Additionally, we find that M/WBE firms that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals often are not hired—or even solicited—by these prime contractors to work on projects without M/WBE goals (*See* Tables 7.9 and 7.10). The relative lack of M/WBE hiring and, even more significantly, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the State of Maryland and other public entities in the relevant market area, shows that business discrimination continues to fetter M/WBE business opportunities. We conclude that the statistical evidence presented in this Study is consistent with these anecdotal accounts of contemporary business discrimination.

The remainder of this chapter is organized as follows. We first discuss the mail survey results in Section B. In Section B.1, we discuss the survey questionnaire, sample frame, and response rate. Section B.2 presents evidence on willingness of firms to do business with the public sector. Section B.3 presents the key findings from the M/WBE and non-M/WBE respondents concerning disparate treatment. Section B.4 presents the key findings concerning the impact of the current business environment on M/WBEs' ability to conduct their businesses. Section B.5 presents key findings to our questions concerning whether prime contractors solicit or hire M/WBEs for work on public or private contracts without M/WBE goals. Section B.6 then examines whether M/WBEs and non-M/WBEs that responded to the mail surveys are representative of all M/WBEs and non-M/WBEs in the relevant markets. To do so, we surveyed a random sample of M/WBEs and non-M/WBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents.

Finally, Section C describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing businesses in the State of Maryland's market area.

## **B. Business Experience Surveys**

### **1. Survey Questionnaire, Sample, and Responses**

The survey questionnaire asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in the State of Maryland's relevant markets. We also asked about the relative frequency with which firms that have been used as subcontractors, subconsultants, or suppliers by prime contractors on contracts *with* M/WBE goals have been hired to work, or even solicited to bid, on similar contracts *without* M/WBE goals. Finally, we posed questions about the characteristics of the firm, including firm age, owner's education, employment size and revenue size, to facilitate comparisons of similarly situated firms.

The mail survey sample was stratified by industry and drawn directly from the Master M/WBE Directory and the Baseline Business Universe compiled for this Study using the custom census methodology outlined in this chapter.<sup>162</sup> Firms were sampled randomly within strata. M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs. Of 18,362 businesses that received the questionnaire,<sup>163</sup> 1,706 (9.3%) provided usable responses.<sup>164</sup> The distribution of total responses according to the race and gender of the business owner, by major contracting category, appears in Table 7.1.

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<sup>162</sup> See Chapter II for a discussion of how the product and geographic markets were defined. See Chapter III for a discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

<sup>163</sup> These figures exclude surveys that were returned undelivered or were otherwise undeliverable.

<sup>164</sup> The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

**Table 7.1. Race, Gender and Contracting Category of Mail Survey Respondents**

<b>Group</b>	<b>Construction</b>	<b>Architecture &amp; Engineering</b>	<b>Professional &amp; Other Services</b>	<b>Goods &amp; Supplies</b>	<b>Total</b>
African American	89	28	226	20	363
Hispanic	59	9	36	3	107
Asian	23	41	88	10	162
Native American	2	2	9	1	14
Minorities with unknown Race/Ethnicity	-	-	-	-	-
Nonminority Women	138	63	320	40	561
M/WBE Total	311	143	679	74	1,207
Nonminority Men	221	73	173	32	499
Total	532	216	852	106	1,706

Source: NERA mail survey.

## **2. Willingness of Firms to Contract with the Public Sector**

The probative value of anecdotal evidence of discrimination increases when it comes from active businesses in the relevant geographic and procurement markets. The value of such evidence increases further when it comes from firms that have actually worked or attempted to work for the public sector within those markets. Such is the present case.

As shown below in Table 7.2, there is an observable link between the firms responding to our mail survey and the public sector of the Maryland area economy. All respondents operate establishments in the relevant geographic and product markets. Moreover, significant numbers of survey respondents have worked or attempted to do work for the State of Maryland or other public entities in the market area in the last five years. This is observed for virtually all types of M/WBEs and non-M/WBEs in all procurement categories, and the importance of the public sector is even more significant for M/WBEs than it is for non-M/WBEs. Overall, 43 percent of non-M/WBEs and 54 percent of M/WBEs have worked or attempted to work for the State of Maryland or some other public entity in the market area in the previous five years. For M/WBEs in Construction and A&E, the figures are significantly higher than this, at 65 percent and 62 percent, respectively.

**Table 7.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years**

Worked or Attempted to Work, Last 5 Years	African American	Hispanic	Asian	Native American	Minority Total	Non-minority Female	M/WBE Total	Non-minority Male
<b>ALL INDUSTRIES</b>								
With State of Maryland	51.0%	47.7%	48.8%	28.6%	49.4%	32.0%	41.3%	29.7%
	(363)	(107)	(162)	(14)	(646)	(557)	(1203)	(495)
With Other Public Entity in Market Area	54.4%	48.1%	54.0%	21.4%	52.6%	40.3%	46.9%	36.2%
	(360)	(106)	(161)	(14)	(641)	(553)	(1194)	(489)
With any Public Entity in Market Area	62.6%	58.5%	61.1%	35.7%	61.0%	46.4%	54.2%	43.4%
	(361)	(106)	(162)	(14)	(643)	(554)	(1197)	(491)
<b>CONSTRUCTION</b>								
With State of Maryland	57.3%	55.9%	69.6%	100.0%	59.0%	42.3%	51.6%	35.3%
	(89)	(59)	(23)	(2)	(173)	(137)	(310)	(221)
With Other Public Entity in Market Area	63.6%	53.4%	78.3%	100.0%	62.6%	54.4%	59.0%	37.9%
	(88)	(58)	(23)	(2)	(171)	(136)	(307)	(219)
With any Public Entity in Market Area	67.0%	65.5%	82.6%	100.0%	69.0%	59.1%	64.6%	46.6%
	(88)	(58)	(23)	(2)	(171)	(137)	(308)	(219)
<b>ARCHITECTURE &amp; ENGINEERING</b>								
With State of Maryland	57.1%	44.4%	63.4%	50.0%	58.8%	33.9%	47.9%	31.5%
	(28)	(9)	(41)	(2)	(80)	(62)	(142)	(73)
With Other Public Entity in Market Area	71.4%	44.4%	62.5%	50.0%	63.3%	48.3%	56.8%	47.2%
	(28)	(9)	(40)	(2)	(79)	(60)	(139)	(72)
With any Public Entity in Market Area	71.4%	55.6%	68.3%	100.0%	68.8%	54.1%	62.4%	52.8%
	(28)	(9)	(41)	(2)	(80)	(61)	(141)	(72)
<b>PROFESSIONAL &amp; OTHER SERVICES</b>								
With State of Maryland	48.2%	36.1%	38.6%	11.1%	43.7%	27.4%	36.0%	22.9%
	(226)	(36)	(88)	(9)	(359)	(318)	(677)	(170)
With Other Public Entity in Market Area	49.6%	38.9%	44.3%	0.0%	45.9%	33.1%	39.9%	31.5%
	(224)	(36)	(88)	(9)	(357)	(317)	(674)	(168)
With any Public Entity in Market Area	60.4%	47.2%	53.4%	11.1%	56.1%	39.9%	48.5%	37.9%
	(225)	(36)	(88)	(9)	(358)	(316)	(674)	(169)
<b>GOODS &amp; SUPPLIES</b>								
With State of Maryland	45.0%	33.3%	30.0%	0.0%	38.2%	30.0%	33.8%	22.6%
	(20)	(3)	(10)	(1)	(34)	(40)	(74)	(31)
With Other Public Entity in Market Area	45.0%	66.7%	50.0%	0.0%	47.1%	37.5%	41.9%	23.3%
	(20)	(3)	(10)	(1)	(34)	(40)	(74)	(30)
With any Public Entity in Market Area	55.0%	66.7%	50.0%	0.0%	52.9%	42.5%	47.3%	29.0%
	(20)	(3)	(10)	(1)	(34)	(40)	(74)	(31)

Source: NERA mail survey.

Note: Total number of valid responses in parentheses.

### 3. Experiences of Disparate Treatment in Business Dealings

The survey included questions about instances of disparate treatment based on race and/or gender experienced in various business dealings during the past five years. As shown in the two rightmost columns of Table 7.3, in almost every one of the 14 categories on which they were polled, substantially more M/WBEs than non-M/WBEs reported experiencing disparate treatment, casting doubt on claims of widespread “reverse discrimination.” In many cases, these differences were also statistically significant.

On average, reports were highest among African Americans, with an overall rate of 49.7 percent, followed in descending order, by Asians (47.7%), Hispanics (44.0%), nonminority women (34.5%), and Native Americans (23.1%). By comparison, the reported rate for nonminority males was 19.8 percent. The balance of Table 7.3 shows results for each of 14 distinct types of disparate treatment that we asked about in the survey.

In all 14 categories, the ratio of the reported amount of disparate treatment between M/WBEs and non-M/WBEs is large—more than 150 percent of the reported rate for non-M/WBEs. In all 14 categories, this difference is statistically significant as well. In most categories, the reported incidence of disparate treatment is far more severe than even this. Specifically:

- In applying for surety bonds the incidence of disparate treatment was almost 2300% higher than the reported rate for non-M/WBEs;
- In applying for commercial loans and in obtaining price quotes from suppliers or subcontractors the incidence of disparate treatment was approximately 700% higher than the reported rate for non-M/WBEs;
- In hiring workers from union hiring halls and in having to do inappropriate or extra work not required of comparable non-M/WBEs the incidence of disparate treatment was approximately 600% higher than the reported rate for non-M/WBEs;
- In having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs the incidence of disparate treatment was over 500% higher than the reported rate for non-M/WBEs;
- In applying for commercial or professional insurance and in working or attempting to work on private sector prime contracts the incidence of disparate treatment was approximately 450% higher than the reported rate for non-M/WBEs;
- In working or attempting to work on private sector subcontracts and in functioning without hindrance or harassment on the work site the incidence of disparate treatment was over 400% higher than the reported rate for non-M/WBEs;
- In joining or dealing with trade associations the incidence of disparate treatment was almost 300% higher than the reported rate for non-M/WBEs;

- In working or attempting to work on public sector subcontracts and in receiving timely payment for work performed the incidence of disparate treatment was over 200% higher than the reported rate for non-M/WBEs;
- In working or attempting to work on public sector prime contracts the incidence of disparate treatment was just under 200% higher than the reported rate for non-M/WBEs.

Table 7.3 also provides evidence of the positive impact of public sector M/WBE programs in the Maryland economy. Three of the categories with the smallest relative differences between M/WBEs and non-M/WBEs—by far—were working or attempting to work on public sector prime contracts, working or attempting to work on public sector subcontracts, and receiving timely payment for work performed. In these categories, reports of disparate treatment were 1.87, 2.38 times, and 2.29 times more frequent, respectively.

**Table 7.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings**

Business Dealings	African American	Hispanic	Asian	Native American	Minority Total	Non-minority Female	M/WBE Total	Non-minority Male
Applying for commercial loans	<b>36.5%</b> <b>(189)</b>	<b>23.2%</b> <b>(69)</b>	<b>20.3%</b> <b>(79)</b>	14.3% (7)	<b>29.7%</b> <b>(344)</b>	<b>11.8%</b> <b>(262)</b>	<b>21.9%</b> <b>(606)</b>	<b>3.0%</b> <b>(231)</b>
Applying for surety bonds	<b>17.9%</b> <b>(134)</b>	<b>12.3%</b> <b>(57)</b>	<b>10.5%</b> <b>(57)</b>	<b>16.7%</b> <b>(6)</b>	<b>15.0%</b> <b>(254)</b>	<b>7.5%</b> <b>(200)</b>	<b>11.7%</b> <b>(454)</b>	<b>0.5%</b> <b>(195)</b>
Applying for commercial or professional insurance	<b>18.5%</b> <b>(222)</b>	<b>7.8%</b> <b>(77)</b>	<b>6.9%</b> <b>(102)</b>	<b>20.0%</b> <b>(10)</b>	<b>13.6%</b> <b>(411)</b>	3.8% (343)	<b>9.2%</b> <b>(754)</b>	<b>2.0%</b> <b>(294)</b>
Hiring workers from union hiring halls	<b>8.7%</b> <b>(104)</b>	4.9% (41)	0.0% (37)	<b>14.3%</b> <b>(7)</b>	<b>6.3%</b> <b>(189)</b>	3.7% (109)	<b>5.4%</b> <b>(298)</b>	<b>0.9%</b> <b>(113)</b>
Obtaining price quotes from suppliers or subcontractors	<b>24.5%</b> <b>(200)</b>	<b>19.2%</b> <b>(73)</b>	<b>18.8%</b> <b>(80)</b>	0.0% (8)	<b>21.6%</b> <b>(361)</b>	<b>13.2%</b> <b>(302)</b>	<b>17.8%</b> <b>(663)</b>	<b>2.5%</b> <b>(275)</b>
Working or attempting to obtain work on public sector prime contracts	<b>35.0%</b> <b>(197)</b>	21.2% (66)	<b>30.8%</b> <b>(91)</b>	11.1% (9)	<b>30.9%</b> <b>(363)</b>	17.2% (261)	<b>25.2%</b> <b>(624)</b>	<b>13.5%</b> <b>(223)</b>
Working or attempting to obtain work on public sector subcontracts	<b>39.6%</b> <b>(202)</b>	<b>27.8%</b> <b>(72)</b>	<b>29.3%</b> <b>(92)</b>	10.0% (10)	<b>34.0%</b> <b>(376)</b>	<b>16.3%</b> <b>(264)</b>	<b>26.7%</b> <b>(640)</b>	<b>11.2%</b> <b>(223)</b>
Working or attempting to obtain work on private sector prime contracts	<b>36.8%</b> <b>(209)</b>	<b>19.4%</b> <b>(72)</b>	<b>26.6%</b> <b>(94)</b>	9.1% (11)	<b>30.3%</b> <b>(386)</b>	<b>16.2%</b> <b>(297)</b>	<b>24.2%</b> <b>(683)</b>	<b>5.2%</b> <b>(250)</b>
Working or attempting to obtain work on private sector subcontracts	<b>37.2%</b> <b>(215)</b>	<b>28.4%</b> <b>(74)</b>	<b>26.1%</b> <b>(88)</b>	9.1% (11)	<b>32.2%</b> <b>(388)</b>	<b>14.9%</b> <b>(289)</b>	<b>24.8%</b> <b>(677)</b>	<b>6.0%</b> <b>(248)</b>
Receiving timely payment for work performed	<b>30.6%</b> <b>(219)</b>	<b>32.5%</b> <b>(80)</b>	<b>29.7%</b> <b>(111)</b>	27.3% (11)	<b>30.6%</b> <b>(421)</b>	<b>23.0%</b> <b>(378)</b>	<b>27.0%</b> <b>(799)</b>	<b>11.8%</b> <b>(313)</b>
Functioning without hindrance or harassment on the work site	<b>20.1%</b> <b>(194)</b>	<b>21.4%</b> <b>(70)</b>	<b>18.6%</b> <b>(97)</b>	<b>25.0%</b> <b>(8)</b>	<b>20.1%</b> <b>(369)</b>	<b>14.5%</b> <b>(331)</b>	<b>17.4%</b> <b>(700)</b>	<b>4.1%</b> <b>(292)</b>
Joining or dealing with construction trade associations	<b>16.4%</b> <b>(134)</b>	<b>11.1%</b> <b>(63)</b>	8.6% (58)	12.5% (8)	<b>13.3%</b> <b>(263)</b>	5.7% (228)	<b>9.8%</b> <b>(491)</b>	<b>3.3%</b> <b>(212)</b>
Having to do inappropriate or extra work not required of comparable non-M/WBEs	<b>26.6%</b> <b>(184)</b>	<b>20.0%</b> <b>(70)</b>	<b>27.2%</b> <b>(92)</b>	<b>25.0%</b> <b>(8)</b>	<b>25.4%</b> <b>(354)</b>	<b>14.7%</b> <b>(313)</b>	<b>20.4%</b> <b>(667)</b>	<b>3.4%</b> <b>(266)</b>
Double standards not required of comparable non-M/WBEs	<b>24.0%</b> <b>(204)</b>	<b>16.7%</b> <b>(72)</b>	<b>19.0%</b> <b>(100)</b>	<b>22.2%</b> <b>(9)</b>	<b>21.3%</b> <b>(385)</b>	<b>12.9%</b> <b>(318)</b>	<b>17.5%</b> <b>(703)</b>	<b>3.2%</b> <b>(279)</b>
In any one of the business dealings listed above	<b>49.7%</b> <b>(286)</b>	<b>44.0%</b> <b>(91)</b>	<b>47.7%</b> <b>(130)</b>	23.1% (13)	<b>47.5%</b> <b>(520)</b>	<b>34.5%</b> <b>(446)</b>	<b>41.5%</b> <b>(966)</b>	<b>19.8%</b> <b>(354)</b>

Source: NERA mail survey. Notes: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

Table 7.4 represents the same disparate treatment information as in Table 7.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked by each group according to the frequency with which disparate treatment was reported, with “1” representing the most frequent and “14” representing the least frequent.<sup>165</sup> The most frequently reported problem overall for M/WBEs—as opposed to the one with the most relative difference from non-M/WBEs—was receiving timely payment for work performed. The next five most frequently reported, in descending order of frequency, were working or attempting to work on public sector subcontracts,<sup>166</sup> working or attempting to work on public sector prime contracts, working or attempting to work on private sector subcontracts,<sup>167</sup> and working or attempting to work on private sector prime contracts.

Some courts and other observers have asserted that findings such as those in Tables 7.3 and 7.4 tell us nothing about discrimination against M/WBEs since, even though they are current and come directly from the businesses reporting disparate treatment, even though they are restricted to the relevant geographic and product markets, even though they are disaggregated by contracting category and by race and gender, they still do not compare firms of similar size, qualifications, or experience. We have argued elsewhere against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination.<sup>168</sup> Nevertheless, if disparities are still observed even when such “capacity” factors are held constant, the case becomes even more compelling.

The results reported next in Table 7.5 show that even when levels of size, qualifications, and experience are held constant across firms, measures of disparate treatment of M/WBEs are still large, adverse, and statistically significant.

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<sup>165</sup> In the case of ties, not all 14 ranks will be present.

<sup>166</sup> In these two survey questions, “public sector” refers to public sector entities in general and not the State of Maryland specifically.

<sup>167</sup> *Ibid.*

<sup>168</sup> Wainwright and Holt (2010), 65-67; Wainwright (2000), 86-87.

**Table 7.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings (Rankings)**

<b>Business Dealings</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Minority Total</b>	<b>Non-minority Female</b>	<b>M/WBE Total</b>
Applying for commercial loans	4	4	7	6	6	10	6
Applying for surety bonds	12	11	11	5	11	11	11
Applying for commercial or professional insurance	11	13	13	4	12	13	13
Hiring workers from union hiring halls	14	14	14	6	14	14	14
Obtaining price quotes from suppliers or subs	8	9	9	11	8	8	8
Working or attempting to obtain work on public sector prime contracts	5	6	1	8	3	2	3
Working or attempting to obtain work on public sector subcontracts	1	3	3	9	1	3	2
Working or attempting to obtain work on private sector prime contracts	3	8	5	10	5	4	5
Working or attempting to obtain work on private sector subcontracts	2	2	6	10	2	5	4
Receiving timely payment for work performed	6	1	2	1	4	1	1
Functioning without hindrance or harassment on the work site	10	5	10	2	10	7	10
Joining or dealing with trade associations	13	12	12	7	13	12	12
Having to do inappropriate or extra work not required of comparable non-M/WBEs	7	7	4	2	7	6	7
Having to meet quality or performance standards not required of comparable non-M/WBEs	9	10	8	3	9	9	9

Source: See Table 7.1.

In Table 7.5, we report the results from a series of Probit regressions using the mail survey data on disparate treatment.<sup>169</sup> As indicated earlier, the survey questionnaire collected data related to each firm's size, qualifications, and experience. The reported estimates from these models can be interpreted as changes or differences in the probability of disparate treatment conditional on the control variables. The estimates in the table show large differences in disparate treatment probabilities between M/WBEs and non-M/WBEs. In column (1) of Table 7.5 (in which the regression model contains only M/WBE status and contracting category indicators), the estimated coefficient of 0.241 on the M/WBE variable indicates that the likelihood of experiencing disparate treatment for M/WBE firms is 24.1 percentage points higher than that for non-M/WBE firms.<sup>170</sup> This difference is statistically significant. Column (2) of Table 7.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or gender, including the owner's education, the age of the firm, and the size of the firm measured by employment and by sales. Even after controlling for these differences, however, M/WBE firms remain 22.3 percentage points more likely than non-M/WBE firms to experience disparate treatment. These differences are statistically significant. Firm size and other "capacity"-type characteristics account for only a small portion of the disparate treatment reported by M/WBEs in the State of Maryland's market area.

The exercise is repeated in columns (3) and (4). The only difference in these columns from the earlier regressions is that the M/WBE variable is now separated into two components—one for minority-owned firms and one for nonminority-female owned firms. The results in column (3) indicate that minority-owned firms in the State of Maryland's market area are 31.9 percentage points more likely to experience disparate treatment than non-M/WBE firms. When controls are added in column (4), this difference falls only slightly to 29.3 percentage points, indicating that controlling for other "capacity"-type factors makes only a limited difference in the incidence of disparate treatment. These differences are statistically significant. The differences for nonminority female-owned firms are similar, showing a 20.1 percentage point difference with only the industry controls and an only slightly smaller 19.4 percentage point difference when the full set of capacity-type controls is added. These differences are statistically significant.

The exercise is repeated a final time in columns (5) and (6) with separate indicators for each type of M/WBE. The results for nonminority females are nearly identical to those in columns (3) and (4). For African American-owned firms, the differential is 36.1 percentage points in column (5), falling slightly to 34.4 percentage points after the full set of controls is added. These differences are statistically significant. For Hispanic-owned firms, the differential is 26.9 percentage points in column (5), falling just slightly to 24.1 percentage points after the full set of controls is added. These differences are statistically significant. For Asian-owned firms, the differential is 33.3 percentage points in column (5), falling just slightly to 31.6 percentage points after the full set of controls is added. These differences are statistically significant. For Native American-owned firms, the differential is 9.2 percentage points in column (5), falling to -1.8 percent after the full

<sup>169</sup> See Chapter IV for a description of Probit regression.

<sup>170</sup> This estimate largely replicates the raw difference in disparate treatment rates between M/WBE and non-M/WBE firms reported in the last row of Table 7.3. The raw differential observed there (41.5% – 19.8% = 21.7%) differs slightly from the 24.1% differential reported here since the regression specification also controls for industry category.

set of controls is added. The differences for Native Americans, however, are not statistically significant.

**Table 7.5. Prevalence of Disparate Treatment Facing M/WBEs**

	(1)	(2)	(3)	(4)	(5)	(6)
M/WBE	0.241 (8.05)	0.223 (5.82)				
Minority			0.319 (8.95)	0.293 (6.38)		
Nonminority Female			0.201 (5.34)	0.194 (4.13)	0.203 (5.38)	0.197 (4.17)
African American					0.361 (8.64)	0.344 (6.34)
Hispanic					0.269 (4.51)	0.241 (3.24)
Asian					0.333 (6.26)	0.316 (4.60)
Native American					0.092 (0.62)	-0.018 (-0.11)
Owner's Education (3 indicator variables)	No	Yes	No	Yes	No	Yes
Firm Age (4 indicators)	No	Yes	No	Yes	No	Yes
Employment size bracket (6 indicators)	No	Yes	No	Yes	No	Yes
Sales/revenue size bracket (4 indicators)	No	Yes	No	Yes	No	Yes
Industry category (3 indicators)	Yes	Yes	Yes	Yes	Yes	Yes
N	1320.00	897.00	1320.00	897.00	1320.00	897.00
Pseudo R <sup>2</sup>	0.05	0.07	0.06	0.07	0.06	0.08
Chi <sup>2</sup>	79.47	78.50	95.03	85.23	100.76	91.49
Log likelihood						

Source: See Table 7.1.

Note: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. A t-statistic of 1.96 (1.64) or larger indicates that the result is significant within a 95 (90) percent confidence interval.

**Table 7.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing**

Business Dealings	African American	Hispanic	Asian	Native American	Minority Total	Non-minority Female	M/WBE Total
Applying for commercial loans	<b>44.1%</b> (5.57)	<b>42.6%</b> (4.19)	<b>32.8%</b> (3.27)	0.0% (0.00)	<b>32.0%</b> (5.24)	<b>19.0%</b> (3.04)	<b>16.9%</b> (4.51)
Applying for surety bonds	<b>37.6%</b> (3.97)	<b>29.3%</b> (2.76)	<b>26.8%</b> (2.37)	0.0% (0.00)	<b>22.6%</b> (3.63)	<b>18.9%</b> (2.87)	<b>9.8%</b> (3.43)
Applying for commercial or professional insurance	<b>18.3%</b> (4.05)	2.8% (0.57)	<b>11.6%</b> (2.09)	<b>27.4%</b> (1.80)	<b>11.5%</b> (3.49)	3.7% (1.21)	<b>5.8%</b> (2.70)
Hiring workers from union hiring halls	<b>1.3%</b> (2.07)	2.0% (1.48)	0.0% (0.00)	0.0% (0.00)	<b>0.6%</b> (1.69)	0.3% (0.76)	0.2% (1.48)
Obtaining price quotes from suppliers or subcontractors	<b>31.8%</b> (4.72)	<b>33.7%</b> (3.84)	<b>38.4%</b> (4.20)	0.0% (0.00)	<b>25.5%</b> (4.96)	<b>18.9%</b> (3.65)	<b>14.2%</b> (4.57)
Working or attempting to obtain work on public sector prime contracts	<b>26.3%</b> (3.97)	<b>18.0%</b> (1.99)	<b>24.3%</b> (2.99)	0.0% (0.00)	<b>20.3%</b> (3.81)	<b>11.1%</b> (1.96)	<b>13.9%</b> (3.26)
Working or attempting to obtain work on public sector subcontracts	<b>42.1%</b> (5.75)	<b>39.9%</b> (4.23)	<b>32.8%</b> (3.72)	0.0% (0.00)	<b>32.0%</b> (5.55)	<b>16.7%</b> (2.67)	<b>20.3%</b> (4.65)
Working or attempting to obtain work on private sector prime contracts	<b>43.9%</b> (6.11)	<b>28.5%</b> (3.05)	<b>39.9%</b> (4.55)	0.0% (0.00)	<b>31.6%</b> (5.70)	<b>19.5%</b> (3.30)	<b>19.2%</b> (4.95)
Working or attempting to obtain work on private sector subcontracts	<b>39.0%</b> (5.60)	<b>39.3%</b> (4.27)	<b>35.5%</b> (4.06)	0.0% (0.00)	<b>30.6%</b> (5.61)	<b>18.8%</b> (3.16)	<b>19.2%</b> (4.88)
Receiving timely payment for work performed	<b>21.6%</b> (3.85)	<b>20.9%</b> (2.76)	<b>18.8%</b> (2.67)	12.1% (0.78)	<b>18.7%</b> (4.14)	<b>14.2%</b> (3.10)	<b>14.2%</b> (4.01)
Functioning without hindrance or harassment on the work site	<b>25.0%</b> (4.41)	<b>18.8%</b> (2.45)	<b>33.3%</b> (4.29)	<b>22.1%</b> (1.69)	<b>20.8%</b> (4.72)	<b>16.5%</b> (3.75)	<b>12.8%</b> (4.54)
Joining or dealing with construction trade associations	<b>15.1%</b> (2.96)	8.1% (1.44)	6.4% (1.04)	<b>25.3%</b> (1.64)	<b>9.9%</b> (2.66)	3.1% (0.88)	<b>5.4%</b> (2.05)
Having to do inappropriate or extra work not required of comparable non-M/WBEs	<b>36.7%</b> (5.08)	<b>37.3%</b> (3.98)	<b>47.5%</b> (4.96)	<b>32.3%</b> (1.64)	<b>31.2%</b> (5.52)	<b>23.2%</b> (4.19)	<b>17.3%</b> (5.16)
Having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs	<b>25.1%</b> (4.31)	<b>18.1%</b> (2.35)	<b>31.0%</b> (4.03)	<b>22.9%</b> (1.66)	<b>20.3%</b> (4.53)	<b>14.6%</b> (3.19)	<b>12.5%</b> (4.17)
In any one of the business dealings listed above	<b>34.4%</b> (6.34)	<b>24.1%</b> (3.24)	<b>31.6%</b> (4.60)	-1.8% (-0.11)	<b>29.3%</b> (6.38)	<b>19.4%</b> (4.13)	<b>22.3%</b> (5.82)

Source: See Table 7.1. Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. A t-statistic of 1.96 (1.64) or larger indicates that the result is significant within a 95 (90) percent confidence interval; (2) Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

The regression models reported in Table 7.5 used as their dependent variable an indicator of whether or not a survey respondent reported having been treated less favorably in *any* of the 14 different types of business dealings described in the first column of Table 7.3. We re-estimated the regression model reported in Column (2) of Table 7.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 7.6. As Table 7.6 shows:

- In 14 of 14 categories, the differences for African American-owned firms are large, adverse and statistically significant.
- In 11 of 14 categories, the differences for Hispanic-owned firms are large, adverse and statistically significant.
- In 12 of 14 categories, the differences for Asian-owned firms are large, adverse and statistically significant.
- In 5 of 14 categories, the differences for Native American-owned firms are large, adverse and statistically significant.
- In 14 of 14 categories, the differences for minority-owned firms as a group are large, adverse and statistically significant.
- In 11 of 14 categories, the differences for nonminority female-owned firms as a group are large, adverse and statistically significant.
- In 13 of 14 categories, the differences for minority- and women-owned firms as a group are large, adverse and statistically significant.

## 4. Impact of Current Business Environment on Ability to Win Contracts

The survey also asked questions about some common features of the business environment to determine which factors were perceived by M/WBEs as serious impediments to obtaining contracts. As Table 7.7 indicates, substantial percentages of both M/WBEs and non-M/WBEs report that certain factors, such as “Late Notice of Bid/Proposal Deadlines,” “Large project sizes,” “Cost of bidding and proposing,” “Obtaining working capital,” “Price of supplies or materials,” and “Bonding requirements” make it harder or impossible for their firms to obtain contracts. Among non-M/WBEs, for example, 42 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, 32 percent reported that the large project sizes had this effect, 28 percent reported that the cost of bidding or proposing had this effect, 25 percent reported that obtaining working capital had this effect, 25 percent reported that the price of supplies or materials had this effect, and 23 percent reported that bonding requirements had this effect. The figures for M/WBEs in these six categories, however, at 57 percent, 54 percent, 43 percent, 45 percent, 34 percent, and 44 percent, respectively, are substantially and statistically significantly higher than those for non-M/WBEs. Indeed, as Table 7.7 shows, M/WBEs reported statistically significantly more difficulty than non-M/WBEs on all nine factors about which they were surveyed. The rates at which M/WBEs

reported difficulty with these factors ranged from 130 percent to 230 percent higher than the rates reported by non-M/WBEs.

**Table 7.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts—Sample Differences**

<b>Business Environment</b>	<b>African American</b>	<b>Hispanic</b>	<b>Asian</b>	<b>Native American</b>	<b>Minority Total</b>	<b>Non-minority Female</b>	<b>M/WBE Total</b>	<b>Non-M/WBEs</b>
Bonding Requirements	<b>48.9%</b> (135)	<b>37.5%</b> (56)	<b>46.7%</b> (60)	<b>100.0%</b> (2)	<b>46.2%</b> (253)	<b>41.3%</b> (179)	<b>44.2%</b> (432)	<b>23.3%</b> (159)
Insurance Requirements	<b>27.4%</b> (215)	<b>18.9%</b> (74)	14.6% (89)	28.6% (7)	<b>22.9%</b> (385)	<b>17.5%</b> (263)	<b>20.7%</b> (648)	<b>9.8%</b> (256)
Previous Experience Requirements	<b>38.5%</b> (218)	<b>23.0%</b> (74)	<b>25.0%</b> (100)	16.7% (6)	<b>31.9%</b> (398)	<b>17.7%</b> (288)	<b>25.9%</b> (686)	<b>11.3%</b> (256)
Cost of Bidding or Proposing	<b>53.5%</b> (213)	<b>40.8%</b> (71)	<b>42.7%</b> (96)	60.0% (5)	<b>48.6%</b> (385)	<b>35.2%</b> (264)	<b>43.1%</b> (649)	<b>27.8%</b> (241)
Large Project Sizes	<b>66.0%</b> (194)	<b>48.5%</b> (68)	<b>54.2%</b> (96)	<b>40.0%</b> (5)	<b>59.2%</b> (363)	<b>47.1%</b> (242)	<b>54.4%</b> (605)	<b>32.1%</b> (215)
Price of Supplies or Materials	<b>42.7%</b> (192)	<b>43.1%</b> (65)	<b>23.3%</b> (73)	20.0% (5)	<b>38.2%</b> (335)	<b>29.0%</b> (238)	<b>34.4%</b> (573)	<b>25.0%</b> (228)
Obtaining Working Capital	<b>62.0%</b> (208)	<b>49.2%</b> (65)	38.4% (86)	25.0% (4)	<b>53.7%</b> (363)	31.3% (227)	<b>45.1%</b> (590)	<b>25.4%</b> (205)
Late Notice of Bid/Proposal Deadlines	<b>60.6%</b> (198)	<b>58.1%</b> (62)	<b>57.8%</b> (90)	33.3% (3)	<b>59.2%</b> (353)	52.7% (224)	<b>56.7%</b> (577)	<b>42.0%</b> (212)
Prior Dealings with Public Agency of Private Owner	<b>24.9%</b> (201)	<b>23.7%</b> (59)	<b>18.3%</b> (93)	0.0% (5)	<b>22.6%</b> (358)	<b>11.4%</b> (255)	<b>17.9%</b> (613)	<b>10.0%</b> (241)

Source and Notes: See Table 7.3.

To control for firm and owner characteristics, we used a regression technique known as ordered Probit.<sup>171</sup> Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—(1) “helps me,” (2) “has no effect,” (3) “makes it harder,” or (4) “makes it impossible”—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, the education level of the primary owner of the firm and the major industry group. To report results from ordered Probit analysis, we use a “+” to indicate that M/WBEs had more difficulty than non-M/WBEs with similar firm characteristics, and a “-” to indicate that M/WBEs had less difficulty than non-M/WBEs with similar firm characteristics.

<sup>171</sup> For a textbook discussion of ordered Probit, see, for example, Greene (2011).

Table 7.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, all nine of the factors we inquired about prove to be greater difficulties for M/WBEs than for non-M/WBEs (as indicated by the “+” sign), even when “capacity”-type factors such as employment size, revenue size, years in business, and owner education are held constant. The disparities observed regarding previous experience requirements, the cost of bidding or proposing, large project sizes, and prior dealings with the owner, in particular, were statistically significant with respect to non-M/WBEs.

**Table 7.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible for M/WBEs to Obtain Contracts, Regression Results**

Business Environment	M/WBEs
Bonding Requirements	+*
Insurance Requirements	+*
Previous Experience Requirements	+*
Cost of Bidding or Proposing	+*
Large Project Sizes	+*
Price of Supplies or Materials	+*
Obtaining Working Capital	+*
Late Notice of Bid/Proposal Deadlines	+*
Prior Dealings with Public Agency or Private Owner	+†

Source: See Table 7.1.

Notes: A plus (+) indicates that a group is more likely than non-M/WBEs to report difficulty with business environment factors. A minus (–) indicates that a group is less likely than non-M/WBEs to experience difficulty. An asterisk (\*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

## 5. Solicitation and Use of M/WBEs on Public and Private Projects Without Affirmative Action Goals

Our second to last survey question asked, “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses also *hire* your firm on projects (public or private) *without* such goals or requirements?” As Table 7.9 shows, 74 percent of African American-owned firms, 52 percent of Hispanic-owned firms, 62 percent of Asian-owned firms, 70 percent of Native American-owned firms, and 53 percent of nonminority female-owned firms responded that this seldom or never occurs. For minorities as a group the figure was 67 percent and for M/WBEs as a group the figure was 64 percent.

**Table 7.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never Hire Them on Projects without Such Goals**

M/WBE Group	All Industries	Construction	Maintenance	AE-CRS	IT	Services	CSE
African American	74.4% (219)	50.8% (63)		69.6% (23)		86.2% (123)	90.0% (10)
Hispanic	52.2% (69)	45.5% (44)		42.9% (7)		70.6% (17)	100.0% (1)
Asian	61.5% (104)	47.1% (17)		65.6% (32)		63.3% (49)	66.7% (6)
Native American	70.0% (10)	50.0% (2)		50.0% (2)		83.3% (6)	- (0)
Minority Total	67.2% (402)	48.4% (126)		64.1% (64)		79.0% (195)	82.4% (17)
Nonminority Female	52.8% (123)	48.1% (27)		50.0% (16)		56.5% (62)	50.0% (18)
M/WBE Total	63.8% (525)	48.4% (153)		61.3% (80)		73.5% (257)	65.7% (35)

Source and Note: See Table 7.2.

At least one court has held that the failure of prime contractors to even *solicit* qualified minority- and women-owned firms is a “market failure” that is important evidence in helping to establish a government’s compelling interest in remedying such failures.<sup>172</sup> Among the evidence relied upon for this holding was a NERA survey similar to the current one in which approximately 50 percent of the respondents reported that they were seldom or never solicited for non-goals work.<sup>173</sup>

Our final survey question therefore asked “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) *without* such goals or requirements?” Responses to this question are tabulated in Table 7.10, which shows the same pattern as in Table 7.9. In Table 7.10, 69 percent of African American-owned firms, 47 percent of Hispanic-owned firms, 57 percent of Asian-owned firms, 82 percent of Native American-owned firms, and 54 percent of nonminority female-owned firms responded that this seldom or never occurs. For minorities as a group the figure was 62 percent and for M/WBEs as a group the figure was 60 percent. Similar results were observed in each major contracting category as well.

<sup>172</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp. 2d 725, 737 (N.D. Ill. 2003).

<sup>173</sup> *Id.* See also *Concrete Works of Colorado v. City and County of Denver*, 321 F.3d 950 at 987-988.

**Table 7.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never *Solicit* Them on Projects without Such Goals**

<b>M/WBE Group</b>	<b>All Industries</b>	<b>Construction</b>	<b>Maintenance</b>	<b>AE-CRS</b>	<b>IT</b>	<b>Services</b>	<b>CSE</b>
African American	68.9% (225)	47.8% (67)		63.6% (22)		79.4% (126)	90.0% (10)
Hispanic	47.1% (68)	46.7% (45)		16.7% (6)		62.5% (16)	0.0% (1)
Asian	56.5% (108)	36.8% (19)		62.5% (32)		58.0% (50)	71.4% (7)
Native American	81.8% (11)	100.0% (2)		50.0% (2)		85.7% (7)	- (0)
Minority Total	62.4% (412)	46.6% (133)		58.1% (62)		72.9% (199)	77.8% (18)
Nonminority Female	53.7% (134)	54.8% (31)		47.4% (19)		53.8% (65)	57.9% (19)
M/WBE Total	60.3% (546)	48.2% (164)		55.6% (81)		68.2% (264)	67.6% (37)

Source and Note: *See* Table 7.2.

## 6. Impact of Survey Non-Response

Since the mail survey was voluntary, it is important to account for the fact that many recipients did not respond. As a check on the usefulness of the information obtained from our mail survey respondents, we conducted telephone surveys of 11,000 randomly selected M/WBEs and non-M/WBEs that did not respond to our mail survey. The purpose of this “non-response” survey is to test whether their answers to key survey questions were different from the answers of respondents in ways that would impact the relevance of the information obtained from our mail survey respondents.

We obtained complete responses from 2,261 firms, for a raw response rate of 21 percent. After removing duplicate records, records where the firm was no longer in business, and records where the telephone number was disconnected or the listing was otherwise unreachable, the effective response rate increased to 33 percent.

For the non-respondent survey, we selected three questions from the mail survey to pose to non-respondents. The first question asked whether large project sizes helped or harmed the firm’s ability to obtain public or private sector contracts. The second question asked whether and how frequently the firm had experienced discrimination in attempting to apply for commercial loans. The final question asked whether and how frequently the firm had experienced discrimination in working or attempting to work on private sector prime contracts.

Not surprisingly, one difference that we observed between respondents and non-respondents was that respondents had a greater general interest in the questions being asked. Among survey respondents, only 31.0 percent indicated that the question about large project sizes was “not applicable.” Among non-respondents, the figure was 46.2 percent. Among survey respondents, 43.3 percent indicated that discrimination in applying for commercial loans never occurred, compared to 84.0 percent among non-respondents. Among survey respondents, 42.0 percent indicated that discrimination in working or attempting to work on private sector prime contracts never occurred, compared to 82.5 percent among non-respondents. This phenomenon was apparent regardless of whether the firm was minority-owned, women-owned, or nonminority male-owned.

Among those firms to which the question was applicable, 31.2 percent of minority-owned firms that did not respond to the mail survey indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among those that did respond to the survey, the figure was 59.2 percent. This difference is statistically significant. Among female-owned firms that did not respond to the mail survey, 22.8 percent indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among those that did respond to the survey, the figure was 50.4 percent. This difference is statistically significant.<sup>174</sup> Among nonminority male-owned firms that did not respond to the mail survey, 12.4 percent indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among

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<sup>174</sup> The percentages reported in this section may differ slightly from comparable figures reported elsewhere in Chapter VII, since minorities of unknown race or ethnicity were excluded from the tallies in the mail survey.

those that did respond to the survey, the figure was 32.1 percent. This difference is also statistically significant.

These results demonstrate two key findings. First, reports that large project sizes make it harder or impossible for firms to obtain contracts are greater among mail survey respondents than among non-respondents, regardless of M/WBE status. Second, substantially more M/WBEs than non-M/WBEs report that large project sizes make it harder or impossible for them to obtain contracts, regardless of whether they responded to the mail survey or not. Moreover, the ratio of M/WBEs to non-M/WBEs reporting difficulty in this regard is actually greater among non-respondents, than among respondents, implying that the estimate of adverse disparity for M/WBE firms with regard to large project sizes that was reported from the mail survey (*See* Tables 7.7 and 7.8) may be somewhat understated relative to the universe of firms as a whole.

Among those firms to which the question was applicable, 10.4 percent of minority-owned firms that did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in applying for commercial loans. Among those that did respond to the survey, the figure was 29.7 percent. This difference is statistically significant. For female-owned firms, 5.4 percent of those that did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in applying for commercial loans. Among those that did respond to the survey, the figure was 16.8 percent. This difference is statistically significant. Among nonminority male-owned firms that did not respond to the mail survey, 4.2 percent indicated that they had experienced one or more instances of discrimination during the previous five years in applying for commercial loans. Among those that did respond to the survey, the figure was 3.0 percent. This difference is not statistically significant.

Once again we see that substantially more M/WBEs than non-M/WBEs report experiencing discrimination in applying for commercial loans during the previous five years, regardless of whether they responded to the mail survey or not. The ratio of M/WBEs to non-M/WBEs reporting discrimination is greater among respondents than non-respondents, indicating that the estimate of adverse disparity for M/WBE firms with regard to discrimination in applying for commercial loans reported from the mail survey (*See* Tables 7.3, 7.4 and 7.6) may be somewhat larger than in the universe of firms as a whole.

Among those firms to which the question was applicable, 9.7 percent of minority-owned firms that did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in working or attempting to work on private sector prime contracts. Among those that did respond to the survey, the figure was 30.3 percent. For female-owned firms, 7.1 percent of those that did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in working or attempting to work on private sector prime contracts. Among those that did respond to the survey, the figure was 22.5 percent. Both of these differences are statistically significant. Among nonminority male-owned firms that did not respond to the mail survey, 5.0 percent indicated that they had experienced one or more instances of discrimination during the previous five years in working or attempting to work on private sector prime contracts. Among those that did respond to the survey, the figure was 5.2 percent. This difference is not statistically significant.

We see from these results that reports of discrimination in working or attempting to work are greater among mail survey respondents than among non-respondents, regardless of M/WBE status, although the difference with respect to non-M/WBEs in this instance is not statistically significant. As observed with the other questions, more M/WBEs than non-M/WBEs reported experiencing discrimination in working or attempting to work on private sector prime contracts, regardless of whether they responded to the mail survey or not. However, the ratio of M/WBEs to non-M/WBEs reporting this type of discrimination is somewhat larger among respondents than non-respondents, indicating that the estimate of adverse disparity for M/WBE firms with regard to discrimination in working or attempting to work on private sector prime contracts shown above (*See* Tables 7.3, 7.4 and 7.6) may be somewhat larger than in the universe of firms as a whole.

In conclusion, the results of our non-respondent survey indicate that both M/WBEs and non-M/WBEs are more likely to have responded to the mail survey if they had experienced the difficulties identified in the mail survey and also that M/WBEs reported greater difficulties than non-M/WBEs whether or not they responded to the mail survey. For all three of the questions we examined, this means the actual disparities facing M/WBEs in the State of Maryland market area are not dissimilar to those that we estimated based on our mail survey results. For all three questions examined, the basic qualitative finding of more problems and greater disparities being observed among M/WBEs than among non-M/WBEs is unchanged.

### **C. Business Owner Interviews**

To explore additional anecdotal evidence of possible discrimination against minorities and women (collectively, M/WBEs) in the State of Maryland market area, we conducted 30 focus group sessions, including a stakeholder meeting with minority- and women-owned business leaders. We also conducted four group interviews with State staff including senior procurement officers, M/WBE liaisons and Governor's Office of Minority Affairs ("GOMA") personnel. The focus group sessions were held in every region of the State: Western, Eastern, Central and Southern Maryland and included minority and nonminority firms doing business with the State of Maryland. Combined, we met with 183 business owners or representatives, and received written comments as well, from a cross section of the industries from which the State of Maryland procures goods and services. Firms ranged in size from large national businesses to much smaller and newer firms in all major industry categories (*i.e.*, construction, A/E-CRS, maintenance, IT, services and CSE). Owners' backgrounds included individuals with decades of experience in their fields as well as entrepreneurs at the start of their business careers. We sought to explore their experiences in seeking and performing public and private sector contracting opportunities, and with the State of Maryland's contracting and purchasing policies.

This effort gathered individual perspectives to augment the statistical information in the study, including that from the business experience surveys. In general, interviewees' individual experiences echoed the responses to the business experience surveys. We also elicited feedback, both positive and negative, on the State of Maryland's contracting and purchasing policies, along with corresponding recommendations for improvements. These are reported below in Chapter VIII.

The following are summaries of the issues discussed. Quotations are indented, and are intended to represent the views expressed by several participants.

### **1. Perceptions of Competence and Qualifications and Higher Performance Standards**

Many firms, both minority and nonminority, indicated that there had been significant progress in providing opportunities for minorities and women in the State of Maryland's public and private sector contracting activities. There was also a belief that many barriers remained in the State's contracting processes. Although not quantifiable, one theme in the interviews was the continuing influence of subtle and sometimes not so subtle negative perceptions and stereotypes. These stereotypes of a lack of competence infect all aspects of the M/WBEs' attempts to obtain contracts and to be treated equally in performing contract work. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities in the business world.

There is a reputation that it's hard to find a good company, a good engineer who is MBE, qualified, that we get the jobs because of this requirement, it's not because we are worthy of it.

\*\*\*\*

I do all environmental landscaping. I have a Masters in natural resource management, my B.S. and Masters in natural resources and yet, I'm still constantly—I get all the certifications I can...I'm a tree expert, I'm a fertilizer expert...but it's still not fair...I should have to do that simply because I want to [so] I'm not having to constantly prove myself as a female in the construction industry.

\*\*\*\*

One of the things, when you get a contract in from like an insurance company where they've got millions of dollars coming in and they're out of state and they need an MBE component and I call them up and he says just put the black tax on it...So we even have a name for it. Put the black tax on it.

\*\*\*\*

There are meetings that I go to and I put on a hardhat and steel toed boots just so people [know] because they're already going to discount me because I am a woman....

\*\*\*\*

I go up to this fella who was with one of the big national companies and I introduce myself. I told him that I do high performance coating...And he said to me... "Well you know, I really don't have the time to answer the phone if you have questions about the drawings."

\*\*\*\*

When I [a female construction business owner] go on a construction site and one of my [male] employees is [there]...we're 60 percent women, my firm is. The questions, to this day, if someone doesn't know us, they walk up to the two of us and they ask [the man the technical questions]....They ask [the man]. So that happens all the time.

One majority prime contractor summarized his view of the competency of minority contractors as follows:

I've seen firms surviving because of it. Yeah, I guess some of them have flourished, but most of them—I shouldn't say it, but a lot of them wouldn't exist without that crutch...In other words, if they didn't have that certification, they couldn't even exist in the business world.

M/WBE firms also complained that they are held to higher standards than their nonminority counterparts.

I've been on jobs where I walked through and I look at [the] work, and I say, "Wow, they accepted this?" Meaning that we know, when we work on it, it's never accepted like that. You got to make it better. And we're talking, [private agencies like ---] and [public agencies like ---]. And it's like they actually accepted this work by this guy, and we know if we were doing that work, we would've had to have a higher standard.

\*\*\*\*

And as a woman in construction, you have to have a thicker skin and be able to deal with this, and you have to know...your stuff 200 percent better than whoever any other person. Like, you just have to know your job, you have to know everything, because they're always going to test you.

M/WBE firms also complained that they were often paid less for the same work than the nonminority counterparts.

I remember the initial conversation was like, "You have to reduce that, because you're new, and we're trying to help get you in, which, you know, the industry is dominated by, you know, others. ...but you can't charge what they charge. I was selected to sit on the interagency rates committee [and] had the privilege to see everybody's rates and to see the minority vendor's rates are down here and everybody else's is up here, and we're providing some of the same services.

Many M/WBE firms also hold the perception that many in the State and a majority of nonminority prime contractors did not support the M/WBE program.

Each of them showed me their fuel trucks... telling me in essence that they were using us just because we are a certified MBE company. ...but they used us up to, I think, it was 25 percent and stopped...I called them, I had a meeting with them. They said, "... we met

our goal.” And it’s not because any other company was giving [them] a lower price because I said give me the invoice and I’ll match it.

\*\*\*\*

I guess the biggest thing is just the attitude of the State.

A significant number of M/WBE firms have the perception that the majority contracting community continues to engage in discrimination but it is subtle.

I’m 100 percent in agreement that racism and discrimination is alive and well in just about every industry. It’s gotten to be extremely subtle in how it’s executed these days, and so if you are not savvy enough to pick up the nuances that you’re hearing, the code words, the code phrases that are being used, then you’re going to miss it, and you might feel it and not be able to put your finger on it that it is actually discrimination...but you know that it is.

\*\*\*\*

My business card had my picture on it, and so someone said to me, “Oh, whatever you do, don’t put your picture on your card.” And I said, “Why?” ...They said, “Because you’ll never get hired because you’re Black.”

\*\*\*\*

I’m senior management on most projects I’m on. I’m like the top...When they come in, if me or you are standing here, you could be my assistant, they will go to you first. Literally, they would walk up to you and ask you.... I’ve had come into—I’m at a trailer in a file cabinet getting some files out when the office person, girl wasn’t there, they’re like. “Yeah, hon, can you tell...I’m here to see him and can you get me a cup of coffee?”

Although discrimination is considered to be subtle, M/WBE firms reported that they continue to experience some forms of blatant discrimination. Some M/WBE firms reported that nonminority prime contractors intentionally undermine the performance of M/WBE firms on State contracts.

I developed and earned the trust of the people in positions of authority. But I still have employees who work for those clients and who have literally tried to sabotage my work so that I can get out of there so they can get back to business as usual.

The experiences of WBEs illustrate the impact of the glass ceiling and negative perceptions on their efforts to develop and grow professionally in the industry.

I have gone on interviews where I am in ...the running, three people, final cut. And I have spoken to this person about the job and they were questioning me about my skill, my everything, why I bid the job. I’m looking at this person as, “What do you mean why, I bid this job?... I’m in the business of making money...And he said to me, “Well, you know, women just simply shouldn’t be here.”

\*\*\*\*

She started this company, like I said, in 1996, and she started it because her ideas weren't taken seriously in the engineering circles of the time. Her ideas about doing environmental compliance and environmental mitigation work in the face of engineering often resulted in being second thought or afterthought in the whole process...engineers in her firms were offered training, were offered an ability to go for ...certified engineer training... She, as an environmental scientist, had to pay for it herself...had to do self-improvement on her own nickel. And finally, as a woman, she was often the brunt of sexual innuendos...Those three things caused her to...put her shingle out...But those reasons, many of them still exist today. And you go into a ...design meeting of engineer firms, and you're going to see a lot of men sitting around the table and one or two women...So there is a disparity.

Several nonminority owners articulated a contrary position that the issue of race and gender should not be considered in the procurement process and that discrimination was no longer an issue.

First of all, do I think there is any discrimination? Is there some out there? Yes. Is it prevalent? I don't think so.

\*\*\*\*

But I don't think it's race as it once was.

\*\*\*\*

We've got some real issues and we have some real perception issues.... I know what the other side says. I don't share their opinion.... Ninety percent of what is going on in business has nothing to do with race or gender; it has to do with the color green, to be honest with you.

## **2. Workplace/Jobsite Harassment**

Although less overt, there was little disagreement that racism and gender discrimination continue to persist in the State of Maryland public and private sector contracting.

I had a gentleman reach out to me. He was a sub...And what he did was he sent me a lengthy email about how they're using the N word towards him and his staff.

\*\*\*\*

I actually sent one of my employees...a young lady...and she cried the whole way back...And I promised her I'd never send her back again.

### 3. Payment

There was uniform agreement across ethnic and gender groups that one of the most important issues was payment, by both the government and the prime contractor.

Nonminority construction firms reported that certain agencies in Maryland had significant delays in processing payments.

I think recently...everyone experienced delay in pay from ---...and I think it has to do with the changes in the organizations, a lot personnel change, shortage...We have noticed it's really causing some cash flow problems. Some of the invoices...routinely, six to eight months. We have invoices from last August we haven't got paid, quite a few of them.

\*\*\*\*

[O]nce you're in and you're working for them, payment's a problem, I mean 180 to 200-day DSO, day sales outstanding, is common.

\*\*\*\*

It takes a year to get your final payment...I have jobs that are two years old that I've not gotten final payment.

Minority- and women-owned firms also considered payment an issue and were particularly sensitive to the issue of payment and the negative impact delays in payment have upon their ability to succeed

I'm talking about I under-billed, so I would have been cheating myself out of two pennies because that's the way my software extended out the decimal points and it came back two pennies shorter than the way they did it, which was using two decimal points and mine took it out to four...but they kicked it back for two pennies... Started all over again.

\*\*\*\*

[I]t makes it hard to grow to do more State work. You literally have to become financially capable as a tiny company first. ...It's also something that the primes don't get.

\*\*\*\*

With the State, you know you're going to get paid, it's just a question of when, and what is that money worth...." Every day that you don't get paid in that 30 days, that dollar is depreciating. And by the time you get it, it's probably only worth two thirds of what you actually had because you[ve] been fronting it so long.

Some M/WBE companies advocated that the payment process with the State should be more transparent.

Is there any meaningful way to track payment besides calling the primes? Pennsylvania is pretty transparent. You can see when the primes get paid and when it's coming up and down through the chain.

Some M/WBE companies also expressed frustration in dealing with the prime contractors and the State on the handling of their payment issues.

So we had a contract where we had to move money. I sent a reallocation request to the prime who proceeded to just not do anything with it for three months. So, I couldn't bill for four months. Finally, after I bugged him repeatedly, nicely, because I didn't want to get my prime upset, he finally said, "Oh, my mistake. That was approved...two and half months ago."

\*\*\*\*

My primary issue with getting paid is that as a subcontractor working for a State agency through a general contractor or a prime, when they don't pay you although you've got to guarantee you are paying all your subs. The State agencies don't assist because you don't have a contract with them.

\*\*\*\*

You might be told particularly why there's a delay and sometimes they're legit. Sometimes the State may be holding up the money. It may be a short fall with the State or may be something going on with the government where they haven't gotten paid so they're not able to pay the sub. But the sub needs to be paid. When you take on as a prime, you take that responsibility on and I found that a real challenge.

This is not to imply or suggest that all M/WBEs' experiences with the State on payment issues are negative.

[B]ut if you go through the MBE office, they will advocate for you to get paid and, in fact, to the point where my prime wasn't getting paid and because I told them I was making the call because they haven't gotten paid either. So I called and they got all of us paid. But every agency doesn't have that. This was through [one particular agency].

\*\*\*\*

Working with the State, our experience has been actually very positive, and let me explain. We do a lot of work with \*\*\*. They actually go through, they will check to see that we've been paid...and that's actually been a great advantage so I'm able to say, okay, I'm going to get paid eventually, so I'm willing to take more risks on more jobs and try to get on more teams. So I think from our experience, the payment, [has been] positive.

#### 4. Exclusion from Industry Networks

The perspective of many M/WBE firms was that the close-knit nature of the construction industry intentionally or unintentionally contributes to the exclusion of minority firms from informal networks.

I've actually gone to do walkthroughs and stuff like that, and obviously it [does] exist, because there's women owned businesses... showing up with two guys. And we've been there where we've been doing the walkthrough and...it's like the good old boys club.

\*\*\*\*

I'm in a totally different field with construction, not based upon color, it is still the good old boy club and I don't fit. And just a note, I belong to some very big professional organizations for construction. I have been approached to run payroll through my company so that the person can get the bid. I refused.

\*\*\*\*

I've worked for a lot of different counties like for consultants and I've seen the different agencies throughout the State.... And honestly, to me [the good old boy network]...it's alive and well.

\*\*\*\*

In construction it's about the team. Everybody has a team. And they don't want to break that team. They're forced to break it with the MBE laws. They're forced to break it. But if they don't have to do it, they don't...if they don't have to use the women, they won't. And the same thing, they don't have to use the minority, they don't.

\*\*\*\*

We've run into the good old boy network, but it sort of is in reverse where the government employees now working with the prime contractors or subcontractors and they have previous relationships with the government employees, and they're the ones that are getting awarded the contracts because of their past history.

In an effort to avoid the negative impact of the "good old boy network" on the M/WBE's ability to conduct business, some firms have hired nonminority employees to interact with the State.

So we've been women owned for almost 15 years now...We saw a lot of our State business go away...I asked one of my senior salesmen if they would start developing a relationship with three of our top suppliers...And I will tell you, in those, in just within about a year, all of our support turned back around. They related better to him than they

related to me. And to this day, still, one of our suppliers can only deal with my white salesman.

\*\*\*\*

It got so bad, my margins were hit so hard, I went ahead and hired a middle aged white man to be president of my company so I could get a seat at the table. And guess what? My margins went up 6 percent last year as a result of doing that. We shouldn't have to do that.

\*\*\*\*

Now, here is what we've done in a couple different situations. We've actually had some non-minorities go to the table for us so that we were not there, and we got much better response in that situation [than] when it was just us presenting ourselves in the room.

\*\*\*\*

I actually hired a Caucasian guy on purpose. Sat down and explained to him what I wanted to do. I said, "Look, I'm going to give you the same call list. I want you to call all of these folks and introduce the company, ask them can we meet with them." Every one of them on the list invited him to meet with the buyer.

## 5. Applying for Commercial Loans

Many M/WBE business owners stated that they found it difficult to obtain working capital. While perhaps not the direct result of discrimination by the lender, the exclusion of minorities from construction and other industries hampers their access to family wealth and networks that support growing businesses, making access to commercial credit all the more critical.

Several M/WBEs commented on the difficulty of getting financing with commercial banks.

We wanted to get financing. We went to --- [bank] and --- [bank]. We had our accounts there. They said bring your account to us, we will take care of you and get you the loans. We asked for \$5,000 loan one time, we got denied.

\*\*\*\*

I went into a local bank and I was denied and I tried different [banks], with the relationship building and everybody was denying me. I finally went to another local bank and they looked at my credit. I had a house, I had good credit, my score was over 700, but it didn't have the history...so they wouldn't give me a loan. I had had it. I sat in the bank and I said, "This is bull, because I am a woman" and I usually don't say that, but I'd had it. I said, "Because I'm a woman business owner, you're not giving me a loan. I am not leaving here until you do."

\*\*\*\*

Some of the primes say, “You can borrow from me.” If I were to get it from a bank, it might be 6 percent. Borrowing from them, it’s 9 or 10 percent. And then if you look at the P&L, you don’t make any profit if you’re on a seven-year lease until the last year.

\*\*\*\*\*

I can’t get money from a bank. I have to self-finance. I started this with a dollar, literally. I mean I had \$1.50.

\*\*\*\*\*

I had to secure my personal home which is how I have been funding everything with an equity loan from my real estate.

\*\*\*\*\*

However, we went to the African-American newspaper, had a big meeting there, and this organization said, “Okay, let’s hear your story. We won’t look at what your revenue is. Tell me what your story is, where you’re going to go. If it makes sense to us, we’ll give you the loan.” So we had to go in front of them and pitch our speech to them and it worked and they got us the loan. But it was a little different criteria. It was not straight “let me see your numbers.” They wanted to know, “Do you have a vision to go to a certain area? Are you going to make it?” And they took a chance on us.

Access to capital in highway construction is especially important, and the lack of capital is a barrier because the field is relatively capital intensive.

At least in highway construction it really is a capital intensive program...I’ve got 50 trucks, I probably got 150 pieces of equipment. That’s a lot of capital.... [A] lot of these companies that I compete against [are] old companies like mine. They are second and third and fourth generation. [There are] very few first generation contractors in this business.

\*\*\*\*\*

[T]he nuclear gauge and that’s what you use to measure the density and moisture in asphalt and different materials....It is a unique challenge because it can be thousands of dollars just to have the license for that equipment because it has nuclear—it has radiation in it.

Some M/WBE firms expressed mixed reviews, some complimentary others more critical, regarding State-sponsored programs designed to provide access to capital.

[T]here was a program in which the casinos are generating funds and they have to take a certain amount of their money and put it aside and make the money available to businesses, MBEs, small businesses in the State of Maryland [that] do not fit the profile

that --- [bank] or --- [bank] would [use to] give you a loan and they set up a separate fund that gave us funding. Now if I wasn't in the program, I wouldn't have gotten that.

\*\*\*\*

I actually went to [the Maryland Small Business Financing Authority] when I needed financing. They actually took longer than the bank. While I was waiting for them, I went to a bank...and the bank gave me a loan while I was waiting for them.

\*\*\*\*

Of course, the first part of the program is to help people to get business, but it's also supposed to help them grow their business and expand their business where they no longer need the program anymore, and I don't think that's occurring.

## **6. Applying for Surety Bonds**

Many firms reported difficulty obtaining surety bonds. The underwriting standards were so strict and required that the firm post so much cash or have sufficient assets to secure the bond that they could not qualify. They saw bonding as a barrier to growing and taking advantage of opportunities.

I ran into problems with getting adequate bonding. Normally, in the course when you bid on a contract, they require you to have a minimum amount of bonding in place and I found that...I couldn't afford it....

\*\*\*\*

So when the contract came up for rebid, what they did was they said, "You got to bid on the contract." I said, "Okay, I'll bid the contract."...what they came up with...this last bid session? You need a \$5 million bond in order for you to come down there and work at the stadium...So I couldn't do it.

\*\*\*\*

I guess I should say it's a big challenge...the bonding issue, I think, is a big deal for MBE companies. Surety is based on financial strength, and the normal surety companies aren't going to look seriously at a lot of small companies.

\*\*\*\*

We've had people practically signing their houses away to get bonded, because we don't have the past work experience, but you can't get the experience unless you get the job, but they won't bond you unless you had a job that was \$1 million.

\*\*\*\*

Why do I, as a small business owner—again, I’m not talking about \$10 million dollars, I’m talking about a couple thousand dollars or less or whatever, why do I have to kick out so much money for a bond for a contract that I might not get or I won’t know if I get for 6 months to 12 months later?

## **7. Insurance**

Several minority- and nonminority-owned firms were concerned about the insurance requirements and the high costs, particularly for professional liability insurance.

I’ve notice[d] in Maryland; I believe in the last couple of years...the tendency to raise professional liability [insurance] limits in contracts that we are involved in. ...If you are asking \$5 million worth of special liability insurance on a \$2 million fee, it’s disproportionate. What I am just saying is...I understand why you want professional liability insurance, and I agree with it...but the amount of insurance should be commensurate with the amount of work that you’ve done, not some figure that somebody came up with.

\*\*\*\*\*

One of the unique challenges sometimes that small businesses face is getting professional liability insurance.

\*\*\*\*\*

Well...the cost to do business with the State...I’m paying a crap load of money for insurance, and I haven’t even got a bid yet, it’s for the professional liability.

## **8. Obtaining Work on Public Sector Projects**

### **a. Prime Contracts**

Most M/WBEs expressed a desire to grow their firms and move from subcontractor to prime on public sector contracts.

We are 18 years old in May and we have been prime on everything we’ve done except maybe two or three contracts and those were for reasons of political jockeying and strategy to maybe get into something we hadn’t done before so we could get that past performance, so we could then do it in the future. But, it’s a huge challenge, as we all know, being entrepreneurs.

\*\*\*\*\*

My issues are I just wish that there were better ways that I can become prime...in terms of development of staff and more long-term contracts, in terms of really becoming a bigger organization.

\*\*\*\*

We don't want to be subcontractors for our entire career, but because it's no teeth in this program, and you're only looking at percentages and percentages for each contract.

Many M/WBE firms recognized that the State's change allowing the participation of M/WBE primes to be counted toward the goal was a significant improvement in the process.

As a general contractor, prime contractor, my minority [status] did not count. So for years, if I ran the job, it didn't count. They changed it now to where my self-performance, 50 percent of the minority can count towards me, which is a good step.

Many firms were also discouraged from pursuing prime contracts because of concerns about the commitment of the State of Maryland to be inclusive in the contracting process.

[A]nother issue is that design-build projects, now they are becoming popular, because they feel that...private owners that [it] saves money to them. For the design team, there is a problem usually, because we have some recent experience that we started to make some bridging documents and then when they go to design build, they say...we hire[d] this nationwide firm. I don't need you anymore.

\*\*\*\*

[W]e got them to hold up and take a look at why it's not any minority participation on it. We finally got them to look at it again and they came back, well no minority participation. So, I had to take the director of procurement for --- into a computer and show them...minorities who are certified. So we put the NAICS code in and 11 people showed up. She had to take it back into the contracting officer and tell him he need[s] to look at it...He came back with 5 percent minority participation...Why just 5 percent?

\*\*\*\*

I'll put on the MBE reporting what my issues are, what I've been doing, I've been contacting the prime...And I was in an MBE meeting yesterday...and the MBE representative...said, "Well, I don't even open it, because I get 1,000 of these reports a month, so I don't really open the reports."

Several M/WBE owners agreed that the program opened doors and created opportunities for firms.

But I found that the MBE Program does open some doors. It does get you in front of some people. It does at least get people to try your business, try your company...I think the program is a good program.

\*\*\*\*

The MBE Program is; they've got two programs in the State of Maryland. They've got the MBE Program and they got the SBR Program. Both very good programs and if both programs didn't exist, we would not be here...where we are today with our company....

\*\*\*\*\*

Since I joined the company and had the opportunity to start learning about MBE certification and to gain other certifications, I and my colleague...we've been able to access \$2 million worth of business. It would not have been possible—95 percent of it would not have been possible without the MBE program.

M/WBE firms explained that nonminority contractor violations and complaints about the program often go unreported because of fear of retaliation.

To file a complaint, no. But has it happened, yes, on all the others. But to file a complaint, to me would be kind of putting up a red flag...Basically you'll never work again.

\*\*\*\*\*

We complained, it was a retaliation after we complained that we didn't get paid and they had been paid. It was clear discrimination....

\*\*\*\*\*

There was an [advertisement] agency...that was interested in the contract and they contacted me and asked if I'd like to be a sub...[T]hey won the contract...I never heard from them again....I called and talked to somebody and they said, "Why don't you report them to the office of fair trading practices,"...I said, "No. Because that's like raising a flag to everybody else who might want to prime with me, or sub with me, that I'm a troublemaker."

## **b. Subcontracts**

Although M/WBEs reported that it is easier to obtain subcontracts than prime contracts on public projects, the firm also expressed frustration with their prime-subcontractor relationships and the business practices of the primes.

They call you on the phone like the day of and I'll tell them, "Don't ask me for a waiver because I am going to write a letter or an email to the MBE office that you have called me up an hour before the bid."

M/WBE firms uniformly complained that the minority firms are not solicited in good faith or not used as listed in the Contractor's schedule of subcontractors.

I get a lot of requests for me to bid on proposal...It seems to me that a lot of these bigger companies when they are sending out these RFPs and they are requesting for your bid,

they are not really looking at who the DBE companies are, they are just looking for a DBE company because they have to check off a checkbox...

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[L]ater on two contracts with the biggest bus companies in the United States who used our name on contracts for the State of Maryland. We were not aware of this. But because I attend a lot of events, somebody...said, "Congratulations, you have a contract", I said, "With who?"

\*\*\*\*

I've had an experience...where the contractor bid it, put our name in, and what we were told was that the State did a random compliance check and came across the document that had our name as being a part of the award and they alerted us to the fact that we were on that award.... they ended up buying the product from another competitor....

\*\*\*\*

There are times when the prime will use us and our expertise and our past performance to win the contract, and once the contract is won, many times, we're not part of that or we don't get the dollars we were initially promised.

\*\*\*\*

But the [letters of intent] don't get enforced... They always come back with, can you do it for less? Well, I already signed a letter of intent. Where's the number on the letter of intent? And they tell us, don't fill in the number, we'll fill that in later. This is my number, why wouldn't I fill it in now?

M/WBE firms uniformly complained that the nonminority prime contractors' efforts to include M/WBE firms were pro forma and that their efforts were not designed to achieve the M/WBE participation goals.

Same thing as I keep saying, two or three days before the bid is due. So I called the office...and said, "listen I would really like to bid on this but I need more than three days...." And the women on the phone said, "Don't worry about it, we've already picked a person. We just need to send that out as part of the requirements."

\*\*\*\*

I just got a gentleman for my company now who just called me and wanted me to bid on painting at ---. He sent me the request, but would not send me the access to get into the files. So for two weeks I called the office, I sent him emails, I tried to get in touch with him. So he finally calls me and says, "Sorry, I was away for two weeks. Here I can give you the access now, but it's due tomorrow.

\*\*\*\*

The problem is, they don't give us the chance to bid in a timely fashion. If a prime contractor says, "I really want to bid on this," they should start that day looking for us, not wait.

Some M/WBE firms also complained that the type of work subcontracted by nonminority primes in professional services was not substantive and calculated only to reach their participation toward the goal.

The engineering firms don't particularly want to give away their drawings. They keep that close to their chest.... They will ask minority businesses to do certain tasks that are less favorable, perhaps landscape, simple things...

\*\*\*\*

I mean, some of the projects I've done, it's like, I can't believe I'm a PE and this is what you want me to do—I'm essentially a secretary—so that I can have this opportunity.

\*\*\*\*

They don't want to give away their core work.

\*\*\*\*

I had a senior environmental scientist go on site visits at \*\*\* facilities to take photos and notes. And he and I were in the office and he's like, "I can't believe it." I said, "Listen do the best job taking notes and photos that you possibly can."

\*\*\*\*

So I had a 30 percent goal...So the only other thing I could think of to do at the time was to go out and hire another architect...Now this is an MBE firm...But the problem was, we had trouble figuring out exactly what he was going to do...I said, "We don't have anything for design. We're going to pay you a fee. You're going to get a fee no matter what. ...We'll probably end up sending you to meetings during construction so that you can earn your part of the fee." We got into construction, that made no sense... We're just going to pay your fee.

Some M/WBE companies reported good experiences working on State construction projects as a subcontractor.

I work primarily as a subcontractor, but working with ---, --- and ---, the actual quality of the work and the exposure to those larger contracts that we get as being a subcontractor of the work, it's always been great.

## 9. Obtaining Work on Private Sector or “Non-Goals” Projects

M/WBEs providing construction services uniformly continue to find private sector prime contractor work (other than small residential and commercial projects) very difficult to obtain. Most M/WBEs, particularly those owned by African Americans and Hispanics, are often limited to public sector projects. Minority firms in particular reported that general contractors who use them successfully and repeatedly on public sector projects with M/WBE goals rarely or never contact them to bid private work.

[W]hy is it the only time that they contact me is when there's a participation required? Never am I contacted just for the private work or the negotiated work, but I am only good enough when there's participation required.

\*\*\*\*

[O]ne of the big issues for minority contractors are contractors have certain lists. Our problem is, we've got to get off the minority contractor list, because as long as you're on that list, needless to say...they call when they need a minority contractor.

\*\*\*\*

You've got to build the relationships. That's true regardless. It took a while just to build the relationships to get the MBE piece. ...So it is a long process to get there, but the bottom line is they bid every day on all kinds of projects that if indeed we could be a part of, we'd be billionaires, I suspect. But when they don't have to include you, they don't. They just don't.

\*\*\*\*

When there's no goal for women on these contracts, GC's don't hire them. It's real simple. It is not rocket science.

The paucity of private sector opportunities means that some M/WBEs, despite having the capacity to take on more projects, have to cut staff when public jobs are finished because they receive no or very limited private sector work. This negatively affects their capacity to do future projects.

## D. Conclusion

Consistent with other evidence reported in this Study, our interview information strongly suggests that M/WBEs continue to face discriminatory barriers to full and fair participation in both public and private sector contracts in the State of Maryland Market Area. This evidence includes negative perceptions of M/WBE competence and qualifications; being held to higher performance standards than for non-M/WBEs; harassment at the workplace/jobsite; abuses by primes of the payment process, and in the compliance process; exclusion from industry networks; discrimination in access to commercial loans, surety bonds, and commercial or professional insurance; difficulties in obtaining work on public sector projects; and difficulties

obtaining work on private sector or “non-goals” projects. The results of these surveys and personal interviews have yielded the types of evidence that the courts have found to be highly probative in deciding whether an entity such as the State of Maryland has been and/or continues to be a passive participant in a discriminatory market area, particularly when considered in conjunction with the numerous pieces of statistical evidence assembled and presented throughout this Study.

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## VIII. The State of Maryland's Minority Business Enterprise Program: Overview and Feedback Interviews

The State's Minority Business Enterprise ("MBE") Program seeks to provide opportunities for minority-owned and women-owned business enterprises to participate fully and fairly in State contracting. State agencies currently have an aspirational goal of spending 29 percent of all State contract and procurement dollars directly or indirectly with certified MBEs.<sup>175</sup> The State has also implemented a Small Business Reserve program that provides for a 10 percent setaside for qualified small business enterprises. The Maryland Department of Transportation ("MDOT") must also remove barriers to the participation of Disadvantaged Business Enterprises ("DBEs") and Airport Concessions Disadvantaged Business Enterprise ("ACDBEs") in its U.S. Department of Transportation-assisted contracts, and strive to achieve the aspirational goals established in its DBE and ACDBE goal-setting documents prepared pursuant to 49 C.F.R. Part 26 and Part 23, respectively. Consistent with Part 26, MDOT has also implemented a Small Business Enterprise ("SBE") Program for federally funded contracts.

### A. History of the MBE Program

The General Assembly enacted the State's first MBE Program law in 1978, based upon hearings and testimony regarding the underutilization of minorities in State procurement.<sup>176</sup> The General Assembly found that MBEs had experienced the effects of past discrimination in the award of contracts and/or subcontracts for the purchase of materials, supplies, equipment and services for the benefit of the State. The effect of such discrimination may have been to impede the economic development and expansion of minority businesses. The first MBE law required that 10 percent of the dollar value procurements for the University System of Maryland ("USM"), the Department of General Services ("DGS"), MDOT, the Food Center Authority, and the Interagency Committee on Public School Construction ("IACPSC") be awarded to MBE prime contractors and subcontractors.<sup>177</sup> This first enactment served as a policy directive to the Executive Branch.

In 1981, the MBE statute was repealed and re-enacted, with amendments providing for sanctions for firms that misrepresented themselves as MBEs.<sup>178</sup> In 1983, the MBE law was broadened to include all State departments and agencies. The Department of Budget and Management was added to the list of designated agencies, and the Board of Public Works was given the authority to draft regulations consistent with the Program's objectives.<sup>179</sup> In 1988, the State set a goal for

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<sup>175</sup> COMAR 21.11.03.01.C.1. "Certified MBEs" refers to both minority-owned and women-owned firms that have been certified under the State's MBE Program. *See* Md. Code Ann., State Fin. & Proc. §§14-301(d), (f), (k).

<sup>176</sup> Originally codified in former Article 41, §14F, Annotated Code of Maryland.

<sup>177</sup> The IACPSC operates differently than any other State agency as it provides matching funds for school construction projects to 24 separate school districts. Where State funds are used for public school construction projects overseen by the IACPSC, the State's MBE laws are applied.

<sup>178</sup> Codified in former Article 41, §14F, Annotated Code of Maryland.

<sup>179</sup> Chapter 193, Laws of Maryland, 1983, codified at Article 21, Procurement, §8-601, Annotated Code of Maryland.

certain departments of 10 percent MBE participation and adopted regulations to implement the Program.

In 1990, in response to *City of Richmond v. Croson*, Coopers & Lybrand completed a Minority Business Utilization Study that determined that Maryland possessed a compelling interest in continuing the MBE Program. Based on this study, the MBE Program was re-enacted by the Maryland General Assembly in 1990. The 1990 legislation also authorized a new study to determine the State's compliance with *Croson* to be completed before the newly established 1995 sunset date for the MBE Program.<sup>180</sup>

The State commissioned three additional studies of the MBE Program, issued in 1994,<sup>181</sup> 2001,<sup>182</sup> and 2006,<sup>183</sup> and based on these studies, the Maryland General Assembly re-enacted and reauthorized the MBE Program in 1995, 2001, and 2006, respectively.

The most recent study was completed by NERA Economic Consulting in 2011 and submitted to the Maryland General Assembly for consideration.<sup>184</sup> The General Assembly subsequently reauthorized the MBE Program<sup>185</sup> based in part on the findings from the 2011 study:

The 2011 and 2012 legislation *inter alia*: continued to require an overall aspirational statewide MBE goal, but directed that the goal number be set by regulation every two years rather than by statute; clarified the process for establishing contract-level MBE goals; eliminated statutory subgoals for African Americans and women; and directed the Governor's Office of Minority Affairs ("GOMA") to issue periodic guidance for setting subgoals.<sup>186</sup> The current MBE Program statute and any regulations promulgated under it expire July 1, 2017.<sup>187</sup>

Finally, NERA was retained in late 2014 to prepare this current Study of the MBE Program.

## **B. MBE Program Overview**

### **1. Program eligibility**

Title 14, subtitle 3 of the State Finance and Procurement Article, "Minority Business Participation," outlines the general legislative framework for the State's MBE program.<sup>188</sup>

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<sup>180</sup> Chapter 708, Laws of Maryland, 1990, codified at State Finance and Procurement Article, §14-301 *et seq.*, Annotated Code of Maryland.

<sup>181</sup> National Economic Research Associates, Inc. (1994).

<sup>182</sup> National Economic Research Associates, Inc. (2001).

<sup>183</sup> NERA Economic Consulting (2006).

<sup>184</sup> NERA Economic Consulting (2011).

<sup>185</sup> Chapter 252 and 253, Laws of Maryland, 2011, and Chapter 154, Laws of Maryland, 2012, codified at State Finance and Procurement Article, §14-301 *et seq.*, Annotated Code of Maryland.

<sup>186</sup> Md. Code Ann., State Fin. & Proc. §14-302.

<sup>187</sup> *Ibid.* §14-309.

<sup>188</sup> *Ibid.* §14-301 *et seq.*

Section 14-301 is the definitions section and provides some of the key definitions for the MBE program. A Minority Business Enterprise is defined as a legal entity organized to engage in commercial transactions which is owned at least 51 percent by one or more socially and economically-disadvantaged individual(s) and managed and controlled by one or more of the socially and economically disadvantaged individual(s) who own it.<sup>189</sup>

A key component of the MBE program is the rebuttable presumption that certain groups are socially and economically disadvantaged.<sup>190</sup> Provided the presumption is in accordance with the State's most recent disparity study, a "socially and economically disadvantaged individual" includes members of the following minority groups:<sup>191</sup>

- African American;
- American Indian/Native American;
- Asian;
- Hispanic;
- Women; and
- Physically or mentally disabled.<sup>192</sup>

A socially disadvantaged individual is an individual who has been subject to racial or ethnic prejudice or cultural bias because of their membership in the above listed groups.<sup>193</sup> An economically disadvantaged individual is a "socially disadvantaged individual whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially disadvantaged."<sup>194</sup> The firm's minority or woman owner(s) must be economically disadvantaged, as evidenced by his or her Personal Net Worth not exceeding a specified cap, as indexed for inflation. Effective January 2016, the cap increased to \$1,674,928.<sup>195</sup>

Another criteria for eligibility under the MBE Program is that the firm must be a small business in accordance with the size standards prescribed by the Small Business Administration (SBA)

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<sup>189</sup> *Ibid.* §14-301(f).

<sup>190</sup> *Ibid.* §14-301(k)(2).

<sup>191</sup> *Ibid.* §14-301(k)(i).

<sup>192</sup> The presumption for the physically or mentally disabled groups requires that such individuals must demonstrate that they have an impairment that substantially limits one or more major life activities and is regarded by the community as having a disability. The disability must also substantially limit the ability to engage in competitive business. See Md. Code Ann., State Fin. & Proc. §14-301(k)(i)5.

<sup>193</sup> *Ibid.* §14-301 (l).

<sup>194</sup> COMAR 21.11.03.03B.5.a.

<sup>195</sup> Maryland Department of Transportation (2016a).

under 13 CFR Part 121. If, after certification, a firm meets or exceeds SBA size standards, the firm no longer meets the Program's eligibility requirements.<sup>196</sup>

The Board of Public Works ("BPW") is responsible for adopting regulations regarding the MBE Program, including designating a State agency to certify and decertify minority- and women-owned businesses.<sup>197</sup>

Pursuant to this designation, the Maryland Department of Transportation ("MDOT") Office of Minority Business Enterprise ("Office of MBE") is charged with certifying MBE firms and maintaining an MBE Directory for use by all State agencies and the general public.<sup>198</sup> The Office of MBE is also required to maintain a directory of all MBEs that are no longer eligible for certification because they exceed the Personal Net Worth requirements and/or the business size standards.<sup>199</sup> After the Office of MBE completes its review and evaluation of the application for certification and the supporting documentation, the Minority Business Enterprise Advisory Committee makes recommendations concerning the certification of firms seeking certification or an expansion of services.<sup>200</sup> MBE certifications are subject to annual review for continuing eligibility.<sup>201</sup>

The Maryland General Assembly has made it a felony offense, punishable by a fine not to exceed \$20,000 and/or imprisonment for up to five years, to fraudulently obtain or attempt to obtain MBE certification.<sup>202</sup> It is also a felony offense for a contractor to include a certified MBE firm in a proposal or bid and fail to (1) obtain the firm's authorization, (2) notify the certified MBE of its inclusion prior to execution of the contract, or (3) fail to use the certified MBE in the performance of the contract.<sup>203</sup> A person that makes a false statement about whether an entity is certified is guilty of a misdemeanor offense punishable by a fine and/or a maximum of one year's imprisonment.<sup>204</sup>

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<sup>196</sup> COMAR 21.11.03.15.

<sup>197</sup> Md. Code Ann., State Fin. & Proc. §14-303. The BPW is also responsible for outlining the procedures and solicitation documents to carry out the purposes of the MBE Program. Generally, the BPW's regulatory authority includes adopting comprehensive regulations and requirements related to all aspects of the procurement process including solicitation documents, minority subcontractor utilization, liquidated damages and graduation from the program.

<sup>198</sup> COMAR 21.11.03.03.B.2. MDOT also has responsibility for certifying DBEs and ACDBEs.

<sup>199</sup> Md. Code Ann., State Fin. & Proc. §14-304.

<sup>200</sup> COMAR 21.11.03.16.

<sup>201</sup> Maryland Department of Transportation (1999) (as amended February 2009 & July 2014), p. 57.

<sup>202</sup> Md. Code Ann., St. Fin. & Proc. §14-308(a).

<sup>203</sup> *Ibid.* §14-308(a)(2).

<sup>204</sup> *Ibid.* §14-308(b).

## 2. Program operations

In general, designated agencies must attempt to achieve the current overall State goal of spending 29 percent with certified MBEs.<sup>205</sup> The IACPSC requires all public school boards to adopt similar regulations for MBE participation before obtaining State funds for public school construction.<sup>206</sup>

### a. Governor's Office of Minority Affairs

GOMA is a cabinet-level state office that is involved with oversight of two procurement programs: the MBE Program and the Small Business Reserve ("SBR") Program. GOMA's mission is to strengthen and preserve Maryland's MBEs by facilitating MBE activities through coordinating and promoting government programs aimed at strengthening and preserving the State's minority- and women-owned businesses. GOMA is also responsible for coordinating the work of the State agencies in the implementation of the MBE program and small business initiatives. As the State's cabinet level advocate for minority businesses, GOMA assists minority and small business owners who seek State procurement opportunities. GOMA may also facilitate the resolution of issues raised by minority and female business owners who believe they are victims of discrimination or have been treated unfairly by a State agency or other entity.

The Special Secretary of GOMA, in consultation with the Secretary of Transportation and Attorney General, is tasked with the responsibility of establishing overall goals, subgoal guidelines, guidelines for contract goal-setting, and other policies governing the implementation of the MBE program.<sup>207</sup> In establishing overall goals and subgoal guidelines, the Special Secretary is to consult with the business community including minority, women and general contractor groups. Guidelines for contract goal-setting must be consistent with the statutory requirements for contract goals, which include consideration of the potential subcontracting opportunities, the availability of certified minority- and women-owned businesses, and a number of other factors.<sup>208</sup>

### b. Agency responsibilities

The head of each procurement agency appoints an MBE Liaison Officer that provides the direct interface between bidders, MBEs and the agencies.<sup>209</sup> The MBE Liaison Officer reports directly to an agency's Secretary, Deputy Secretary, or procurement agency head. The MBE Liaison Officer is generally responsible for coordinating the agency's MBE outreach, ensuring prime and subcontractor compliance on contracts containing MBE commitments, assisting in the resolution

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<sup>205</sup> *Ibid.* §14-302.

<sup>206</sup> Md. Code Ann., Educ. §5-301(d)(3)(v); COMAR 23.03.03.06.D.

<sup>207</sup> Md. Code Ann., St. Fin. & Proc. §14-302 (a)(2) & (a)(3)(ii).

<sup>208</sup> *Ibid.* §14-302 (a)(1)(ii)-(vi); §14-302 (a)(2) & (3).

<sup>209</sup> COMAR 21.11.03.05.

of contract issues involving MBE firms, and collecting and submitting MBE program reports or information as required.<sup>210</sup>

As indicated above, MDOT maintains a central electronic directory of certified firms that is available to the public on the Internet. The certification database contains the type of services provided by MBE firms and their associated contact information.<sup>211</sup> The purpose of the directory is to provide a resource for State agencies and contractors seeking to identify certified firms to potentially do business with.

In coordination with GOMA, procurement agencies are also responsible for taking race-neutral measures to facilitate the inclusion of MBE and small businesses in State procurements. Procurement officers, sometimes coordinating with GOMA, may engage in outreach activities to notify MBEs of new opportunities by meetings, seminars, and other means.<sup>212</sup> GOMA is also charged with providing seminars and meetings to address topics of interest to the MBE community related to doing business with the State.<sup>213</sup> Further, procurement agencies may not bundle contracts, and they are prohibited from using evaluation criteria or solicitation or contract requirements that unreasonably hinder or restrict the participation of MBE firms.<sup>214</sup>

On an annual basis, each procuring agency forwards GOMA a list of all known regularly occurring procurement solicitations reasonably expected to be in excess of \$100,000. GOMA then prepares a master list of State procurement opportunities and coordinates outreach with the procuring agencies to facilitate the participation of minority businesses.<sup>215</sup>

All solicitations issued by procurement agencies for construction contracts in excess of \$50,000 are required to be assessed to determine the potential for certified MBE participation. Each agency also reviews and evaluates upcoming procurement opportunities to determine the appropriate strategies to facilitate MBE participation. When setting contract-specific goals for particular goods and services, the procuring agency is required to consider a variety of factors.<sup>216</sup> Contract goals should vary depending on the availability of MBEs, the anticipated scope of work of the contract, the feasibility of subcontracting opportunities, and the geographic region within which the goods and/or services will be procured.<sup>217</sup> The use of quotas by State agencies in the goal-setting process is expressly prohibited.<sup>218</sup> An agency head or designee may also waive the

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<sup>210</sup> *Ibid.*

<sup>211</sup> *Ibid.* 21.11.03.06.

<sup>212</sup> *Ibid.* 21.11.03.07.

<sup>213</sup> Md. Code Ann., St. Gov't. §9-305(b)(2); COMAR 21.11.03.07.C.

<sup>214</sup> Md. Code Ann., St. Fin. & Proc. §14-302(a)(3)(i); COMAR 21.11.03.07.F. & COMAR 21.11.03.07.H.

<sup>215</sup> COMAR 21.11.03.08.

<sup>216</sup> *Ibid.* 21.11.03.09.B.

<sup>217</sup> *Ibid.*

<sup>218</sup> Md. Code Ann., St. Fin. & Proc. §14-302(a)(4); COMAR 21.11.03.09.B.4.

MBE requirements in the public interest for sole source, expedited, or emergency procurements.<sup>219</sup>

When a solicitation includes a stated MBE goal, each bidder/offeror must complete and submit an MBE utilization affidavit acknowledging the MBE participation goal and commit to making good faith efforts to achieve the goal. Each bidder/offeror must also identify proposed MBE participation at the time of the submittal by providing a completed participation schedule that includes the name and percentage of the contract committed to each certified MBE proposed to be used in the contract. By submitting a bid or proposal, the bidder/offeror agrees that MBEs will perform the percentage of the total dollar amounts of the contract as specified in its submission.<sup>220</sup>

If unable to meet the MBE participation goal, the bidder or offeror may request a waiver. To receive a waiver, the bidder/offeror must, upon request, submit detailed documentation of its good faith efforts to meet the goal, including a statement of the work allocated to MBE participation and the efforts made to identify, contact, and negotiate with MBEs available to perform the work prior to submission of the bid/proposal.<sup>221</sup> An agency may grant a waiver request if: (a) the contractor reasonably demonstrates that it could not obtain certified MBE participation; (b) such participation could not be obtained at a reasonable price, or in the appropriate MBE classification; and (c) the agency determines that a waiver is in the public interest.<sup>222</sup> In determining whether to grant or deny a waiver request, the procurement agency's head may consider: engineering estimates; catalogue prices; general market availability; geographic availability of certified MBEs; the impact on the State's overall contract cost of other bids or offers (including subcontract bids or offers) with significant differences between certified MBE and non-MBE costs; and any other relevant factors.<sup>223</sup> If a waiver is granted, a copy of the waiver determination must be maintained in the agency's records and a copy sent to GOMA.<sup>224</sup>

All contracts containing certified MBE participation goals shall include language that provides for liquidated damages if the contractor fails to comply with the MBE laws or regulations related to the procurement.<sup>225</sup>

When a certified MBE participates in a contract, the procurement agency may only count the participation of an MBE firm that performs a commercially useful function. An MBE performs a commercially useful function if it is responsible for actually performing, managing and supervising the work involved in the contract.<sup>226</sup> If a certified MBE prime contractor is awarded

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<sup>219</sup> Md. Code Ann., St. Fin. & Proc. §14-302(a)(9)(iii).

<sup>220</sup> COMAR 21.11.03.09.C.5.

<sup>221</sup> *Ibid.* 21.11.03.11.

<sup>222</sup> *Ibid.* 21.11.03.11.B.

<sup>223</sup> *Ibid.*

<sup>224</sup> *Ibid.* 21.11.03.11.D.

<sup>225</sup> *Ibid.* 21.11.03.10.E. *See also* Maryland Governor's Office of Minority Affairs (2016a).

<sup>226</sup> *Ibid.* 21.11.03.12-1.B.

the contract, the MBE prime may count 50 percent of the work performed with its own forces toward the MBE goal and up to 100 percent of the relevant subgoal.<sup>227</sup>

Each agency is required to maintain records of MBE utilization on the contracts the agency has awarded. Within 90 days after the end of the fiscal year, each State agency must submit an annual report to GOMA stating its MBE accomplishments from the prior fiscal year. The report includes both the dollars and percentage of MBE participation on State procurement contracts.<sup>228</sup> The report contains dollars awarded and dollars paid to MBE prime contractors and subcontractors as well as the number of waivers granted. The report also includes a brief description of the agency's outreach efforts to MBE businesses.<sup>229</sup> GOMA compiles the data reported by each agency and submits an annual report to the Governor summarizing the MBE participation achieved by each agency and for the State as a whole. The Legislative Policy Committee directs a standing committee from the House of Delegates and the State Senate to review the reports.

## C. Race-Neutral and Gender-Neutral Initiatives

As discussed in Appendix B, a crucial element of narrowly tailoring a race- and gender-conscious program is the use of race- and gender-neutral measures<sup>230</sup> to help eliminate unreasonable barriers to MBE participation in State contracting and procurement. This section provides an overview of some of Maryland's race neutral measures.

### 1. Small Business Preference Program

The State's Small Business Preference ("SBP") Program provides a bid preference for small businesses. The program is designed to assist small businesses in obtaining State contracts. The SBP Program applies to the procurements made by DGS, the University System of Maryland ("USM"), Morgan State University, MDOT, and, in connection with the construction of State correctional facilities, to procurements made by the Department of Public Safety and Correctional Services. Under this Program, a qualifying small business may receive up to a 5 percent price preference. Up to an additional 3 percent price preference may be granted for a disabled veteran-owned small business or a 2 percent preference for a veteran-owned small business.<sup>231</sup>

The SBP price preferences allow a small business to win a given contract even if its responsive bid exceeds the lowest responsive bid, as long as it exceeds it by no more than the applicable

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<sup>227</sup> *Ibid.* 21.11.03.12-1.D.

<sup>228</sup> Md. Code Ann., St. Fin. & Proc. §14-305.

<sup>229</sup> COMAR 21.11.03.17.

<sup>230</sup> "Race-neutral methodologies" refers to procedures that can be used to assist all businesses notwithstanding the social, economic, racial or sexual composition of those who own or control the business. *See* COMAR 21.11.03.03.B.13.

<sup>231</sup> COMAR 21.11.01.01 *et seq.*

price preference percentage.<sup>232</sup> Contracts with a small business preference will state that in the solicitation and will cite the preference percentage.<sup>233</sup>

The agencies subject to the SBP are required to maintain a list of eligible small businesses and to adopt other procedures to facilitate the involvement of small businesses in the public procurement process.<sup>234</sup> DGS administers the small business self-certification process on behalf of the participating agencies. Based on its "Small Business Affidavit" form, DGS designates vendors as small businesses and includes them on its "Small Business" vendor list. A business is required to reapply for qualification every year by the anniversary date of its initial certification. A firm's gross sales and employment data are also required to be verified annually.<sup>235</sup>

## **2. Small Business Reserve Program**

Like the SBP Program, the Small Business Reserve ("SBR") Program is also designed to assist small businesses in obtaining State contracts. However, rather than establishing a price preference, such as in the SBP, the SBR sets aside certain contracts exclusively for competition among qualifying small businesses.<sup>236</sup>

The SBR Program was created in 2004 and its goal is to support the economic viability of small businesses by guaranteeing that an eligible contract will be awarded to a qualified small business.<sup>237</sup> The Program requires 23 designated State agencies to structure their procurement processes so that at least 10 percent of their total procurement dollars are spent with qualified small businesses.<sup>238</sup> An invitation to bid or request for proposals issued under the SBR Program will state that it has been designated as an SBR solicitation and an award can only be made to a registered SBR vendor.<sup>239</sup>

Each fiscal year, SBR participating agencies are required to prepare a forecast that identifies total projected expenditures along with a plan allocating at least 10 percent of those expenditures to qualifying small businesses.<sup>240</sup> The SBR forecasts must be submitted to GOMA within 60 days of final approval of the State budget by the General Assembly. Agencies are also required to submit an annual report to GOMA summarizing their SBR activity over the previous fiscal year.<sup>241</sup> In fiscal year 2015 (the most recent year for which data is available), 10.6 percent of all

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<sup>232</sup> Maryland Department of Legislative Services, Office of Policy Analysis (2014), p. 23.

<sup>233</sup> Maryland Department of General Services (2016a).

<sup>234</sup> Md. Code Ann., State Fin. & Proc. §14-204.

<sup>235</sup> COMAR 21.11.01.04.

<sup>236</sup> *Ibid.* 21.11.01.01 *et seq.*

<sup>237</sup> Md. Code Ann., State Fin. & Proc. §14-501 *et seq.*

<sup>238</sup> COMAR 21.11.01.01 *et seq.* See also Md. Code Ann., State Fin. & Proc. §14-501 *et seq.*

<sup>239</sup> Maryland Department of General Services (2016a).

<sup>240</sup> COMAR 21.11.01.06.D.1.

<sup>241</sup> Md. Code Ann., State Fin. & Proc. §14-505.

payments made by the 23 participating agencies (or \$418.7 million) went to participating SBR vendors.<sup>242</sup>

Only qualified small businesses may participate in the SBP and SBR programs. For purposes of these two programs, a “small business” is defined as a for-profit business, other than a broker, that is independently owned and operated, not a subsidiary of another business and not dominant in its field of operation. Other criteria also apply by procurement category as follows:

- Its wholesale operations did not employ more than 50 persons or its gross sales did not exceed \$4,000,000 in its most recently completed three fiscal years;
- Its retail operations did not employ more than 25 persons or its gross sales did not exceed \$3,000,000 in its most recently completed three fiscal years;
- Its manufacturing operations did not employ more than 100 persons or its gross sales did not exceed \$2,000,000 in its most recently completed three fiscal years;
- Its service operations did not employ more than 100 persons or its gross sales did not exceed \$10,000,000 in its most recently completed three fiscal years; and
- Its construction operations did not employ more than 50 persons or its gross sales did not exceed \$7,000,000 in its most recently completed three fiscal years.
- The architectural and engineering services of the business do not employ more than 100 persons, or the gross sales of the business do not exceed an average of \$4,500,000 in its most recently completed three fiscal years.<sup>243</sup>

If a business is less than three years old, the gross sales average is computed for the entire period it has been in existence. For newly formed businesses, the determination is based on employment levels and projected gross sales.<sup>244</sup>

The SBR Program is managed by GOMA, which is charged with establishing guidelines for SBR Program administration, ensuring agency compliance with the SBR Program requirements, providing training and technical assistance to agency personnel, maintaining a database of qualifying small businesses, and collecting data regarding the State's utilization of SBR vendors.<sup>245</sup>

### **3. Maryland Small Business Development Financing Authority**

The Maryland Small Business Development Financing Authority (MSBDFA)<sup>246</sup> was created in 1978 to assist in the promotion of business growth in the State for businesses owned by socially

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<sup>242</sup> Maryland Governor's Office of Minority Affairs (2015), p. 20.

<sup>243</sup> COMAR 21.01.02.01.B.80.

<sup>244</sup> *Ibid.* 21.11.01.04.

<sup>245</sup> Md. Code Ann., State Fin. & Proc. §14-503.

<sup>246</sup> Md. Code Ann., Econ. Dev. §5-501 *et seq.*

or economically disadvantaged persons in Maryland. The MSBDFA statute was expanded in 2001 to include any small business that does not meet the established credit criteria of financial institutions and commercial sureties, and consequently, is unable to obtain adequate business assistance on reasonable terms through normal financing and bonding institutions. A major criterion for approval is the economic impact of the loan, investment or guaranty, via employment opportunities and tax base increases. The MSBDFA Program is overseen by the Maryland Department of Commerce ("DOC").<sup>247</sup> The DOC, in turn, employs the Meridian Management Group to manage the program on its behalf.<sup>248</sup>

MSBDFA offers four major assistance programs:

Contract Financing Program. This Program provides financial assistance to eligible small businesses in the form of loans and loan guaranties. Loan funds can be used for working capital or the acquisition of equipment to begin, continue and complete work on contracts that receive the majority of their funding from government agencies or public utilities. Financing is limited to \$2 million and must be repaid during the term of the contract, with interest rates ranging from the prevailing prime rate to prime plus two percent. Applicants may also qualify for financing before contract award.<sup>249</sup>

Guaranty Fund Program. This Program provides financial assistance to eligible small businesses through loan guaranties and interest rate subsidies for loans made by financial institutions. The loans can be used for working capital, the acquisition and related installation of machinery or equipment, refinancing of existing debt, or the purchase of, and improvements to, real property owned or leased by the applicant. A loan guaranty cannot exceed the lesser of 80 percent of the loan value or \$2 million. Guarantees cannot exceed 10 years with an interest rate charged by the financial institutions limited to prime plus two percent. The Program can also subsidize up to four percentage points of the interest being charged by the financial institutions making the loans. The subsidy is negotiated directly with the borrower and may be reviewed annually.<sup>250</sup>

Surety Bond Program. This Program assists eligible small businesses in obtaining bid, performance or payment bonds necessary to perform on contracts where the majority of funds are provided by a government agency, public utility company or private entity. The Program directly issues bonds or guarantees a surety's losses incurred as a result of the contractor's breach of a bond. Directly issued bonds are limited to \$5 million. Guaranties are limited to 90 percent of the face value of the bond not to exceed \$5 million. Guaranties remain in effect for the duration of the surety's exposure under the bond. Directly issued bonds remain in effect for the duration of the qualified contract and any related warranty period. Bond premiums generally range from 2-3 percent. A surety bond revolving line of credit may also be established to directly

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<sup>247</sup> Formerly the Department of Business and Economic Development.

<sup>248</sup> Maryland Department of Business and Economic Development (2014), p. 1.

<sup>249</sup> *Ibid.*

<sup>250</sup> *Ibid.*

issue or guaranty multiple bonds to a client within pre-approved terms, conditions and limitations.<sup>251</sup>

Equity Participation Investment Program. This Program helps to expand business ownership by socially and economically disadvantaged entrepreneurs and small businesses that do not meet the established credit criteria of financial institutions and are unable to obtain adequate business financing on reasonable terms through normal financing channels. Financial assistance is provided through the use of loans, loan guaranties, and equity investments. The proceeds may be used for the specific purpose of purchasing a franchise, acquiring an existing profitable business, developing a technology-based business, or to start or expand other types of small businesses. All equity investments must be repaid by the end of the seventh year. The most common form of repayment is for the owner to buy back the Program's investment at a predetermined price between the fourth and seventh year. The repaid amount is required to be the greater of its percentage of the current value of the business or the initial investment. Investments under the Program are limited to a maximum of \$2 million and the typical projects that are financed generally range from \$100,000 to \$3 million. At the end of the term of financing assistance, if MSBDFA and the client are unable to agree on the value of an investment, an independent appraiser is used to make a fair market value determination. As of October 2013, the Program uses the U.S. Small Business Administration size standards to define "Small Businesses" that are eligible for financing assistance.<sup>252</sup>

Collectively, from its inception in 1980 through the end of fiscal year 2014 (the most recent year for which the MSBDFA Annual Report is available), these four MSBDFA programs have financed approximately 859 transactions for approximately 625 businesses. MSBDFA's current portfolio as of the end of fiscal year 2014 was comprised of 76 transactions with an aggregate exposure of \$18 million, with another 29 transactions pending or under consideration with a value of \$6.1 million.<sup>253</sup>

Small businesses that progress beyond the need for financial assistance from the MSBDFA program are classified by MSBDFA as graduates. In some cases, these businesses can now qualify for loans or surety assistance from private lenders or surety companies with minimal or no support from the MSBDFA. Graduates also include companies that successfully repay their loans or satisfactorily have their bonds released and no longer require financial assistance. During fiscal year 2014, eight companies graduated from the MSBDFA program.<sup>254</sup>

#### **4. Maryland's Linked Deposit Program**

Maryland's Linked Deposit Program ("LDP") is a statewide initiative designed to stimulate opportunities for small businesses, including MBEs, by reducing the interest rate on loans they obtain from participating banks.<sup>255</sup> Businesses that notify the Maryland Department of Housing

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<sup>251</sup> *Ibid.*

<sup>252</sup> *Ibid.*, p. 2.

<sup>253</sup> *Ibid.*, p. 3.

<sup>254</sup> *Ibid.*, p. 6.

<sup>255</sup> Md. Code Ann., State Fin. & Proc. §6-211 *et seq.*

and Community Development (“DHCD”) prior to obtaining qualifying loans from enrolled financial institutions may be able to receive a 2 percent discount on loans to be applied to a project or activity located in Maryland.<sup>256</sup>

Lenders underwrite the requested loan according to their standard underwriting. A participating bank and the associated business may agree to any loan amount they deem appropriate, but for purposes of the LDP, the amount eligible to be “enrolled” may not exceed \$1 million dollars, or if a business has more than one loan under the Program, the total of all such loans cannot exceed \$1 million. Loans may be combined with other loan programs like Neighborhood BusinessWorks and the Maryland Capital Access Program (see below). Loan terms cannot exceed 10 years and points charged by the lender cannot exceed 1 percent of the loan amount.<sup>257</sup>

The LDP is operated by the Maryland State Treasurer’s Office and the DHCD. The Treasurer has flexibility to make deposits in participating financial institutions that may yield a higher interest rate than certificates of deposit. When a qualifying loan is enrolled, the Treasurer deposits an amount equal to the amount of the loan from the bank that issued the loan. The Treasurer accepts an interest rate on that deposit that is reduced commensurately. Loans enrolled in LDP are not a debt of the State nor is the State liable to any financial institution for payment of the principal or interest on a loan assisted by a linked deposit.<sup>258</sup>

Presently, there are only three participating lenders in the LDP: Bank Annapolis, Industrial Bank, and Columbia Bank.<sup>259</sup> In fiscal years 2011 and 2012, a total of 6 loans totaling \$1,675,000 were extended under the LDP, all by Columbia Bank. During fiscal year 2013 (the most recent year for which data is available), zero loans were extended.<sup>260</sup>

## 5. Microenterprise Loan Program

The Microenterprise Loan Program (“MLP”),<sup>261</sup> also administered by the DHCD, expands opportunities for microenterprise development, creating new opportunities for small business development and sustaining local economies in Maryland communities. The MLP provides flexible financing for microenterprise start-ups and expansions within designated “Sustainable

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<sup>256</sup> Maryland Department of Housing and Community Development (2016a).

<sup>257</sup> *Ibid.*

<sup>258</sup> *Ibid.*

<sup>259</sup> *Ibid.*

<sup>260</sup> Maryland Department of Housing and Community Development (2014). This document includes an informative discussion of why so few banks participate in the LDP and steps recently taken by the General Assembly and the DHCD to increase participation in the Program.

<sup>261</sup> COMAR 05.13.01.03 *et seq.*

Communities”<sup>262</sup> throughout the State. The DHCD has established partnerships with community-based microlenders as intermediaries that originate and administer the microenterprise loans.<sup>263</sup>

Eligible applicants must be: Maryland-based small businesses with not more than 5 employees or non-profit organizations whose activities contribute to a broader revitalization effort; located in a commercial space; and located in a designated Sustainable Community in the State of Maryland. Applicants must also demonstrate that financing from two other lending sources is not possible. Funds obtained through MLP may be used for: working capital; marketing/planning/feasibility studies; real estate acquisition down payment; minor renovations; minor leasehold improvements; machinery and equipment; and certain other costs associated with opening or expanding a small business. Loan amounts can range from a minimum of \$1,000 to a maximum of \$500,000 or 50 percent of total project costs.<sup>264</sup>

## **6. Maryland Capital Access Program**

The Maryland Capital Access Program (“MCAP”),<sup>265</sup> administered by the DHCD, is part of a revitalization initiative to support the growth and success of small businesses in “Priority Funding Areas” throughout the State of Maryland.<sup>266</sup> MCAP is a credit enhancement program that enables private lenders to establish a loan loss reserve fund from fees paid by lenders, borrowers, and the State of Maryland. Communities that have small businesses receiving financing through enrolled MCAP loans can benefit from new or expanded services provided by the relevant small businesses. Most Maryland small businesses, including nonprofit organizations, are eligible for this Program. Certain types of investments, including passive real estate investment and residential living facilities, are excluded from eligibility for MCAP.<sup>267</sup>

## **7. Neighborhood BusinessWorks Loan Program**

The Neighborhood BusinessWorks Program (“NBW”),<sup>268</sup> administered by the DHCD, provides flexible financing to small businesses and nonprofits locating or expanding in Sustainable Communities or Priority Funding Areas throughout the State. Eligible applicants include: Maryland-based small businesses, as defined by U.S. Small Business Administration size standards, and nonprofit organizations whose activities contribute to a broader revitalization effort and whose projects are intended to promote investment in commercial districts or town centers. Funds obtained through NBW may be used for: mixed use projects combining residential and commercial uses in the same building; new construction or rehabilitation;

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<sup>262</sup> Priority Funding Areas are existing communities and places designated by local governments want State investment to support future growth. *See* Maryland Department of Planning (2016a) (including a map of Priority Funding Areas).

<sup>263</sup> Maryland Department of Housing and Community Development (2016b).

<sup>264</sup> COMAR 05.13.01.08.

<sup>265</sup> *Ibid.* 05.13.04.00 *et seq.*

<sup>266</sup> Maryland Department of Planning (2016b).

<sup>267</sup> Maryland Department of Housing and Community Development (2016c).

<sup>268</sup> COMAR 05.13.01.01 *et seq.*

machinery and equipment; retail; manufacturing; services; real estate acquisition; and certain other costs associated with opening or expanding a small business.<sup>269</sup>

## **8. Maryland's Prompt Payment Effort**

By statute, Maryland provides prompt payment protection was only provided to subcontractors participating on State procurement contracts for construction.<sup>270</sup> Maryland also has a 2008 Prompt Payment Policy Directive that applies to all non-construction State procurement contracts in excess of \$25,000 that are issued by Executive Branch.<sup>271</sup> Generally, where there is a prompt payment obligation under the statute or Policy Directive, a prime contractor may not withhold any undisputed amount once it receives payment from the State. The statute identifies specific remedies for non-payment of undisputed amounts.<sup>272</sup> The Policy Directive similarly provides for remedies to be included in the contract.<sup>273</sup>

## **9. Maryland Small Business Development Centers Network**

The State, in partnership with the U.S. Small Business Administration ("SBA"), operates the Small Business Development Center ("SBDC") Network, which provides advice, consulting and support services to small businesses in Maryland. Managed by the University of Maryland, College Park, the network consists of 21 locations throughout the State where small business owners can receive comprehensive resources and relevant assistance. Each region offers a variety of training programs, market and industry research, and access to business consultants. Services include on-line courses, one-on-one counseling, financing assistance and certification assistance. The SBDC also operates several specialty programs, including a Spanish language Hispanic Business Center, and programs focusing on increasing profits and building equity, technology commercialization, managing retail or restaurant operations, and highway construction.<sup>274</sup>

## **10. Maryland Procurement Technical Assistance Center**

The SBDC Network also operates the Procurement Technical Assistance Program ("PTAP"). The PTAP was authorized by Congress in 1985 with a mission to increase the number of small businesses participating in federal government contracting and procurement by providing education on the requirements of government contracting and technical assistance on obtaining and successfully performing government contracts. The program was later expanded to include assistance with state and local government contracting. The Maryland PTAP opened in 2002 with a mission to provide these education and technical assistance services to small businesses in

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<sup>269</sup> Maryland Department of Housing and Community Development (2016d).

<sup>270</sup> Md. Code Ann., State Fin. & Proc. §15-226.

<sup>271</sup> Maryland Governor's Office of Minority Affairs (2016d).

<sup>272</sup> Md. Code Ann., State Fin. & Proc. §15-226.

<sup>273</sup> Maryland Governor's Office of Minority Affairs (2016d).

<sup>274</sup> Maryland Small Business Development Center (2016a).

Maryland that meet the SBA size standards.<sup>275</sup> According to its 2014 Annual Report (the most recent data available), since its inception, Maryland PTAP has served almost 6,000 clients, held more than 26,000 counseling sessions, and conducted more than 700 outreach sessions. Its clients have been awarded over \$14 billion in government contracts and created over 36,000 jobs in the State.<sup>276</sup>

## **11. Maryland Technology Development Corporation**

The Maryland Technology Development Corporation (“TEDCO”) was created by the Maryland General Assembly in 1988. Its mission is to facilitate the transfer and commercialization of technology from Maryland’s research universities and federal labs into the market and to assist in the creation and growth of technology-based businesses throughout the State. TEDCO’s business services include mentoring, funding, and networking for business owners attempting to bring technologies to market.<sup>277</sup> In 2015, TEDCO provided grants or other funding to 108 companies and technologies, and those awardees then attracted an additional \$129 million in additional grants and other funding. In 2015 TEDCO also provided mentoring services to 200 companies in rural parts of the state, facilitated peer roundtables, provided executive support, and staged community events including its signature event, the Entrepreneurial Expo.<sup>278</sup> TEDCO also operates the Maryland Entrepreneur Resource List (“MERL”), a listing of more than 100 entrepreneurs and mentors who are available to assist businesses to commercialize their technology.<sup>279</sup>

## **12. Video Lottery Fund Small, Minority, and Women-Owned Business Account**

Article XIX of the Maryland Constitution authorizing gaming operations through video lottery terminals (“VLTs”) established the Small, Minority, and Women-Owned Business Account (“Account”) under the Authority of the BPW.<sup>280</sup> Each VLT gaming site is required to pay 1.5 percentage of its proceeds into the Account. The BPW is required to use those funds to make grants to eligible fund managers who provide investment capital and loans to small, minority-, and women-owned businesses in the State. The BPW designated the DOC to manage the Account on its behalf.

## **13. Ready Set Grow**

“Ready Set Grow” is a workshop series initiated by GOMA in March 2015 and designed to connect small, minority and women-owned businesses with contracting opportunities in Maryland. Through this series, GOMA helps vendors learn how to overcome barriers in the State contracting arena. The workshop typically includes information about certification in the State’s

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<sup>275</sup> Maryland Procurement Technical Assistance Program (2016a).

<sup>276</sup> Maryland Procurement Technical Assistance Program (2016b).

<sup>277</sup> Maryland Technology Development Corporation (2016a).

<sup>278</sup> Maryland Technology Development Corporation (2015).

<sup>279</sup> Maryland Technology Development Corporation (2016b).

<sup>280</sup> Md. Code Ann., State Gov’t §9-1A-35.

MBE Program, vendor enrollment in the SBR Program, where to find procurement opportunities within 70 participating state agencies, and tips on how to navigate the procurement process. At each event, buyers from different state agencies discuss current bid opportunities and meet with business owners one-on-one during a networking session.

Ready Set Grow replaces an earlier program known as “MBE University,”<sup>281</sup> a conference-style training program hosted in collaboration with other public and private entities for informing stakeholders about the business opportunities and resources available to all small businesses, including MBEs, throughout the State. MBE University provided a networking opportunity for buyers and sellers to interact in a low pressure and supportive environment and was a collaborative effort between GOMA, MDOT, DOC, DGS, and the Governor's Grants Office.<sup>282</sup> It was designed to travel periodically to each region of the State to offer training and information on the tools necessary for successfully doing business with the State of Maryland.<sup>283</sup> The final MBE University was co-hosted by GOMA and Prince George's County in November 2014 at a full-day conference that included buyer/seller matchmaking as well as workshops on an array of small business development topics.<sup>284</sup>

#### 14. Additional Outreach to Small Firms and MBEs

The majority of State of Maryland solicitations over \$15,000 are advertised on *eMaryland Marketplace*, the State's internet-based procurement system.<sup>285</sup> Additionally, State agencies are encouraged to send notices of procurement opportunities to minority- and female-oriented media and contractor associations.<sup>286</sup> Some agencies waive fees for sending copies of bid specifications to such organizations. Because of prohibitive costs, MDOT generally only sends bid packages upon request, but some solicitation packages are uploaded to *eMaryland Marketplace* or the State Highway Administration's website. DGS, USM, and DPSCS each maintain a bidders list that includes MBEs to whom solicitations are routinely mailed. Generally, agencies rely on the MDOT Directory to identify certified MBEs and on GOMA to help identify minority- and female-oriented contractor associations that could be notified.

Various State agencies, including MDOT and GOMA, sponsor or promote periodic workshops, trainings, conferences, and other professional development and networking events for small businesses and MBEs. Both the Office of MBE and GOMA maintain online calendars of these events.<sup>287</sup>

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<sup>281</sup> MBE University is not a post-secondary educational program or course.

<sup>282</sup> Maryland Governor's Office of Minority Affairs (2016b); Maryland Department of Transportation (2010).

<sup>283</sup> Maryland Governor's Office of Minority Affairs (2010).

<sup>284</sup> Prince George's County Government [Maryland] (2014).

<sup>285</sup> COMAR 21.05.02.04, 21.05.07.06.B.4; Maryland Department of General Services (2016b).

<sup>286</sup> Maryland Department of Transportation (2016b). *See also* <http://goma.maryland.gov/Pages/events.aspx>.

<sup>287</sup> Maryland Department of Transportation (2016b); Maryland Governor's Office of Minority Affairs (2016b).

Both GOMA and MDOT maintain special hotlines so that individuals can report suspected cases of fraud or other abuses related to the MBE or DBE programs.<sup>288</sup>

Additionally, both GOMA and MDOT maintain online listings of resources for MBEs and other small businesses, including links to financial and lending resources, state and national business resources, professional associations and organizations, professional and technical assistance programs, and certification assistance.<sup>289</sup>

## **D. Business Owner Feedback Interviews**

To gather anecdotal evidence of the effectiveness of the current State of Maryland MBE program and procedures for leveling the playing field and opening up opportunities for M/WBEs on public contracts, we met with almost 200 business owners or representatives from a cross section of the industries from which the State procures goods and services, as well as 31 State MBE Liaisons, senior procurement officers, and GOMA personnel.

The following are summaries of the issues discussed. Quotations are indented, and are intended to represent the views expressed by multiple participants.

### **1. Significance of the State of Maryland's MBE Program**

In summary, almost all M/WBEs firms reported that being certified provided opportunities that otherwise would not have presented themselves. The MBE Program was seen as critical to allowing M/WBE businesses access to the business opportunities with the State of Maryland.

I believe the MBE, the DBE, the SBE programs help to level the playing field so that we can get into some of these larger projects.

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They've got the MBE program and they've got the SBR Program. Both very good programs and if both of those programs didn't exist, we would not be here...today with our company.

\*\*\*\*\*

If Maryland hadn't had the MBE program, I would not be sitting where I'm today. I am a big cheerleader for the program.

\*\*\*\*\*

Some firms had a contrary view of the State's M/WBE program and its effectiveness.

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<sup>288</sup> Maryland Governor's Office of Minority Affairs (2016c); Maryland Department of Transportation (2016b).

<sup>289</sup> Maryland Department of Transportation (2016c).

I've partnered with MBE companies in the past. And this is a story that was shared with me [by an MBE] and I find it to be so true. He said...it's like prepping on a football team and getting all ready to go and you're ready to play and you've been sitting on the sideline and you're waiting to go and your waiting to go and all of a sudden, the coach comes to you and says okay you can play right now, but you can't have a helmet or pads when you go in.

\*\*\*\*\*

I've given up on the State, because I couldn't get any business.

## **2. eMaryland Marketplace**

Both M/WBE and non-MWBE firms were universal in their criticism of eMaryland Marketplace and the need for a better technology solution for advertising solicitations.

We do use eMaryland Marketplace. My only thing with that is, like, today there are probably like 479 bids out there. They're not easily searchable. Like I have a bid that's out, we've been invited to bid on a college, [and] some on call emergency work. They have an amendment to that. When we click on the link, it takes you to eMarketplace.... What you are forced to do is go page to page to page. You can't even search it with the bid number...It's just very cumbersome, when I think that's kind of a simple fix, it being more user friendly.

\*\*\*\*\*

I got that one off of eMaryland Marketplace before I got it from Howard County. So this morning in my meeting with them, I said, "Are you putting the addendum on eMaryland Marketplace?" "You probably should check our website first, because we don't always put everything on...eMaryland Marketplace.

\*\*\*\*\*

I hate eMaryland Marketplace. Hate it.

\*\*\*\*\*

As far as eMaryland Marketplace is concerned, we don't even know how to code ourselves within the system....

\*\*\*\*\*

It just needs to be more user friendly...but to the contractor who actually needs to use it, unless you are using it on a daily basis, it can be a real pain to navigate through.

An unexpected benefit of eMarketplace, however, is that it provides a database for private firms looking to do business with M/WBE firms.

One positive thing from a marketing perspective that happen to us is there are private companies that actually look at eMaryland Marketplace and have found us in the data base, not necessarily for State work, but they are looking to work with minority contractors and it gave us an opportunity to get an interview....

### **3. Certification Standards and Processes**

The experience of M/WBE firms with the MDOT certification process and recertification process was mixed.

Someone came for my interview, but then I also had someone come out and inspect my warehouse and that sort of thing. But I have honestly thought the process was pretty painless. I appreciate that, them wanting to know I am a credible professional.

\*\*\*\*

[C]an I say that the positive thing that I experienced this year was updating our certification. I ran around, got all the forms notarized, whatever. I uploaded everything and literally, it was like Thursday evening, by Monday morning I got thumbs up, you're certified. I was blown away.

\*\*\*\*

I really felt that MDOT was a little broken because it took me a year to get my certification...it took forever.

\*\*\*\*

I also think that the agency that's running the MDOT [MBE office], they need to set aside more funding to hire more people for certification. It took months upon months to get the actual certification. It was really way too long.

An issue expressed by some WBE firms regarding the certification process was excessive and unfair scrutiny received during the certification process.

They're just going to automatically discriminate against women.... I wanted to say because of the previous people...you know, these pass through companies that happened when they first started the MBE program.... We have to prove ourselves tenfold because of what the predecessors did before us. ...On one side, you want them to be stringent.... But on the other side...don't cut our throats now because of what happened before.

\*\*\*\*

It was awful going through getting approved. I thought there was something wrong with me because I am a minority. I was just like what more do they want from me. And then, in the hearing, I was not treated professionally...I am a tough woman.

There was also concern with some M/WBE firms regarding the annual cycle for recertification and the submission of sensitive financial information.

I am assuming that you're DBE, your MBE application...there is a challenge in and of itself, the fact that we are literally providing a ream of paper of, quite frankly, very personal information to the State...how would, could [we] provide our [qualifications] to get our NAICS codes without providing everything except for our DNA in order to get that, because it's very time intensive to prepare those applications, even with the renewals....

#### **4. Pre-award Processes**

##### **a. Meeting M/WBE Goals**

A significant number of nonminority construction firms thought that the M/WBE goals were too high, particularly in certain regions of the State and that the availability of M/WBE firms to meet race-specific goals was limited.

Frankly, to me, the percentages need to be lowered.

\*\*\*\*

[The goal] is unrealistic based upon the capacity of the contractors. It's not the number of people in the directory.

\*\*\*\*

[W]e have at least one client that will not allow us to take credit for second tier contractors.

\*\*\*\*

The NAICS codes give you a false sense of capacity.

Some nonminority firms thought that the contract specific goals need to more accurately reflect the subcontracting opportunities on the project.

If the goals and the subgoals have no relationship to the actual work you're actually being asked to do, there's a real problem and that's typically the case. It's like square peg, round hole.

A consistent theme in the construction focus groups with nonminority male construction contractors was that Maryland should revisit the time frame for submission of the M/WBE bid documents on bid day.

The process on bid day that's established by the State has frankly ruined the construction industry.

\*\*\*\*

The fact that you are trying to have numbers and minorities and all your subcontractors selected at bid time is frankly impossible, even though we're doing it. There is no opportunity for anyone to fairly evaluate bids from any subcontractor, forget about race or gender. We're trying to figure out what in the heck price are they giving us and what does it cost and is it the proper thing. And trying to name minority companies on bid day is destructive to the industry.

\*\*\*\*

I think there needs to be a delay between bid day and submitting your program. I just feel that there needs to be time to allow contractors to vet it out. Now whether it's 10 days or not, that's another issue.

A major barrier and concern that can hinder the success of M/WBE firms is getting competitive pricing from suppliers.

The problem I'm finding with some of the minority contracts is that we have to remember that State agencies are giving us the opportunity to bid on that but if ...we cannot get pricing from the suppliers that we need the products from, then we can't get ahead.

\*\*\*\*

For the last ten years that I know of...they would not relinquish pricing to me. ...So pretty much, I had hit a wall. I kept going to the agency saying...do something to support this so I can continue to stay in this business.... So after no one listening, I said, okay, and I packed up my trucks and I parked them.

\*\*\*\*

But what we found is that we're finding the same thing on the supplier side, that the suppliers to us will not give us the pricing that they are giving to these big people.

Some nonminority firms complained about the inconsistent application and the burden of the M/WBE program requirements.

If it's a State program, then, you know, a State form, standard form because that's the biggest thing that this office will often have seminars just to explain to their GCs how to fill out the form, because they have so many people filling out the form incorrectly...six [different] agencies, six different forms.

\*\*\*\*

I need one person almost for two days, two complete days, just to do the invoicing, billing, paperwork, MBE, D4, D5s, that kind of stuff, just to track....

**b. Contract Solicitations**

There was significant support among the M/WBE firms to unbundle State contracts to improve the opportunities for small firms to win prime contracts.

We would prefer to prime, to be honest with you. We would like to see more small contracts come out, strictly for small businesses.

\*\*\*\*\*

We struggle being able to prime State-funded contracts because we are specialized ... But what we find is the State bundles a lot of projects into one package, and so then you are looking at a \$5 million contract that a small business can't necessarily bond.

Several M/WBEs expressed concerns that the restrictive experience requirements create a barrier to M/WBE firms competing for opportunities.

Each and every one of these entities that I have subsequent contracts, I had to go there and make my presence known, or I'll submit an RFP, and it has to stand on its own. But they do ask you in the RFP process, please give me three or five other references from State agencies that you have worked and done the same type of work.

\*\*\*\*\*

And what my issue is, is that it's hard to break into the marketplace, if you will, because of past performance, the lack of, [for] a new company.

Several M/WBEs recounted negative experiences with the State in the solicitation process.

[W]e worked for two and a half years developing the relationship. We got to everybody except the guy who put the RFP out. ...I actually went to an event so I could see him in person. I walked up to him and said hey, just wanted to put a face with a name, wanted to introduce myself, gave him a card. He looked at me like I was from Mars, and then, he thought about it, he took the card, and then he walked away from me.

\*\*\*\*\*

They give you the spec, you have to read the spec and read through each line and to try to interpret what it is they want you to do. But the problem that I have is when you call up a contracting officer, they are so lacking in knowledge of what they're putting out that you actually have to teach them.

There was uniform agreement among M/WBE firms that the State should review the procurement process and streamline the decision making process.

The archaic nature of the Maryland procurement system is such that there's no fairness in the process. ...[T]here's no review, there's no definition given of how the selection

committee was even formed.... And so a decision is made by one person as to who the solicitation goes to....

\*\*\*\*

Restructure the --- to have more accountability of the people that are putting contracts out. The people that are putting these contracts [out] are not qualified to do it. They're not...trained, they don't follow up, they don't answer—call down there; try to get a phone call answered.

\*\*\*\*

You got a bureaucracy of people; they don't know what they're procuring. The contracts are absolutely insanely written such as my business dealing with Iran, blood diamond traffic, then I get this mercury compliant form...That's insane. Why ask me that?

Both M/WBEs and Non-M/WBEs professional service firms complained about the long delays from submission of a proposal to award.

I know we have been on teams where proposals initially went in as late as 2013 that are still open, haven't been awarded yet. So it's very difficult to plan staffing when you are budgeting three years per contract award.

\*\*\*\*

[W]hen you take that long to make [a] decision, like you're submitting something in 2013, that's when the letter went in, and then your technical proposal is due in 2016, the longer that gap in time, the more likely there are changes in your company.

\*\*\*\*

The timelines are so long from the point the proposal comes out until it's awarded. [T]hey will ask key personnel to be submitted with the proposal. ... We cannot substitute any personnel until 30 days after award. ... We submitted our proposal [in] December. We have yet to hear back about the award. Holding onto four key personnel as a small business ...this really narrows the proposals that we can go after....

## **5. Contract Performance**

### **a. Monitoring**

Many M/WBE firms commented that the State's monitoring of contract payments during the term of the contract had improved.

I have to submit a form stating which contractor paid me, how much they paid me on each job. What I have as a minority...noticed this year more than any other year that they are really keeping track and following up on it. There was a payment that was applied to

the wrong job in my office, and \*\*\* called and said that this doesn't make sense because we don't have that the prime contractor made a payment on this. It was fixed and everything was fine, but I was like wow, we've been filling out these papers for thirty years.

\*\*\*\*\*

I think it's gotten better over time, ... because before we submitted and it just kind of goes in a black hole. But if you don't submit, then somebody actually does follow-up. But the point is, it is in some timely fashion.

\*\*\*\*\*

I have found that when I'm not paid by the prime and I'm looking for the money, I can call the State and say [I am] the minority contractor on this job, I haven't been paid, have they been paid, and they will work with you. But you have to ask.

\*\*\*\*\*

I'd say again, \*\*\* is maybe the most organized...and aggressive. And they'll come out and do audits and, you know, sit down and look at the paperwork and say, "Hey, you fell short, and you said you were going to meet this goal, and it looks like your paperwork showed that you fell 3 percent on this guy...What happened?"

Some firms expressed their view that the State's monitoring and compliance efforts were weak and ineffective.

[A]t the end of the job they sent me a blank form with no contract number, no amount, no job locations, no nothing and said can you sign this for us? I said absolutely not... but when they did fill it out, at least, I signed it and sent it back. ...A few months later, I get a call from the MBE liaison...He said I just want to make sure you got paid...I said we got paid and I told him what happened. I said I don't think it was done fairly and properly...and would you like me to send you a copy. [He said,] No, no, that's okay.... Because he doesn't want to open that can of worms.

\*\*\*\*\*

I've had several State contracts, for example, where I had to send in a monthly D-5 form to certify that I was paid on time. Then I've had other contracts, the contract was for millions of dollars, and I have yet to send in. So it's irregular. No one following up to see that I was paid. So what kind of compliance are they tracking? So it has to be consistent on the State's side.

\*\*\*\*\*

I mean, in the State's defense, I guess what they would say is that they really don't have the staff to monitor and go behind every contract and see if everything is legit and straight up.

Some M/WBE firms expressed their view that the M/WBE liaisons must understand the procurement process in order to effectively monitor M/WBE participation.

[I]f the MBE liaison doesn't have the expertise in understanding the difference...doesn't understand what an indefinite delivery contract is and have task orders associated with it, then that person [or] then hiring a person without having that understanding of the government procurement process automatically then discriminates against minority businesses who come in who need to know how to navigate the process.

## **b. Payment**

In general, both M/WBEs and non-M/WBEs recognized the importance of receiving timely payments and the negative impact not getting paid had upon their ability to be successful on State projects.

I work with a sub, minority or not, to keep him moving, to pay his materials, even though I haven't been paid, because on the next bid, I'm going to get maybe a better price than my competitor, because he knows I'll pay him or help get his materials.

\*\*\*\*\*

Sometimes when the sub is doing certain work, and they send an invoice in, and if the prime hadn't had to participate in that, they're not in a whole lot of hurry to get their portion, the invoices, so that your payments get delayed, not because you didn't hand in your invoice properly, but the prime didn't submit, because that's the only person that's submitting an invoice to the State, not the sub. It's the prime that's submitting the invoice to the State. And then so the sub ends up having to wait 30, 60, 90 days.

\*\*\*\*\*

Many times my sub costs will be higher than my effort costs, and I don't do pay when paid. I paid my subs. That is difficult when you're 90, 120, six months out, and I'm knee deep in the hole. It creates this balance that is—it makes it hard to grow to do more State work. You literally have to become financially capable as a tiny company first.

## **c. Liquidated Damages<sup>290</sup>**

There were major concerns in the M/WBEs professional service firms of the unintended consequences of the threat of liquidated damages.

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<sup>290</sup> See also fn. 225 and COMAR 21.11.03.10.E (requiring liquidated damages provision that applies if the contractor fails to comply in good faith with MBE requirements or contract provisions).

I think that the root of the problem...on the liquidated damage[s], it was intended to help the DBE community, but I think it's backfiring.

\*\*\*\*

So my worry is if they have that liquidated damages to design contracts that they'll use engineering firms that have multiple disciplines, so maybe they could do utilities and MOT and landscape architecture versus all I do is landscape architecture.

\*\*\*\*

I got particularly concerned with our last renewal documents we got through \*\*\* for our next two-year renewal. There were some new provisions that have been added to the contract which really give me pause, including things like liquidated damages.

Several nonminority contractors both in construction and professional services, also expressed their concerns regarding the liquidated damages provisions required by the State.

I personally don't like the LDs. I don't like assigning liquidated damages to a program that is supposed to have a goal. To me, if you don't meet your goal, you have a reason that you didn't meet your goal, and you shouldn't be financially impacted. ...[H]e has a flooring guy that doesn't show up and he's going to have to pay him anyway even though he didn't show up...I don't understand how that can be legal.

\*\*\*\*

At the end of the day to find out if I fall a little short because there is a change in scope, or for whatever reason...we're subject to liquidated damages where we're actually paying money back to the State, it puts us in a business environment that's very antagonistic in my mind and makes a difficult situation almost untenable.

#### **d. Small Business Reserve**

Both the M/WBE and Non-M/WBE business community were supportive of expanding the Small Business Reserve Program.

But they need more SBR contracts.

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[T]here should be established small business opportunities for small businesses. They can be bundled for small businesses, so you get a collection of services, but take them out of large contracts and give them to small businesses.

**e. Retainage**

There was a major concern among the majority of M/WBE and Non-M/WBE construction firms regarding the long delay to release retainage.

Retainage is really a challenge and I don't know if it can be dealt with...to tell you the truth because it doesn't seem to be a cap within reason of what the primes can hold...That money is sitting in the bank somewhere and they're getting a profit from it.... But what we do as a small business is you keep telling them, respectfully, that's what I was saying not to self-destruct. Sir, is there any change on that retainage? Can we get some of that retainage back? We need it for operating costs.

\*\*\*\*\*

They'll say we're going to hold onto it for five years. Once that five years is [over], we'll give it back to you. Some of them may say we're going to hold onto it for 10 years and once the 10 years is over, we're going to give it back.

\*\*\*\*\*

Look we only have a 10 percent fee. So if you take a year to pay retainage, and I'm working three or four universities, you took all my profit. That's my 10 percent fee, my profit that I've added on the bid so that I can keep going. With them holding it for a year, it's killing me....

\*\*\*\*\*

But with landscape, they hold 30 percent retainage on all my work, and then on top of that, my prime that I work with holds 5 to 10 percent retainage. That means at all times, anywhere between 35 and 40 percent of my money is sitting in either a prime's pocket or an agency's pocket. And talk about financial issues on a small MBE company.

**f. Front Companies and Pass Throughs**

There was uniform perception among M/WBE and non-M/WBE firms that shams and front companies continue to be a problem in the State of Maryland with the MBE program.

[W]e'll use an Asian supplier, which meets the goal but, you know—it's just a pass through. Everybody knows about how the suppliers work. \*\*\* is the only agency we work with that only recognizes the suppliers at 60 percent of whatever we give them. You know, \$100,000 to a supplier, we only get credit for \$60,000. All the other State agencies say, "Hey we don't care. Use a supplier, and we will give you full credit." That's the easiest for me...I'll buy the materials through them...it's a minority firm, but it's just a pass through.

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Except he had to have MBE participation, and so he figured “MBE insurance”—and this is how some of them think: “MBE insurance, if I have them write my bond for me or my insurance for me, then I’m good.” Well he wanted us to write his bond, but his bonding was huge; it was very large and he already had somebody to do it, but he wanted to offer me some percentage of that.

\*\*\*\*

What we find is a lot of husbands had a business and then the wife wants to move into the same business, yet the husband is still doing his business, so you’re going to just piggyback off what the husband—so that would not be fair to me, because if I’m competing against her, I’m really not competing against her, I’m competing against her husband who’s already in the private sector.

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So when you bring these fraud complaints to the State, the State doesn’t do anything about it. They just let it go.

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Every contractor in the State, I guarantee you, uses suppliers to meet MBE goals.... And most of these suppliers don’t touch a piece of equipment. They process paper. It’s a pure pass through. It’s a shame. We all know it happens.

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## **IX. Suggested Best Practices for Race- and Gender-Conscious Programs**

As detailed above, we conducted a thorough examination of the evidence regarding the experiences of minority- and women-owned firms in Maryland's geographic and procurement market area. To meet strict scrutiny, we have analyzed evidence of such firms' utilization by the State on its prime contracts and subcontracts, as well as M/WBEs' experiences in obtaining contracts in the public sector and economy-wide. We gathered statistical and anecdotal data to provide the State with the evidence necessary to consider whether it has a compelling interest in remedying identified discrimination in its market area and, if so, how to narrowly tailor any race- and gender-based remedies adopted.<sup>291</sup>

The State of Maryland has a mature and comprehensive MBE Program and accompanying regulations and guidance. Based upon our review of M/WBE best practices and our experience with M/WBE programs, we highlight some of the best practices applicable to the contracting process that allow for a well implemented M/WBE contracting and inclusion strategy.

### **A. Continuing and Augmenting Race- and Gender-Neutral Initiatives**

#### **1. Expanding Small Business Programs**

Race- and gender-neutral programs are critical to fostering the inclusion of M/WBE and small business owners in the state contracting process. A question facing many jurisdictions is how to grow capacity at the prime level and shift the program objectives from a subcontracting program. A best practice to facilitate this goal is to expand the Small Business Programs (SBP and SBR).

This is recognized as a primary structured best practice approach to providing prime contracting opportunities to M/WBEs and other small firms. There are four elements that should be considered in the state's strategy of inclusion steps. First, the size standards for small business program eligibility should be reviewed to ensure that the program targets the appropriate pool of firms to maximize the program's effectiveness. States may develop small business program eligibility standards that reflect the state's small business profile. Some states have seen the need to encourage microbusiness small business programs or sheltered markets programs for emerging or start-up businesses. Other programs such as the DBE and ACDBE programs (as well as MDOT's recently implemented federal SBE program) have relied upon the SBA size standards to determine eligibility. Second, as mentioned above, the size of contracts included within the small business program could be increased. Third, the number of agencies authorized to implement small business price preferences or reserve contracts for small business competition could be expanded. Fourth, some jurisdictions have also expanded the types of contracts eligible for price preferences and small business set-asides; particularly professional services contracts, with smaller local firms, such as architecture or engineering firms.

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<sup>291</sup> Throughout this section, the acronym "MBE" is used when referring to State of Maryland program and policy matters, while "M/WBE" is used to refer to minority-owned and/or women-owned businesses.

Finally, the impact of the small business program efforts on the business community should be measured. Both race and gender data could be collected on firms participating in the SBP and SBR programs. This would facilitate the next study of the MBE Program, which should include review of the effectiveness of the small business program in increasing the number and capacity of M/WBEs.

### **2. Increasing Contract “Unbundling”**

Another recognized best practice is review of contracting opportunities to unbundle larger contracts to facilitate bidding by M/WBEs and small firms. Master contracts and blanket purchase order contracts as a best practice could be redefined to have smaller scopes and create more opportunity. Policies and procedures in many jurisdictions to divide state purchasing contracts into smaller work packages have been implemented as a means to increase small and diverse business participation and level the playing field. To increase opportunities for M/WBEs and other small businesses, for example, large construction contracts can also be unbundled and direct prime contracts on smaller scopes of work such as landscaping or sidewalks could be encouraged by state agencies. Under Maryland law, agencies are required to consider the severability of contracts<sup>292</sup> and prohibited from bundling contracts to limit minority business participation.<sup>293</sup>

### **3. Reviewing Surety Bonding, Insurance, and Experience Requirements**

A recognized best practice to remove barriers and enhance the opportunity for participation in construction and professional services contracts is to review surety bonding and commercial/professional insurance requirements. The goal of the review is to ensure that the bonding and insurance requirements make sense from a business perspective and ensure that amounts are no greater than necessary to protect the state’s interests. For example, a bonding requirement of \$50,000 for a state job priced at \$25,000 may not justify the expense related to securing the bond.

At least one jurisdiction innovated its bonding program by implementing a group policy bonding program to increase the bonding capacity of M/WBEs. Other tools available to assist with bonding and insurance include “wrap up” insurance and Owner Controlled Insurance Programs to manage risk and potentially allow for more opportunities for small businesses to compete.

Similarly, the experience requirements on state contracts including professional service contracts should not create an artificial barrier that precludes qualified firms from competing for those opportunities. Experience requirements in solicitations should be reviewed to ensure that M/WBEs and other small firms are not unfairly disadvantaged and that there is adequate competition for state work. For example, a requirement of five years of previous airport terminal-specific janitorial experience in order to bid to clean an airport terminal automatically limits the field of potential competitors. Equivalent experience, such as with shopping malls, commercial

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<sup>292</sup> Md Code Ann., State Fin. & Proc. §14-302(a)(3)(i).

<sup>293</sup> Md Code Ann., State Fin. & Proc. §11-201(d)(3)(i).

buildings or other government facilities, should be permitted to increase access for small firms and guard against unfair incumbent advantages.

### **4. Ensuring Prompt Payments**

Prompt payment is the lifeblood of any business and slow payments by the state to prime firms and by prime contractors to firms performing as subcontractors clearly create hardships for M/WBEs and other small businesses impacting their success. Many states, Maryland among them, require timely payments to subcontractors working on public contracts. Generally, most states or jurisdictions require that they pay the contractor within 30 days from approval of invoice and, similarly, require the contractor to pay the subcontractor seven to ten days from receipt of payment by the prime.

Best practices to facilitate the payment process include implementing an electronic contract tracking system, whereby contractors and subcontractors could see the status of the prime contractor's invoice. Such tracking systems should be detailed enough for a subcontractor to ascertain if its own invoice was included in the prime contractor's INVOICE FOR PAYMENT. This could help to address the complaint by subcontractors that prime contractors often withhold or delay payments without cause. It could also help avoid wasted time and energy by all subcontractors in determining the status of their invoices and whether the prime contractor has been paid.

Expedited payment programs have also been adopted for major capital projects that provide incentives for primes to pay subcontractors within seven days of receiving a subcontractor invoice. This voluntary program allows prime contractors with multi-year contracts for construction or maintenance, for example, to be paid interest on the contractor's payments to its subcontractors pending payment of the invoice or progress payment to the prime.

### **5. Collecting Bid Data and Pricing Information for Subcontractor Quotations**

Collecting bid data on all subcontractor quotes received on larger projects is currently required under the Federal DBE regulations. The practice can potentially provide a wealth of information both for pricing of state projects and for monitoring subcontractor participation in the MBE program. The prices and scopes could then be compared to ensure that bidders are, in fact, soliciting and contracting with subcontractors on a non-discriminatory basis and whether M/WBEs are inflating quotes.

### **6. Utilizing Technology**

The use of technology and the availability of technology have evolved tremendously with the advent of smart phones, iPads and other mobile technology devices. The use of technology can increase the visibility of business opportunities and help communicate directly with potential contractors and vendors. Utilizing technology can also provide potential cost savings for state agencies and enable the advertising of contract opportunities to a wider pool of firms.

## **B. Implementing Race- and Gender-Conscious Remedies**

Maryland has a strong basis in evidence to implement a race- and gender-based program for contracting and procurement based upon the findings in this Study. This record establishes that minorities and women in the Maryland market area continue to experience statistically significant disparities in their access to State and private sector contracts and in those factors necessary for business success. Further, the anecdotal evidence provides vivid individual accounts of the discriminatory barriers, both overt and covert, to their full and fair participation in both State and private sector procurement and contracting expenditures. The statistical and anecdotal evidence presented in this Study is strong evidence that establishes Maryland's compelling interest in remedying race and gender discrimination. The evidence supports the conclusion that affirmative intervention is still needed to dismantle the exclusion of racial and gender groups from the private sector market. Maryland will likely be a passive participant in a discriminatory marketplace if it fails to continue to address the issue. Moreover, as found in Chapter VI, there remain large and statistically significant disparities between the availability of M/WBEs and their utilization on State contracts despite the State's aggressive current efforts. These results support the need for continued remedial action.

In adopting a new or revised MBE statute, Maryland should consider best practices implemented in other race- and gender-conscious programs to advance equity in contracting. Other race and gender conscious best practices include the following.

### **1. Increasing Certification Outreach**

The hallmark of an exemplary MBE program is a rigorous certification process to ensure Program integrity. Outreach is a necessary and important component of a good MBE certification process in order to maximize the available pool of available M/WBEs. To facilitate an increase in the available M/WBE pool, the length of time it takes to be certified should not be unreasonable and certification documents should be as streamlined as possible. Further, state agencies and officials should continue to explain the benefits of certification to the pool of non-certified MBE firms and provide additional training to those personnel charged with certification responsibilities to avoid an inconsistent interpretation and application of the certification requirements.

### **2. Annual Forecast of MBE Participation for State Spending**

Maryland should continue the policy, a recognized best practice, that each agency must develop an annual plan for projected M/WBE utilization to detail the anticipated procurements and the level of M/WBE participation the agency will seek to achieve. It goes without saying that the more accurate the anticipated annual procurements, the more accurate the forecast of M/WBE participation may be projected.

### **3. Setting Contract-Specific Goals**

A best practice that directly impacts the success of the MBE Program is the goal setting process. Contract goals cannot simply be the rote application of the annual goals. Contract goals must be based upon the demonstrated availability of M/WBEs to perform the anticipated weighted scopes

of the project's prime and subcontracting opportunities, as well as the agency's progress towards meeting its overall annual goals. Given that goals are based upon both subcontracting opportunities and the available pool of M/WBE firms, if there are few or no subcontracting opportunities, no goals should be set. Realistic and achievable goals reduce contractor frustration with achieving M/WBE participation goals, reduce applications for waivers, and also reduce vendors' temptation to use brokers, who add little value to the transaction other than goal credit, or to make contractual commitments that will ultimately not be kept.

In order to uniformly set contract specific goals, the contract-by-contract goal setting process should be standardized across agencies. Collaboration with the project managers, engineers, and MBE Liaisons should be encouraged as early as possible in the goal setting process. A standard best practice is to require the MBE Liaison to sign off on all goals before the solicitation is advertised. This facilitates consideration of M/WBE issues and provides earlier opportunities to reduce contracting barriers for such firms.

Setting goals for "indefinite delivery" or "task order" contracts is often difficult because the scope of the work is not fully developed at the time of initial award. Some jurisdictions have dispensed with the requirement of M/WBE utilization plans with specific percentage or dollar values at contract award for these types of contracts. Listed M/WBEs often have no guarantee of any certain amount of work on these types of contracts and unrealistic expectations are often created by listing the firms in the utilization plans. One best practice is to set task-specific goals on each task order within the framework of an overall commitment by the prime contractor to achieve an aspirational MBE goal as the portfolio of task orders is assigned.

#### **4. Counting MBE Prime Contractor Participation Towards Meeting Contract Goals**

A best practice, adopted by Maryland, is to allow M/WBE prime firms to count their participation towards meeting a contract goal and to count those dollars towards its overall, annual goal. This approach is captured in the Federal DBE regulations, which permit a firm to count its self-performance, minus any work subcontracted to non-certified firms.<sup>294</sup> This approach also requires that the M/WBE prime make good faith efforts to meet the subcontracting goal. This practice, which facilitates increased capacity among M/WBE prime contractors, could be coupled with providing incentives for M/WBE firms to pursue non-traditional contracting opportunities, which helps to avoid over-concentration of M/WBE firms in certain industry categories.

#### **5. Counting Lower Tier M/WBE Utilization**

On large projects, a best practice is to count verifiable lower tier M/WBE subcontractors toward the goal. This approach facilitates a general contractor's ability to meet the M/WBE subcontracting goals by providing more flexibility for general contractors and first tier subcontractors and potentially will provide more opportunities for smaller M/WBE firms on large projects.

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<sup>294</sup> See 49 C.F.R. §26.55(a)(1) ("Count the entire amount of that portion of a construction contract...that is performed by the DBE's own forces").

## 6. Using Control Contracts

With respect to future disparity studies, a best practice is to bid a small sample of contracts that are determined to have significant opportunities for M/WBE participation without any M/WBE goals. The designated control contracts may provide insight into whether M/WBEs are used or even solicited in the absence of contract-specific goals. The Courts have considered such unremediated markets data probative of the need to implement M/WBE goals to level the playing field for public sector contracts.

## 7. Reviewing Contract Award Procedures

Once goals have been set on a contract, it is critical that standards for contract award be clarified, standardized, and enforced across all agencies.

### a. Scrutinizing M/WBEs' Commercially Useful Function

Another best practice is to provide extensive training to staff to make sure they clearly understand critical elements of the MBE Program such as “commercially useful function.” The Federal DBE regulations provide the standard in federal contracting and a best practice that M/WBE utilization must be carefully evaluated to determine whether the firm is serving a commercially useful function. It is uniformly recognized that a minority- or woman-owned firm can be illegally used as a “pass through” or “front” on a specific contract. Commercially useful function means responsibility for the execution of a distinct element of the work of the contract and carrying out the M/WBE’s responsibilities by actually performing, managing, and supervising the work involved, or fulfilling those responsibilities as a joint venture partner. Accordingly, a best practice is to review the proposed M/WBE subcontractor’s role on a project and confirm that the M/WBE firm’s role meets the definition of a commercially useful function. It should be noted that the setting of contract goals based upon a clear scope of work that is a defined subcontracting opportunity should reduce the incentives to claim credit for work that is not commercially useful in order to meet unrealistic or artificial goals.<sup>295</sup>

### b. Standardizing and Disseminating Good Faith Efforts Policies and Procedures

Flexibility in the aspirational goal and the availability of waivers are essential elements to a well-designed MBE program. For a bidder who makes good faith efforts, a best practice is for that bidder to be considered by a state agency under the same standards as a bidder who has met the goals. To mandate meeting a defined goal without considering the circumstances may be considered by the Courts an impermissible race- and gender-based quota. Non-M/WBEs must be able to legitimately apply for a waiver and accurate information about the waiver standards and process should be fully disseminated. State personnel should be adequately trained on the evaluation of waivers and be empowered to grant a waiver if the circumstances justify the decision.

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<sup>295</sup> The Commercially Useful Function regulations for the Federal DBE Program are at 49 C.F.R. 26.55©-(d). For Maryland’s Commercially Useful Function regulations, *see* COMAR 21.11.03.12-1.

Given that construction firms take bids up to almost the literal last minute, a better practice is to provide some flexibility for those solicitations consistent with industry standards. Perhaps a very short window (*e.g.*, two hours) could be considered so that bidders can submit complete and accurate paperwork or perhaps bidders could be allowed to correct strictly clerical errors in the computation of the percentages or dollar values committed to M/WBE firms. The goal is to provide a balance between the practical realities of construction contracting and the implementation of the MBE Program's legitimate requirements.

### **c. Developing Standard Contractual Terms and Conditions for Program Enforcement**

A best practice is to make sure that the contracting community understands that the MBE Program requirements are not optional and the contract language for the MBE Program is clear and concise. The contractual requirements for the MBE Program should be uniform across state agencies including the contract language that allows for the imposition of liquidated damages. The failure to enforce contract sanctions for default, up to and including termination, when the contractor has violated the contract terms, conditions and applicable regulations, undermines the legitimacy of the program both to the M/WBE and the non-M/WBE business communities.

## **8. Monitoring Contract Performance**

Adequate staffing and authority to properly monitor contract compliance with the M/WBE commitments once awarded is critical. A best practice is to provide M/WBEs and other subcontractors with transparency in the contracting process and access to information about when the prime contractor received the notice to proceed, subcontractor utilization, and when progress payments have been made. Depending upon the size of the agency and available resources, many MBE Liaisons are too overwhelmed to conduct thorough ongoing compliance audits, and contract closeout is too late in the process to determine that a prime contractor has failed to utilize M/WBEs or that firms have not been paid. Some jurisdictions have relied, as a practice, upon the project management staff to augment contract monitoring. Another approach adopted by many jurisdictions is the implementation of a comprehensive data tracking and monitoring system.

A best practice is not to permit a contractor to substitute those M/WBEs listed in the original compliance documents, even with another certified firm, without prior written approval of both the project manager and the MBE Liaison. Substitutions of an M/WBE subcontractor should be permitted only under certain limited circumstances, such as the refusal by the subcontractor to honor the bid or proposal price. As a component of the program, the decision-making process for the consideration of the contractor's proposed substitution on a project should be administered in such a manner as to make the decision timely.

## **9. Enhancing Program Administration**

As mentioned above, continued training of MBE Liaisons in procurement policies and procedures, and the intricacies of the MBE program is also a best practice that will enhance consistency in the implementation of the MBE program across agencies. Centralizing oversight of the compliance aspects of the Program with one agency, with individual staff members

responsible for a set group of agencies and for interfacing with their MBE Liaisons will also foster consistency. Because of MDOT's unique responsibility of administering both the State MBE and Federal DBE Programs, MDOT may need to continue its certification responsibilities for both the MBE and DBE Programs, as well as its oversight of compliance at the MDOT modal administrations.

### **10. Implementing a Mentor-Protégé Program**

Mentor Protégé programs can further the development of M/WBE firms by assisting them in growing and building the capacity of their firms. Mentor Protégé programs also have the potential for assisting M/WBE firms to move into non-traditional areas of work and compete in the private market. Following the guidelines of the USDOT DBE Program<sup>296</sup> and other successful initiatives, could provide an additional tool for the State to foster the development and growth of M/WBE firms. In an effort to encourage these type of relationships, contractors and consultants for construction and professional services firms have been provided incentives, including providing credit towards meeting contract goals for participation in such a program.

### **11. Developing Performance Measures for Program Success**

Another best practice of an MBE program is to measure program performance. Achievement of the numerical M/WBE goal should not be the only measure of program success. Qualitative and quantitative performance measures for certified firms and overall Program success should be utilized in evaluating or setting benchmarks for the Program. Possible benchmarks are the achievement of business development plans similar to those used in the Small Business Administration's 8(a) Program, including revenue targets for certified firms; increased prime contracting by M/WBEs; and increased graduation rates. It is also important to know programmatic strengths and weaknesses and to track progress towards the State MBE policy goals and objectives.

### **12. Releasing Retainage**

Another best practice is to release retainage to subcontractors prior to final completion of a project, especially longer (*i.e.* multi-year) projects. The release of retainage to subcontractors on work performed early in the project, *e.g.* site and utility lines, and partial releases of retainage as appropriate can have a significant positive impact upon the ability of M/WBEs and other small business owners to do business on construction projects with the State.

The Federal DBE rules provide an example of best practice in this regard. Recipients of federal funds (*e.g.* MDOT) are required to employ one of three methods regarding retainage: (1) do not hold retainage from prime contractors and prohibit prime contractors from holding retainage on their subcontractors; (2) do not hold retainage from prime contractors and require prime contractors to make full payment of any retainage held from a subcontractor within 30 days after satisfactory completion of the subcontractor's work; or (3) hold retainage from prime contractors, pay that retainage to prime contractors based on prompt and regular incremental

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<sup>296</sup> 49 C.F. R. Part 26, Appendix D, "Mentor-Protégé" Program Guidelines.

acceptances of project completion, and require prime contractors to pay all retainage owed to a subcontractor for satisfactory completion of the accepted work within 30 days after retainage is released to the prime contractor.<sup>297</sup>

### **13. Periodically Reviewing the Program**

Maryland should continue its longstanding and prudent legislative requirement and best practice that the MBE Program be thoroughly reviewed every five years, and that only if there is strong evidence of continuing business discrimination should it be continued. The Program's goals and operations should also be evaluated to ensure that they remain narrowly tailored to current evidence. As has been Maryland's practice for over a decade, a sunset date for the statute providing that the Program will end unless reauthorized should be included.

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<sup>297</sup> 49 C.F. R. § 26.29(b).

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## References

- Acs, Z. and D. Evans (1994), "The determinants of variations in self-employment rates across countries and over time," Working Paper.
- Alba-Ramirez, A. (1994), "Self-employment in the midst of unemployment; the case of Spain and the United States," Applied Economics, 2, 189-204.
- Arai, A. B. (1997), "The road not taken, The transition from unemployment to self-employment in Canada, 1961-1994," Canadian Journal of Sociology, 22, Summer, 365-382.
- Adelino, M., A. Schoar, and F. Severino (2015), "House prices, collateral, and self-employment," Journal of Financial Economics, 117, 288-306.
- Ardalan, K. (2006), "Community Reinvestment Act: Review of the empirical evidence," Journal of Commercial Banking and Finance, 5(1/2), 115-139.
- Areed, P., L. Kaplow and A. Edlin (2013), Antitrust Analysis: Problems, Text, Cases, New York: Aspen Publishers, 7<sup>th</sup> ed.
- Aronson, R. L. (1991), Self-employment, Ithaca, NY: ILR Press.
- Arrow, K. (1972), "The theory of discrimination," Discrimination in Labor Markets, Ashenfelter, O. and A. Rees (eds.), Princeton, NJ: Princeton University Press, 3-33.
- Bates, T. (1973), Black Capitalism, A Quantitative Analysis, New York: Praeger.
- Bates, T. (1989), "The changing nature of minority business, a comparative analysis of Asian, non-minority, and black-owned businesses," The Review of Black Political Economy, 25-42.
- Bates, T. (1991a), "Discrimination and the capacity of Chicago metropolitan area minority and women-owned businesses," Report to the City of Chicago Department of Law.
- Bates, T. (1991b), "Commercial bank financing of white- and black-owned small business startups," Quarterly Review of Economics and Business, 31(1), 64-80.
- Bates, T. (1993), "Banking on black enterprise, the potential of emerging firms for revitalizing urban economies," Washington, DC: Joint Center for Political and Economic Studies.
- Bates, T. (1997), "Unequal access: Financial institution lending to black- and white-owned small business start-ups," Journal of Urban Affairs, 19(4), 487-495.
- Bates, T. (2002), "Rule 26(a)(2)(B) report of expert witness Timothy Bates," in *Builders Association of Greater Chicago v. the City of Chicago*, 298 F.Supp. 2d 725 (N.D. Ill. 2003).
- Bates, T. and A. Robb (2013), "Greater access to capital is needed to unleash the local economic development potential of minority-owned businesses," Economic Development Quarterly, 30(2), 159-170.

- Bates, T. and A. Robb (2016), "Impacts of owner race and geographic context on access to small-business financing," Economic Development Quarterly, 30(2), 159-170.
- Bauer, P. W. and B. A. Cromwell (1994), "A Monte Carlo examination of bias tests in mortgage lending," Federal Reserve Bank of Cleveland Economic Review, 30(3), 27-40.
- Becker, G. S. (1957), The Economics of Discrimination, Chicago, Illinois: University of Chicago Press.
- Bernhardt, I. (1994), "Comparative advantage in self-employment and paid work," Canadian Journal of Economics, May, 273-289.
- Black, J., D. de Meza and D. Jeffreys (1996), "House price, the supply of collateral and the enterprise economy," The Economic Journal, 106(434), January, 60-75.
- Blanchflower, D. G. (2000), "Self-employment in OECD countries," Labour Economics, 7, September, 471-505.
- Blanchflower, D. G. (2009), "Minority self-employment in the United States and the impact of affirmative action programs," Annals of Finance, (5)3-4, 361-396.
- Blanchflower, D. G., P. Levine and D. Zimmerman (2003), "Discrimination in the small business credit market," Review of Economics and Statistics, 85(4), 930-943.
- Blanchflower, D. G. and B. Meyer (1994), "A longitudinal analysis of the young self-employed in Australia and the United States," Small Business Economics, 6, 1-20.
- Blanchflower, D. G. and A. J. Oswald (1990), "Self-employment and the enterprise culture," British Social Attitudes: The 1990 Report, Jowell, R., S. Witherspoon and L. Brook (eds.), Aldershot, UK: Gower Publishing.
- Blanchflower, D. G. and A. J. Oswald (1998), "What makes an entrepreneur?," Journal of Labor Economics, 16(1), January, 26-60.
- Blanchflower, D. G. and A. J. Oswald (2008), "What makes a young entrepreneur?," Handbook of Youth and Young Adulthood, Furlong, A. (ed.), Routledge International Handbook series, London and New York: Routledge.
- Blanchflower, D. G., A. J. Oswald and A. Stutzer (2001), "Latent entrepreneurship across nations," European Economic Review, 45, no. 4-6, May, 680-691.
- Blanchflower, D. G. and C. Shadforth (2007), "Entrepreneurship in the UK," Foundations and Trends in Entrepreneurship, 3(4), 257-364.
- Blanchflower, D. G. and J. S. Wainwright (2005), "An analysis of the impact of affirmative action programs on self-employment in the construction industry," National Bureau of Economic Research, Working Paper Series, #11793, November.

- Blau, D. (1987), “A time-series analysis of self-employment in the United States,” Journal of Political Economy, 95, 445-467.
- Bogenhold, D. and U. Staber (1991), “The decline and rise of self-employment,” Employment and Society, 5, 223-239.
- Bone, S., G. Christensen, G., and J. Williams, (2014), “Rejected, shackled, and alone: The impact of systematic restricted consumer choice among minority customers’ construction of self,” Journal of Consumer Research, 41, 451-474.
- Borjas, G. J. and S. Bronars (1989), “Consumer discrimination and self-employment,” Journal of Political Economy, 97, 581-605.
- Bourdon, C. C. and R. E. Levitt (1980), Union and Open-Shop Construction, Compensation, Work Practices, and Labor Markets, Lexington, MA: Lexington Books.
- Broussard, N., R. Chami and G. Hess (2013), “(Why) do self-employed parents have more children?,” Review of Economics of the Household, 13(2), 297-321.
- Browne, L. E. and G. M. B. Tootell (1995), “Mortgage lending in Boston-A response to the critics,” New England Economic Review, September-October, 53-78.
- Caballero, R. J. and A. Krishnamurthy (2008). “Collective risk management in a flight to quality episode,” The Journal of Finance, 63, 2195–2230.
- Cagetti, M. and M. DeNardi (2006), “Entrepreneurship, frictions and wealth,” Journal of Political Economy, 114(5), 835-70.
- Carr, J. H. and I. F. Megbolugbe (1993), “The Federal Reserve Bank of Boston mortgage lending study revisited,” Journal of Housing Research, 4(2), 277-313.
- Cavalluzzo, K. S. and L. C. Cavalluzzo (1998), “Market structure and discrimination, the case of small businesses,” Journal of Money, Credit, and Banking, 30(4), November, 771-792.
- Cavalluzzo, K. S., L. C. Cavalluzzo and J. Wolken (2002), “Competition, small business financing, and discrimination, evidence from a new survey,” The Journal of Business, 75(4), 641-681.
- Cavalluzzo, K. S. and J. Wolken. (2005), “Small business loan turndowns, personal wealth, and discrimination,” Journal of Business, 78(6), 2153-2177.
- Chénier, R., J. Fink and L. Keister (2015), “Racial inequality and consumption: exploring disparities in white and black household expenditures,” Working Paper, Duke University.
- Cloud, C. and G. Galster (1993), “What do we know about racial discrimination in mortgage markets,” Review of Black Political Economy, 22(1), Summer, 101-120.

- Coate, S. and S. Tennyson (1992), "Labor market discrimination, imperfect information and self-employment," Oxford Economic Papers, 44, 272-288.
- Cole, R. A. (1999), "Availability of credit to small and minority-owned businesses, evidence from the 1993 National Survey of Small Business Finances," Working Paper, Washington, DC: Federal Reserve Board, March 9.
- Corradin, S., A. Popov (2013), "House prices, home equity and entrepreneurship," Working Paper, European Central Bank, Frankfurt, Germany.
- Cowling, M. and P. Mitchell (1997), "The evolution of UK self-employment, A study of government policy and the role of the macroeconomy," Manchester School of Economic and Social Studies, 65, no. 4, September, 427-442.
- Day, T. S. and S. J. Liebowitz (1998), "Mortgage lending to minorities, where's the bias?," Economic Inquiry, XXXVI, January, 3-28.
- DeWit, G. and F. A. Van Winden (1990), "An empirical analysis of self-employment in the Netherlands," Economics Letters, 32, 97-100.
- Disney, R. and J. Gathergood (2009), "Housing wealth, liquidity constraints and self-employment," Labour Economics, 16(1), 79-88.
- Dogra, K. and O. Gorbachev (2016), "Consumption volatility, liquidity constraints and household welfare," The Economic Journal, forthcoming.
- Dunn, T. A. and D. J. Holtz-Eakin (2000), "Financial capital, human capital, and the transition to self-employment: evidence from intergenerational links," Journal of Labor Economics, 18 (2): 282-305.
- Eccles, R. G. (1981), "Bureaucratic versus craft administration: The relationship of market structure to the construction firm," Administrative Science Quarterly, 26, 449-469.
- Enchautegui, Maria E., M. Fix, P. Loprest, S. von der Lippe and D. Wissoker (1996), Do minority-owned businesses get a fair share of government contracts?, Washington, DC: The Urban Institute.
- Evans, D. and B. Jovanovic (1989), "An estimated model of entrepreneurial choice under liquidity constraints," Journal of Political Economy, 97, 808-827.
- Evans, D. and L. Leighton (1989), "Some empirical aspects of entrepreneurship," American Economic Review, 79, 519-535.
- Executive Office of the President, Office of Management and Budget (2012), North American Industrial Classification System: United States, 2012, Lanham, MD: Bernan.
- Fairlie, R. W. (1999), "The absence of the African American owned business, an analysis of the dynamics of self-employment," Journal of Labor Economics, 17(1), 80-108.

- Fairlie, R. W. (2006), "Entrepreneurship among disadvantaged groups: an analysis of the dynamics of self-employment by gender, race and education," Handbook of Entrepreneurship, Volume 2, Parker, S. C., Z. J. Acs and D. R. Audretsch (eds.), New York: Springer Verlag.
- Fairlie R. W. and B. D. Meyer (1996), "Ethnic and racial self-employment differences and possible explanations," Journal of Human Resources, 31(4), 757-793.
- Fairlie R. W. and B. D. Meyer (1998), "Does immigration hurt black self-employment?," Help or Hindrance? The Economic Implications of Immigration for Blacks, Hamermesh, D. S. and F. D. Bean (eds.), New York, Russell Sage Foundation.
- Fairlie R. W. and B. D. Meyer (2003), "The effect of immigration on native self-employment," Journal of Labor Economics, 21(3), 619-650.
- Fairlie, R. W. and B. D. Meyer (2000), "Trends in self-employment among white and black men during the twentieth century," Journal of Human Resources, XXXV(4), 643-669.
- Fairlie, R. W. and H. A. Krashinsky (2012), "Liquidity constraints, household wealth and entrepreneurship revisited," The Review of Income and Wealth, 58(2), 279-306.
- Fairlie, R. W. and A. Robb (2007a), "Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital," Journal of Labor Economics, 25(2), 289-323.
- Fairlie, R. W. and A. Robb (2007b) "Families, human capital, and small business: evidence from the Characteristics of Business Owners Survey," Industrial and Labor Relations Review, 60(2), 225-245.
- Fairlie, R. W. and A. Robb (2008), Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States, Cambridge, MA: MIT Press.
- Fairlie, R. W. and C. M. Woodruff (2010) "Mexican-American entrepreneurship," The B.E. Journal of Economic Analysis & Policy, 10(1), 1-42, Article 10.
- Lofstrom, M. and C. Wang (2009), "Mexican-American self-employment: A dynamic analysis of business ownership," Research in Labor Economics, 29, 197-227.
- Fan, W. and M. J. White (2003), "Personal bankruptcy and the level of entrepreneurial activity," Journal of Law and Economics, 46, 545-567.
- Ferri, G. and P. Simon (1997), "Constrained consumer lending, exploring business cycle patterns using the Survey of Consumer Finances," Working Paper, Princeton University.
- Fort, T., J. C. Haltiwanger, R. S. Jarmin, and J. Miranda (2013), "How firms respond to business cycles: the role of firm age and firm size," IMF Economic Review, 61, 520-559.
- Foti, A. and M. Vivarelli (1994), "An econometric test of the self-employment model - the case of Italy," Small Business Economics, 6, no. 2, April, 81-93.

- Fuchs, V. (1982), "Self-employment and labor force participation of older males," Journal of Human Resources, 17, Fall, 339-357.
- Gentry, W. M. and R. G. Hubbard (2005), "Success taxes, entrepreneurial entry, and innovation," Innovation Policy and the Economy, vol.5, Jaffe, A., J. Lerner, S. Stern (eds.), Cambridge, MA: MIT Press, 87-108.
- Giannetti, M. and A. Simonov (2004), "On the determinants of entrepreneurial activity: Social norms, economic environment and individual characteristics," Swedish Economic Policy Review, 11(2), 271-313.
- Glennon, D. and M. Stengel (1994), "An evaluation of the Federal Reserve Bank of Boston's study of racial discrimination in mortgage lending," Economic and Policy Analysis Working Paper, 94-2, Washington, DC: Comptroller of the Currency.
- Gould, F. E. (1980), "Investigation in construction entrepreneurship," Masters Thesis, MIT, May.
- Greene, W. H. (2011), Econometric Analysis, Seventh Edition, New Jersey, Prentice-Hall, Ch. 19.
- Haggerty, C., K. Grigorian, R. Harter and J. D. Wolken (2000), "The 1998 Survey of Small Business Finances: Sampling and level of effort associated with gaining cooperation from minority-owned businesses," Proceedings of the Second International Conference on Establishment Surveys, Buffalo, NY, June 17-21.
- Hall, R. E. and F. Mishkin (1982), "The sensitivity of consumption to transitory income, estimates from panel data on households," Econometrica, 50(2), 461-81.
- Hamilton, D., A. Austin, and W. Darity, Jr. (2011), "Whiter jobs, higher wages, occupational segregation and the lower wages of black men," Economic Policy Institute Working Paper No. 28, <http://bit.ly/2fMk6in>.
- Hanson, A., Z. Hawley, H. Martin, and B. Liu (2016), "Discrimination in mortgage lending: evidence from a correspondence experiment," Journal of Urban Economics, 92, March, 48-65.
- Harrison, G. W. (1998), "Mortgage lending in Boston, a reconsideration of the evidence," Economic Inquiry, XXXVI, January, 29-38.
- Hayashi, F. (1985), "The effect of liquidity constraints on consumption, a cross-sectional analysis," Quarterly Journal of Economics, 100(1), February, 183-206.
- Heckman, J. J. (1998), "Detecting discrimination," Journal of Economic Perspectives, 12(2), Spring, 101-116.
- Holmes T. J. and J. A. Schmitz (1990), "A theory of entrepreneurship and its application to the study of business transfers," Journal of Political Economy, 89, 265-294.

- Holtz-Eakin, D., D. Joulfaian and R. S. Harvey (1994a), "Entrepreneurial decisions and liquidity constraints," Rand Journal of Economics, 25(2), Summer, 334-347.
- Holtz-Eakin, D., D. Joulfaian and R. S. Harvey (1994b), "Sticking it out, entrepreneurial survival and liquidity constraints," Journal of Political Economy, 102(1), 53-75.
- Holtz-Eakin, D., J. Penrod, and H. Rosen (1996), "Health insurance and the supply of entrepreneurs," Journal of Public Economics, 62(1-2), 209-235.
- Holtz-Eakin, D. and H. S. Rosen (2005), "Cash constraints and business start-ups: Deutschmarks versus Dollars," Contributions to Economic Analysis & Policy, 4(1), Article 1.
- Horne, D. (1994), "Evaluating the role of race in mortgage lending," FDIC Banking Review, 7(1), Spring/Summer, 1-15.
- Hout, M. and H. Rosen (2000), "Self-Employment, family background, and race," Journal of Human Resources, 35, no. 4, Fall, 670-92.
- Hurst, E. and A. Lusardi (2004), "Liquidity constraints, household wealth, and entrepreneurship," Journal of Political Economy, Vol. 112(2), April, 319-347.
- Ivashina, V. and D. Scharfstein (2010), "Loan syndication and credit cycles," American Economic Review, 100(2), 57-61.
- Jappelli, T. (1990), "Who is credit constrained in the U.S. economy?," Quarterly Journal of Economics, 105(1), February, 219-234.
- Johansson, E. (2000), "Self-employment and liquidity constraints: evidence from Finland," Scandinavian Journal of Economics, 102(1), 123-134.
- Kanbur, S. M. R. (1990), "Entrepreneurial risk taking, inequality, and public policy, an application of inequality decomposition analysis to the general equilibrium effects of progressive taxation," Journal of Political Economy, 90, 1-21.
- Kidd, M. (1993), "Immigrant wage differentials and the role of self-employment in Australia," Australian Economic Papers, 32, no. 60, June, 92-115.
- Kihlstrom, R. E. and J. J. Laffont (1979), "A general equilibrium entrepreneurial theory of firm formation based on risk aversion," Journal of Political Economy, 87, 719-848.
- Kleiner, K. (2013), "How real estate drives the economy: an investigation of small firm balance sheet shocks on employment," Working Paper, Indiana University Bloomington, Bloomington, IN.
- Kuhn, P. J. and H. J. Schuetze (1998), "The dynamics of self-employment in Canada," Working Paper, McMaster University.

- La Noue, G. (2006), "Remarks of George LaNoue," in Disparity Studies as Evidence of Discrimination in Federal Contracting, U.S. Commission on Civil Rights, Washington, DC.
- Ladd, H. F. (1998), "Evidence on discrimination in mortgage lending," Journal of Economic Perspectives, 12(2), Spring, 41-62.
- LaFerrere, A. and P. McEntee (1995), "Self-employment and intergenerational transfers of physical and human capital, An empirical analysis of French data," Economic and Social Review, 27, no. 1, October, 43-54.
- Lentz, B. F. and D. N. Laband (1990), "Entrepreneurial success and occupational inheritance among proprietors," Canadian Journal of Economics, 23, 563-579.
- Lindh, T. and H. Ohlsson (1996), "Self-employment and windfall gains, Evidence from the Swedish lottery," Economic Journal, 106(439), November, 1515-1526.
- Lofstrom, M. and T. Bates (2013), "African Americans' pursuit of self-employment," Small Business Economics, 40, 73-86.
- Long, J. E. (1982), "The income tax and self-employment," National Tax Journal, 35, March, 31-42.
- Mach, T. L. and J. D. Wolken (2006), "Financial services used by small businesses: evidence from the 2003 Survey of Small Business Finances," Federal Reserve Bulletin, October 2006.
- Maddala, G.S. (1983), Limited Dependent and Qualitative Variables in Econometrics, Cambridge: Cambridge University Press.
- Meyer, B. (1990), "Why are there so few black entrepreneurs?," National Bureau of Economic Research, Working Paper No. 3537.
- Maryland Department of Business and Economic Development (2012), Maryland Small Business Development Financing Authority Annual Financial Status Report Fiscal Year 2012, Economic Development Article, Section 5-512(c) (4) and 5-555(h), <http://bit.ly/2eiGNtt>.
- Maryland Department of Business and Economic Development (2014), Maryland Small Business Development Financing Authority Annual Financial Status Report Fiscal Year 2014, Economic Development Article, Section 5-512(c) (4) and 5-555(h), <http://bit.ly/2fPOrg6>.
- Maryland Department of General Services (2016a), "Small Business Programs-FAQs," <http://bit.ly/2fXDxny>.
- Maryland Department of General Services (2016b), "Welcome to eMaryland Marketplace," <http://bit.ly/2fQqIfS>.
- Maryland Department of Housing and Community Development (2014), "2013 Linked Deposit Report to the Maryland General Assembly," <http://bit.ly/2fAMMcY>.

Maryland Department of Housing and Community Development (2016a), “Linked Deposit,” <http://bit.ly/2fdl9pI>.

Maryland Department of Housing and Community Development (2016b), “Microenterprise Loan Program,” <http://bit.ly/2eS0kgm>.

Maryland Department of Housing and Community Development (2016c), “Maryland Capital Access Program,” <http://bit.ly/2fzErpZ>.

Maryland Department of Housing and Community Development (2016d), “Neighborhood BusinessWorks,” <http://bit.ly/1PYUecg>.

Maryland Department of Legislative Services, Office of Policy Analysis (2014), Review of Maryland’s Procurement Policies and Structures, <http://bit.ly/2eJhlfi>.

Maryland Department of Planning (2016a), “Sustainable Communities,” <http://bit.ly/2eKmmEm>.

Maryland Department of Planning (2016b), “Priority Funding Areas,” <http://bit.ly/2fx94d2>.

Maryland Department of Transportation (2010), “The MBE Monitor,” Winter 2010, <http://bit.ly/2ejPWSI>.

Maryland Department of Transportation (1999), Maryland Minority Business Enterprise Program Manual, as amended February 2009 & July 2014.

Maryland Department of Transportation (2016a), “Personal Net Worth Cap for Certified MBE Firms Increases Effective January 1, 2016,” <http://bit.ly/2hfMMPT>.

Maryland Department of Transportation (2016b), “MBE/DBE Frequently Asked Questions,” <http://bit.ly/2fBZOTH>.

Maryland Department of Transportation (2016c), “Resources and Information,” <http://bit.ly/28RASbp>.

Maryland General Assembly (2016), “FY 2017 Operating Budget Documents-T00-Department of Commerce,” <http://bit.ly/2fAbA2x>.

Maryland Governor’s Office of Minority Affairs (2010), “MBE University Initiative,” <http://bit.ly/2fenH74>.

Maryland Governor’s Office of Minority Affairs (2011), “State of Maryland – 2011 MBE Legislation,” <http://bit.ly/2fUCViH>.

Maryland Governor’s Office of Minority Affairs (2012), “State of Maryland – 2012 MBE Legislation,” <http://bit.ly/2fsZIiu>.

Maryland Governor’s Office of Minority Affairs (2013), “2013 MBE Legislative Highlights,” <http://bit.ly/2ex4uJI>.

- Maryland Governor's Office of Minority Affairs (2015), "2015 MBE Legislative Highlights," <http://bit.ly/2ePpP2b>.
- Maryland Governor's Office of Minority Affairs (2016a), "Liquidated Damages Provision for Contracts Containing Minority Business Enterprise Participation Goals," <http://bit.ly/2hn5Uvs>.
- Maryland Governor's Office of Minority Affairs (2016b), "Outreach," <http://bit.ly/2fC6aCQ>.
- Maryland Governor's Office of Minority Affairs (2016c), "Fraud Hotline," <http://bit.ly/2fdXISL>.
- Maryland Governor's Office of Minority Affairs (2016d), "Guide to Prompt Payment for Non-Construction Subcontractors," <http://bit.ly/2fAUsvI>.
- Maryland Governor's Office of Minority Affairs (2016d), "Business Resources," <http://bit.ly/2fyqsOz>.
- Maryland Small Business Development Center (2016a), "About Us," <http://bit.ly/2fkzjCV>.
- Maryland Procurement Technical Assistance Program (2016a), "Maryland PTAP (Procurement Technical Assistance Center)," <http://bit.ly/2fwbloL>.
- Maryland Procurement Technical Assistance Program (2016b), "2014 Annual Report," <http://bit.ly/2fwbloL>, Baltimore, MD.
- Maryland Technology Development Corporation (2015), "2015: The State of the Startup," <http://bit.ly/2ffdeIl>, Columbia, MD.
- Maryland Technology Development Corporation (2016a), "Who We Are," <http://bit.ly/2fyiVPR>.
- Maryland Technology Development Corporation (2016b), "MERL: Maryland Entrepreneur Resource List," <http://bit.ly/2eLwSuU>.
- Mayor's Advisory Council on Minority and Women-Owned Business Enterprises (2013). A New Day A Better Way: Rebuilding A Stronger Baltimore Through Economic Inclusion.
- Meager, N. (1992), "Does unemployment lead to self-employment?," Small Business Economics, 4, 87-103.
- MGT of America, Inc. (2004), North Carolina Department of Transportation Second Generation Disparity Study: Final Report, Tallahassee, FL.
- Mora, M. T. and A. Dávila (2006), "Mexican immigrant self-employment along the U.S.-Mexico border: an analysis of 2000 Census data," Social Science Quarterly, 87(1), 91-109.
- Munnell, A., G. M. B. Tootell, L. E. Browne and J. McEneaney (1996), "Mortgage lending in Boston, interpreting HMDA data," American Economic Review, March, 86(1), 25-53.

- Myrdal, G. (1944), An American Dilemma, The Negro Problem and Modern Democracy, Volume 1, New York, Harper & Row.
- National Economic Research Associates, Inc. (1994), The Utilization of Minority-Business Enterprises by the State of Maryland, Cambridge, MA.
- National Economic Research Associates, Inc. (2001), The Utilization of Minority Business Enterprises by the State of Maryland, Austin, TX.
- National Opinion Research Center (2005), “The 2003 Survey of Small Business Finances methodology report,” <http://bit.ly/2fMmgYC>.
- NERA Economic Consulting (2006), Race, Sex, and Business Enterprise: Evidence from the State of Maryland, Austin, TX.
- NERA Economic Consulting (2011), The State of Minority- and Women-Owned Business Enterprise: Evidence from the State of Maryland, Austin, TX.
- Nykqvist, J. (2008), “Entrepreneurship and Liquidity Constraints: Evidence from Sweden,” The Scandinavian Journal of Economics, 110(1): 23–43.
- Oaxaca, R. L. (1973), “Male-female wage differences in urban labor markets,” International Economic Review, 14(3), October, 693-709.
- Olson, P. D., V. S. Zuiker and C. P. Montalto (2000), “Self-employed Hispanics and Hispanic wage earners: differences in earnings,” Hispanic Journal of Behavioral Sciences, 22, 114-130.
- Parker, S. C. (2004), The Economics of Self-Employment and Entrepreneurship, Cambridge: Cambridge University Press.
- Phelps, E. (1972). “The statistical theory of racism and sexism,” The American Economic Review, 62(4), 659-661.
- Pickles, A. R. and P. N. O’Farrell (1987), “An analysis of entrepreneurial behavior from male work histories,” Regional Studies, 21, 425-444.
- Pitts, S. (2007). “Bad jobs: the overlooked crisis in the black community,” New Labor Forum, 16, no. 1: 39-47 (Winter).
- Prince George’s County Government [Maryland] (2014), The Pulse: Supplier Development & Diversity Division Magazine, 2014 Fall/Winter Edition, <http://bit.ly/2eJdkri>.
- Quinn, J. F. (1980), “Labor force participation patterns of older self-employed workers,” Social Security Bulletin, 43, 17-28.
- Reardon, E. (1998), “Are the self-employed misfits or superstars?,” Working Paper, Rand Corporation.

- Rees, H. and A. Shah (1986), “An empirical analysis of self-employment in the UK,” Journal of Applied Econometrics, 1, 95-108.
- Robb, A. (2010). “Beyond the late, lamented Survey of Small Business Finances,” Newsletter of the Association of Public Data Users, 33, no. 2, March/April.
- Robb, A. (2013). “Access to capital among young firms, minority-owned firms, women-owned firms, and high-tech firms,” Washington DC: SBA Office of Advocacy.
- Robb A, R. W. Fairlie, and D. T. Robinson (2010), “Financial capital injections among new black and white business ventures: evidence from the Kauffman firm survey,” Working Paper, Durham, NC: Duke University.
- Robles, B. J. and H. Cordero-Guzmán (2007), “Latino self-employment and entrepreneurship in the United States: an overview of the literature and data sources,” The Annals of the American Academy of Political and Social Science, 613; 18-31.
- Robson, M. T. (1998a), “The rise in self-employment amongst UK males,” Small Business Economics, 10, no. 3, 199-212.
- Robson, M. T. (1998b), “Self-employment in the UK regions,” Applied Economics, 30, no. 3, March, 313-322.
- Ross, S., M. A. Turner, E. Godfrey, and R. Smith (2008), “Mortgage lending in Chicago and Los Angeles: A paired testing study of the pre-application process,” Journal of Urban Economics, 63(3), 902–919.
- Ruetschlin, C. and D. Asante-Muhammad (2015), The Retail Race Divide: How the Retail Industry Is Perpetuating Racial Inequality in the 21<sup>st</sup> Century, [www.demos.org](http://www.demos.org).
- Sauer, R. M. and T. Wilson (2016), “The rise of female entrepreneurs: New evidence on gender differences in liquidity constraints,” European Economic Review, 86, 73-86.
- Schmalz, M., D. Sraer, and D. Thesmar (2013), “Housing collateral and entrepreneurship,” Working Paper, University of Michigan, Ann Arbor, MI.
- Schuetze, H. J. (2000), “Taxes, economic conditions and recent trends in male self-employment: a Canada-U.S. comparison,” Labour Economics, 7(5), 507-544.
- Smith, S. and C. Cloud (1996), “The role of private, nonprofit fair housing enforcement organizations in lending testing,” Mortgage Lending, Racial Discrimination, and Federal Policy, Goering, J. and R. Wienk (eds.), Washington, DC: Urban Institute Press, 589–610.
- Taylor, M. P. (1996), “Earnings, independence or unemployment; why become self-employed?,” Oxford Bulletin of Economics and Statistics, 58, 2, 253-265.
- Taylor, M. P. (2001), “Self-employment and windfall gains in Britain: evidence from panel data,” Economica, 68(272), 539-565.

- Tootell, G. M. B. (1996), “Turning a critical eye on the critics,” Mortgage lending, racial discrimination and federal policy, Goering, J. and R. Wienk (eds.), Washington, DC: Urban Institute Press.
- U.S. Chamber of Commerce (2005), Access to capital, what funding sources work for you?, U.S. Chamber of Commerce, Washington, DC.
- U.S. Census Bureau (2013), American Community Survey information guide, U.S. Department of Commerce, Washington, DC.
- Wainwright, J. and C. Holt (2010), Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program, Transportation Research Board of the National Academies, NCHRP Report, Issue No. 644.
- Wainwright, J. (2012), Report of Defendant Intervenor’s Expert in *Geyer Signal, Inc. and Kevin Kissell v. Minnesota Department of Transportation, Thomas K. Sorel in his capacity as the Minnesota Commissioner of Transportation, and Mary Prescott in her capacity as Acting Director of the Office of Civil Rights*, United States District Court for the District of Minnesota, Case No. 0:11-cv-00321-JRT, December 30.
- Wainwright, J. S. (2010), Report of Defendant’s Expert in *Kevcon, Inc. v. The United States*, No. 09 625, United States Court of Federal Claims, April 29.
- Wainwright, J. S. (2008), “Discrimination facing small minority-owned and women-owned businesses in commercial credit markets,” Testimony before the United States Senate, Committee on Small Business and Entrepreneurship, Hearing on “Business Start-up Hurdles in Underserved Communities: Access to Venture Capital and Entrepreneurship Training,” September 11.
- Wainwright, J. S. (2000), Racial Discrimination and Minority Business Enterprise, Evidence From the 1990 Census, Studies in Entrepreneurship Series, S. Bruchey (ed.), New York: Garland Publishing.
- Yezer, M. J., R. F. Phillips and R. P. Trost (1994), “Bias in estimates of discrimination and default in mortgage lending; the effects of simultaneity and self-selection,” Journal of Real Estate Finance and Economics, 9(3), 196-215.
- Yinger, J. (1998), “Testing for discrimination in housing and related markets,” A National Report Card on Discrimination in America: The Role of Testing, Fix, M., M. A. Turner (eds.), Washington, DC: Urban Institute Press, 27-46.
- Zissimopoulos, J. and L. Karoly (2007), “Transitions to self-employment at older ages: The role of wealth, health, health insurance, and other factors,” Labour Economics, 14(2), 269-295.
- Zissimopoulos, J., L. Karoly, and Q. Gu. (2009), “Liquidity Constraints, Household Wealth, and Self-Employment: The Case of Older Workers,” RAND Working Paper.

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## Appendix A. Glossary

**ACS:** *The American Community Survey.* The Census Bureau’s ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to more than 3.5 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia.

**African American:** African American or “Black” refers to an individual having origins in any of the black racial groups of Africa.

**American Indian:** *See* Native American.

**Anecdotal evidence:** Qualitative data regarding business owners’ accounts of experiences with disparate treatment and other barriers to business success.

**Asian:** Refers to an individual having origins in the Far East, Southeast Asia or the Indian subcontinent.

**Availability:** A term of art in disparity studies that refers to the percentage of a given population of businesses owned by one or more groups of interest. *See also* “Utilization,” “Disparity Ratio.”

**Baseline Business Universe:** The underlying population of business establishments that is used in an availability analysis. It is used as the denominator in an M/WBE availability measure.

**Black:** Or “African American” refers to an individual having origins in any of the Black racial groups of Africa.

**Capacity:** This term has no single definition. *See* Chapter III for discussion of this concept and its role in disparity studies.

**Constitutional significance or substantive significance:** An indication of how large or small a given disparity is. Under the Equal Employment Opportunity Commission’s (“EEOC”) “four-fifths” rule, a disparity ratio is constitutionally (or substantively) significant if it is 0.8 or less on a scale of 0 to 1 or 80 or less on a scale of 1 to 100.

**Decennial:** Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2010.

**Dependent variable:** In a regression analysis, a variable whose value is postulated to be influenced by one or more other “independent” or “exogenous” or “explanatory” variables. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age, are the explanatory variables. *See also* “Independent variable,” “Exogenous variable.”

**Disaggregation, disaggregated:** Refers to the practice of splitting larger groups into smaller groups. In the present context, this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics

presented for “Building Construction,” “Heavy Construction,” and “Special Trades Construction” industries are more disaggregated than statistics for the “Construction” sector as a whole.

**Disparity ratio (or Disparity index):** A measure derived from dividing utilization by availability and multiplying the result by 100. A disparity ratio of less than 100 indicates that utilization is less than availability. A statistically significant disparity ratio of 80 or less can be taken as evidence of disparate impact, *see* “Availability,” “Constitutional significance,” “Utilization.”

**Distribution:** A set of numbers and their frequency of occurrence collected from measurements over a statistical population.

**Econometrics, econometrically:** Econometrics is the field of economics that concerns itself with the application of statistical inference to the empirical measurement of relationships postulated by economic theory. *See also* “Regression.”

**Endogenous variable:** A variable that is correlated with the residual in a regression analysis or equation. Endogenous variables should not be used in statistical tests for the presence of disparities. *See also* “Exogenous variable.”

**Exogenous variable:** A variable that is uncorrelated with the residual in a regression analysis or equation. Exogenous variables are appropriate for use in statistical tests for the presence of disparities. *See also* “Endogenous variable,” “Independent variable,” “Dependent variable.”

**First tier subcontractors:** Subcontractors or suppliers hired directly by the prime contractor.

**Hispanic:** Refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

**Independent variable:** In a regression analysis, one or more variables that are postulated to influence or explain the value of another, “dependent” variable. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age, are the independent or explanatory variables. *See also* “Dependent variable,” “Exogenous variable.”

**MBE:** Minority-Owned Business Enterprise. A business establishment that is 51 percent or more owned and controlled by racial or ethnic minorities (*i.e.*, African Americans, Hispanics, Asians or Native Americans).

**Mean:** A term of art in statistics, synonymous in this context with the arithmetic average. For example, the mean value of the series 1, 1, 2, 2, 2, 4, 5 is 2.43. This is derived by calculating the sum of all the values in the series (*i.e.*, 17) and dividing that sum by the number of elements in the series (*i.e.*, 7).

**Median:** A term of art in statistics, meaning the middle value of a series of numbers. For example, the median value of the series 1, 1, 2, 2, 2, 4, 5 is 2.

**Microdata or micro-level data:** Quantitative data rendered at the level of the individual person or business, as opposed to data rendered for groups or aggregates of individuals or businesses. For example, Dun and Bradstreet provides micro-level data on business establishments. The Census Bureau's *Survey of Business Owners*, provides grouped or aggregated data on businesses.

**Misclassification:** In the present context, this term refers to a situation when a listing or directory of minority-owned or women-owned firms has incorrectly classified a firm's race or gender status. For example, when a firm listed as Hispanic-owned is actually African American-owned, or when a firm listed as nonminority female-owned is actually nonminority male-owned.

**MSA:** Metropolitan Statistical Area. As defined by the Federal Office of Management and Budget, contains at least one urbanized area that has a total population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

**M/WBE:** Minority and/or Women-Owned Business Enterprise. A business establishment that is 51 percent or more owned and controlled by racial or ethnic minorities (*i.e.*, African Americans, Hispanics, Asians or Native Americans) or women.

**NAICS:** North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superseded the Standard Industrial Classification (SIC) System in 1997. *See also* "SIC."

**NSSBF or SSBF:** The *Survey of Small Business Finances*, formerly the *National Survey of Small Business Finances*, was produced jointly by the Federal Reserve Board and the U.S. Small Business Administration to provide a periodic statistical picture of small business finances. The SSBF was discontinued after 2003.

**Native American:** Refers to an individual having origins in any of the original peoples of North America, but not including individuals of Eskimo or Aleutian origin.

**Nonminority:** Firms that are not M/WBEs, *i.e.*, not owned by African Americans, Hispanics, Asians, Native Americans or nonminority females.

**PUMS:** Public Use Microdata Sample. Both the decennial census and the American Community Survey publish PUMS products.

**Regression, multiple regression, multivariate regression:** A type of statistical analysis which examines the correlation between two variables ("regression") or three or more variables ("multiple regression" or "multivariate regression") in a mathematical model by determining the line of best fit through a series of data points. Econometric research typically employs regression analysis. *See also* "Econometrics."

**SATL:** Refers to the South Atlantic census division in the NSSBF and SSBF data sets. The SATL includes the states of Maryland, Delaware, Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia and the District of Columbia.

**SBO:** The Census Bureau’s *Survey of Business Owners* statistical data series is devoted to capturing statistical information on the nation’s minority-owned and women-owned business enterprises. Part of the five-year *Economic Census* series.

**Setaside, setasides:** A contracting practice where certain contracts or classes of contracts are reserved for competitive bidding exclusively among a given subset of contractors, for example minority-owned and women-owned contractors.

**SIC:** Standard Industrial Classification system. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superseded by the North American Industry Classification System (NAICS). *See also* “NAICS.”

**Statistical significance:** A statistical outcome or result that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone.

**SSBF:** *See* NSSBF.

**Stratified:** In the present context, this refers to a statistical practice where random samples are drawn within different categories or “strata” such as time period, industry sector, or M/WBE status.

**Substantive significance or constitutional significance:** An indication of how large or small a given disparity is. Under the EEOC’s “four-fifths” rule, a disparity ratio is substantively (or constitutionally) significant if it is 0.8 or less on a scale of 0 to 1.

**t-test, t-statistic, t-distribution:** Often employed in disparity studies to determine the statistical significance of a particular disparity statistic. A t-test is a statistical hypothesis test based on a test statistic whose sampling distribution is a t-distribution. Various t-tests, strictly speaking, are aimed at testing hypotheses about populations with normal probability distributions. However, statistical research has shown that t-tests often provide quite adequate results for non-normally distributed populations as well.

**Two-tailed (or two-sided) statistical test:** A “two-tailed” test means that one is testing the hypothesis that two values, say  $u$  (utilization) and  $a$  (availability), are equal against the alternate hypothesis that  $u$  is not equal to  $a$ . In contrast, a one-sided test means that you are testing the hypothesis that  $u$  and  $a$  are equal against the alternate hypothesis  $u$  is not equal to  $a$  in only one direction. That is, that it is either larger than  $a$  or smaller than  $a$ .

**Utilization:** A term of art in disparity studies that refers to the percentage of a given amount of contracting and/or procurement dollars that is awarded or paid to businesses owned by one or more groups of interest. *See also* “Availability,” “Disparity Ratio.”

**WBE:** Women-Owned Business Enterprise: A business establishment that is 51 percent or more owned and controlled by nonminority women. In this Study, unless otherwise indicated, WBE refers to nonminority women-owned firms.

## Appendix B. Legal Standards for Government Race- and Gender-Conscious Contracting Programs

### A. Overview of Strict Scrutiny

The applicable framework that establishes the legal standards governing race- and gender-conscious contracting programs is articulated in two seminal Supreme Court cases. In *City of Richmond v. J.A. Croson Company*<sup>298</sup> and *Adarand Constructors, Inc. v. Peña*,<sup>299</sup> the Supreme Court articulated that strict scrutiny would be the standard by which federal courts would review federal, state and local programs. Rather than permit generalized allegations of discrimination against minorities, the Supreme Court held that governments may adopt race-conscious programs only as a narrowly tailored remedy for a compelling interest of identified discrimination.<sup>300</sup>

#### 1. Strict Scrutiny and *City of Richmond v. J.A. Croson Company*

The landmark case establishing that state and local government programs using race as a consideration must pass strict scrutiny is *Croson*. The strict scrutiny standard is comprised of two parts: (i) public entities must show a “compelling governmental interest” in establishing race-conscious programs,<sup>301</sup> and (ii) such programs must be “narrowly tailored” to achieve that compelling interest.<sup>302</sup> The strict scrutiny test calls for a “searching judicial inquiry into the justification,” to determine whether the classifications are truly remedial or rather “motivated by illegitimate notions of racial inferiority or simple racial politics.”<sup>303</sup>

The *Croson* Court struck down the City of Richmond’s Minority Business Enterprise Plan, which required prime contractors that were awarded city construction contracts to subcontract at least 30 percent of the project to minority-owned business enterprises (MBEs). The *Croson* Court affirmed the Court of Appeals’ ruling that the plan was unconstitutional, finding that the City of Richmond had not presented sufficient evidence to support its compelling interest in remedying discrimination.

With respect to the first prong of the strict scrutiny standard, the *Croson* Court emphasized that in order to establish a compelling interest, there must be “a strong basis in evidence” for the use

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<sup>298</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989). Justice O’Connor delivered the opinion of the Court in Parts I, III-B and IV. Parts II, III-A and V were plurality opinions in which Justice O’Connor was joined by Chief Justice Rehnquist, and Justice White; Chief Justice Rehnquist, Justice White, and Justice Kennedy; and Chief Justice Rehnquist, Justice White, and Justice Kennedy, respectively. Justice Scalia concurred in the judgment and Justices Marshall, Brennan and Blackmun dissented. This legal discussion will refer to the entirety of O’Connor’s decision as “*Croson*” or the “*Croson* Court”.

<sup>299</sup> *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995) (“*Adarand III*”).

<sup>300</sup> This legal analysis is not an exhaustive discussion of all of the case law or issues related to *Croson* and its progeny, but rather highlights, with the guidance from the Fourth Circuit, the major trends and status of the case law discussing the use of race and gender conscious measures in government contracting.

<sup>301</sup> *Croson*, 488 U.S. at 485.

<sup>302</sup> *Id.* at 486.

<sup>303</sup> *Id.* at 493.

of race-conscious measures.<sup>304</sup> The *Croson* Court also stated that “findings of societal discrimination will not suffice” to meet the requirements of the Equal Protection Clause of the Fourteenth Amendment.<sup>305</sup> The *Croson* Court opined that “[t]here was no direct evidence of race discrimination on the part of the city” or “any evidence that the City’s prime contractors had discriminated against minority-owned subcontractors.”<sup>306</sup> The Supreme Court rejected all five of the predicate facts which the District Court relied on to uphold the City of Richmond’s 30 percent quota.<sup>307</sup>

Specifically, the *Croson* Court reasoned that the predicate facts—the City’s declaration that the ordinance was remedial, generalized assertions of past discrimination in the construction industry, the paucity of minority contractors in state and local trade associations and Congress’ findings of the effects of past discrimination—did not singly or together provide a strong basis in evidence to justify race conscious measures. Finally, the City of Richmond’s statistical evidence showed a statistical disparity between the *general population* in Richmond (which was 50 percent African American) and the awards of prime contracts to African American firms (0.67 percent of the awards). The *Croson* Court held that this was an irrelevant statistical comparison and insufficient to raise an inference of discrimination.<sup>308</sup> Therefore, the City had failed to establish that it had a strong basis in evidence to support a compelling interest for its use of race-conscious measures.

However, to avoid having its holding construed to categorically eliminate all race-conscious efforts, the *Croson* Court expressly stated that:

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the city of Richmond had evidence before it that nonminority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.... Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government’s determination that broader remedial relief is justified.<sup>309</sup>

In suggesting what kind of evidence would support a proper statistical comparison, Justice O’Connor stated that a more relevant statistical test would compare the number of qualified minority contractors willing and able to perform a particular service and the number of such

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<sup>304</sup> *Id.* at 500 (citing *Wygant v. Jackson Board of Education, et al.*, 476 U.S. 267, 277 (1986)).

<sup>305</sup> *Id.* at 485 (quoting *Wygant*, 476 U.S. at 274).

<sup>306</sup> *Id.* at 480.

<sup>307</sup> *Id.* at 500

<sup>308</sup> *Id.* at 484-485, 499-500.

<sup>309</sup> *Id.* at 509.

contractors actually engaged by the locality or the locality's prime contractors. This, to the *Croson* Court, would support an inference of discrimination and thus satisfy the compelling interest requirement of the strict scrutiny test.<sup>310</sup>

With respect to the second prong, the *Croson* Court ruled that the MBE program was not narrowly tailored to remedy discrimination, as the 30 percent quota could not be "tied to any injury suffered by anyone."<sup>311</sup> For example, the Court pointed to the fact that the program was extended to a long list of minorities, other than African Americans, such as Hispanics, Asians, American Indians, and Eskimos and Aleuts, for which the City had not established any inference of discrimination.<sup>312</sup> Finally, the Court pointed to Richmond's failure to consider race-neutral means to increase MBE participation.<sup>313</sup> In analyzing if the remedy implemented by the local or state government actor is narrowly tailored, the *Croson* Court identified several factors:

- Consideration of alternative, race-neutral means to increase M/WBE participation;<sup>314</sup>
- The flexibility of the program requirements, including the availability of waiver provisions;<sup>315</sup>
- The duration of the proposed relief;<sup>316</sup>
- The relationship of numerical participation goals to the availability of M/WBEs in the relevant market;<sup>317</sup>
- The impact of the relief on third parties;<sup>318</sup> and
- The overinclusiveness or underinclusiveness of the racial classifications.<sup>319</sup>

All of the above factors should be considered when developing a race-based program to ensure that the program is sufficiently narrowly tailored under the strict scrutiny standard. Guidance from the courts relating to the above are further discussed in later sections of this Appendix.

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<sup>310</sup> *Id.* at 509.

<sup>311</sup> *Id.* at 507–508 (quoting *Sheet Metal Workers v. EEOC*, 478 U.S. 421, 494 (1986) (O'Connor, J. concurring in part and dissenting in part)).

<sup>312</sup> *Id.* at 506.

<sup>313</sup> *Id.* at 506–507 (criticizing the City of Richmond's motive in establishing a 30 percent quota as a remedy for past discrimination and concluded that the goal of the program was racial balancing).

<sup>314</sup> *Id.* at 507 (citing *United States v. Paradise*, 480 U.S. 149, 171 (1987)). See also *Fullilove v. Klutznick*, 488 U.S. 448, 463–467 (1980); *Adarand III*, 515 U.S. at 237–238.

<sup>315</sup> *Croson*, 488 U.S. at 507–508 and *Paradise*, 480 U.S. at 171. See also *Adarand VII*, 228 F.3d at 1177, 1180–1181.

<sup>316</sup> *Croson*, 488 U.S. at 498, 509–510. See also *Paradise*, 480 U.S. at 171.

<sup>317</sup> *Croson*, 488 U.S. at 510. See also *Paradise*, 480 U.S. at 171.

<sup>318</sup> *Croson*, 488 U.S. at 510–511.

<sup>319</sup> *Croson*, 488 U.S. at 506, 509–510.

## 2. Intermediate Scrutiny

Since *Croson*, the U.S. Supreme Court has remained silent with respect to the appropriate standard of review for WBE programs. *Croson* was limited to the review of a race-conscious government contracting program. In other contexts, however, the Supreme Court has traditionally ruled that gender classifications are not subject to the rigorous strict scrutiny standard applied to racial classifications. Instead, gender classifications are subject to a lesser “intermediate” level of review.

Although the Supreme Court has not addressed the standard of review for gender-based contracting programs, a significant number of circuit courts of appeals have reviewed WBE programs using intermediate scrutiny, rather than the more exacting strict scrutiny standard of review.<sup>320</sup> The Fourth Circuit applies “intermediate scrutiny” and in *H.B. Rowe Company v. Tippet* reasoned that “precedent dictates...that courts apply ‘intermediate scrutiny’ to statutes that classify on the basis of gender.”<sup>321</sup> In order to meet the burden of proof for an intermediate scrutiny standard of review, the state must show that the “classification serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives.”<sup>322</sup> Unlike the strong basis in evidence requirements for racial classifications, gender classifications are subject to “something less” than a strong basis in evidence.<sup>323</sup>

In defining what constitutes something less than a strong basis in evidence, the Fourth Circuit recently agreed that the state defending the statute must present probative evidence that the rationale for enacting a gender preference rests on evidence, *i.e.*, informed analysis and not stereotypical generalizations.<sup>324</sup> Intermediate review requires the governmental entity to demonstrate an “important governmental objective” and a method for achieving this objective that bears a fair and substantial relation to the goal.<sup>325</sup> The Court has also characterized the test as requiring an “exceedingly persuasive justification” for classifications based on gender.<sup>326</sup>

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<sup>320</sup> See, e.g., *H.B. Rowe Company, Inc. v. Tippet*, 615 F.3d 233 (4<sup>th</sup> Cir. 2010); *Associated Util. Contractors of Md., Inc. v. Mayor & City Council of Balt.*, 83 F.Supp.2d 613, 620 (D. Md. 2000); *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206, 215 n.9. (5<sup>th</sup> Cir. 1999); *Eng’g Contractors Ass’n of S. Fla., Inc. v. Metropolitan Dade Cnty.*, 122 F.3d 895 (11<sup>th</sup> Cir. 1997); *Contractors Ass’n of E. Penn. v. City of Phila.*, 91 F.3d 586 (3<sup>rd</sup> Cir. 1996); *Coral Constr. Co. v. King Cnty.*, 941 F.2d 910 (9<sup>th</sup> Cir. 1991). But see *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6<sup>th</sup> Cir. 1993) (gender-based affirmative action plans subject to strict scrutiny).

<sup>321</sup> *H.B. Rowe, Inc. v. Tippet*, 615 F.3d 233, 242 (4<sup>th</sup> Cir. 2010).

<sup>322</sup> *Id.* at 242 (citing *Miss. Univ. for Women v. Hogan*, 458 U.S. 719, 724 (1982)).

<sup>323</sup> *Rowe*, 615 F.3d at 242 (quoting *Eng’g Contractors*, 122 F.3d at 909). See also *Concrete Works of Colorado v. City and County of Denver*, 321 F.3d 950, 959-960, *cert. denied*, (10<sup>th</sup> Cir. 2003) (“Concrete Works IV”); *Contractors Ass’n of E. Penn. v. City of Phila.*, 6 F.3d 990 at 1010 (3<sup>rd</sup> Cir. 1993); *Coral Construction*, 941 F.2d at 931-932.

<sup>324</sup> *Rowe*, 615 F.3d at 242.

<sup>325</sup> *Id.*; see also *Craig v. Boren*, 429 U.S. 190, 198-99 (1976).

<sup>326</sup> *Id.*; *Miss. Univ. for Women v. Hogan*, 458 U.S. 718 (1982); See also *Mich. Road Builders Ass’n., Inc. v. Milliken*, 834 F.2d 583 (6<sup>th</sup> Cir. 1987). But see *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6<sup>th</sup> Cir. 1993) (gender-based affirmative action plans subject to strict scrutiny).

The State of Maryland, therefore, may meet the intermediate scrutiny standard for gender conscious preferences in its contracting activities if able to establish an exceedingly persuasive justification.

### 3. Strict Scrutiny and *Adarand III*

While *Croson*'s holding applies to challenges to state and local government programs that classify based on race, *Adarand III* extended *Croson*'s reach by holding that the strict scrutiny standard applies to federal programs using race-based classifications as well. Similar to the state and local government context, the federal government must also show a compelling interest for the use of race-conscious measures and the remedies used must be narrowly tailored to the compelling interest.

In *Adarand III*, a nonminority subcontractor that did not receive an award for the guardrail portion of a federal highway project brought an action against the Secretary of Transportation at the time, Federico Peña, alleging that the SBA 8(a) and 8(d) program preference for minorities violated the equal protection clause of the Fifth Amendment's Due Process Clause.<sup>327</sup> The prime contractor involved in this case had a clause in its contract with the government that it would receive a monetary incentive for hiring firms controlled by "socially and economically disadvantaged individuals" for its subcontracting work.<sup>328</sup> While the District Court ruled in favor of the federal government, and the Tenth Circuit Court of Appeals affirmed, the Supreme Court remanded the case to determine whether the challenged program met the strict scrutiny standard.

The Supreme Court noted that while *Croson* set strict scrutiny as the standard by which all race-based action by state and local governments would be analyzed, no such clear guidance was available in terms of what standard of review was required when such action was taken by the federal government. The Supreme Court ultimately concluded that strict scrutiny should also be applied to federal programs using race-conscious measures.<sup>329</sup>

In *Adarand Constructors, Inc. v. Slater*,<sup>330</sup> a case that followed the original remand of the *Adarand III* case, the Tenth Circuit Court of Appeals noted that the compelling interest prong of strict scrutiny has already been established by Congress. Acknowledging Congress's power to address racial discrimination in the states, the Court of Appeals held that "we readily conclude that the federal government has a compelling interest in not perpetuating the effects of racial discrimination in its own distribution of federal funds and in remediating the effects of past discrimination in the government contracting markets created by its disbursements."<sup>331</sup> The Tenth Circuit Court of Appeals drew this conclusion from a portion of Justice O'Connor's opinion in *Croson*, where she stated that "[i]t is beyond dispute that any public entity, state or

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<sup>327</sup> *Adarand III*, 515 U.S. at 208-210.

<sup>328</sup> *Id.*

<sup>329</sup> *Id.* at 221-224, 227.

<sup>330</sup> *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000), *cert. granted*, 532 U.S. 941, *dismissed as improvidently granted*, 534 U.S. 103 (2001) ("*Adarand VII*").

<sup>331</sup> *Id.* at 1165.

federal, has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.”<sup>332</sup>

#### 4. Strict Scrutiny in the Fourth Circuit

The principal case in the Fourth Circuit applying the *Croson* decision is *H.B. Rowe Company v. Tippet*.<sup>333</sup> H.B. Rowe challenged the constitutionality of the North Carolina General Assembly’s Statute 136-28.4 (“the Statute”), promulgated in 1983.<sup>334</sup> The Statute set forth a general policy for the North Carolina Department of Transportation (“NCDOT”) and other state agencies to promote the use of small, minority, physically handicapped and women contractors in non-federally funded State construction projects.<sup>335</sup> Seven years later, in 1990, the Statute was amended to include specific participation goals on State funded transportation construction contracts for minority- and women-owned businesses.<sup>336</sup>

As a result of the amendment, NCDOT created a Minority Business Enterprise and Women Business Enterprise Program (“M/WBE Program”) for non-federally funded transportation construction contracts. The *Rowe* Court noted that the program “largely mirrored” the federal DBE Program in place pursuant to the federal regulations. In 1991, the constitutionality of the Statute was challenged by a nonminority male prime contractor in federal district court. The district court ruled in favor of the plaintiff, stating that in order to implement race-conscious measures to remedy discrimination, “a governmental entity must identify with ‘some specificity’ the racial discrimination it seeks to remedy and present a ‘strong basis in evidence for its conclusion that remedial action [is] necessary.’”<sup>337</sup> As a result of the district court decision, NCDOT suspended its M/WBE program in 1991.<sup>338</sup>

In 1993, NCDOT commissioned a disparity study of state-funded transportation construction contracts. The study determined that minority and women subcontractors were underutilized in State contracts and, as a result, the M/WBE Program was re-implemented. In 1998, the North Carolina General Assembly commissioned an update to the 1993 study. The 1998 update study concluded that minority- and women-owned businesses continued to be underutilized in State-funded transportation construction contracts.<sup>339</sup>

In 2002, H.B. Rowe’s bid, despite being the lowest, was rejected by NCDOT in favor of a firm with a slightly higher bid and substantially greater proposed M/WBE participation. NCDOT’s participation goals for the contract were 10 percent for MBEs and 5 percent for WBEs. NCDOT found that H.B. Rowe failed to meet the good faith effort requirements because the company did

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<sup>332</sup> *Id.* at 1165 (quoting *Croson*, 488 U.S. at 492).

<sup>333</sup> *H.B. Rowe Company v. Tippet*, 615 F.3d 233 (4<sup>th</sup> Cir. 2010).

<sup>334</sup> *Id.* at 236.

<sup>335</sup> *Id.*

<sup>336</sup> *Id.*

<sup>337</sup> *Id.* at 237.

<sup>338</sup> *Rowe*, 615 F.3d at 237.

<sup>339</sup> *Id.*

not solicit enough minority subcontractors to obtain a fair number of quotes, did not describe the available subcontracting opportunities, and proposed no strategy to meet the goal.<sup>340</sup> H.B. Rowe's proposed WBE participation was 6.6 percent and their proposed MBE participation was zero.

In response, H.B. Rowe filed suit challenging the constitutionality of the Statute on its face and as applied. Subsequently, NCDOT commissioned a new disparity study that was completed in 2004. In 2006, relying on that 2004 study, the North Carolina General Assembly amended the Statute. The principal modifications were:

- Remedial action should only be taken when there is a strong basis in evidence of ongoing effects of past or present discrimination that prevents or limits disadvantaged minority- and women-owned businesses from participating as subcontractors in State-funded transportation projects.<sup>341</sup>
- Participation goals should be aspirational rather than mandatory and shall not be applied rigidly on specific contracts or projects.<sup>342</sup>
- Goals should be set on a contract or project specific basis according to available estimates as established by the disparity study.<sup>343</sup>
- The definition of minority/women was limited to those groups that suffered discrimination.<sup>344</sup>
- A disparity study should be performed every five years to respond to changing conditions.<sup>345</sup>
- A sunset provision was included, under which the statute would expire after a set period of time.<sup>346</sup>

In 2008, the District Court upheld the constitutionality of the statute and H.B. Rowe appealed to the Fourth Circuit Court of Appeals. First, the Court of Appeals considered whether the statutory scheme as it relates to minorities survives the strict scrutiny standard. The Circuit Court noted that the strict scrutiny standard is not automatically “fatal in fact”<sup>347</sup> and the State's

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<sup>340</sup> *Id.* at 237-238.

<sup>341</sup> *Id.* at 238.

<sup>342</sup> *Id.* at 238-239.

<sup>343</sup> *Id.* at 239.

<sup>344</sup> *Id.*

<sup>345</sup> *Id.*

<sup>346</sup> *Id.*

<sup>347</sup> *Id.* at 241.

discrimination evidence must be evaluated on a “case by case” basis.<sup>348</sup> The Circuit Court reviewed the statistical evidence detailed in the 2004 disparity study to determine if the statutory scheme was based on strong statistical evidence to implement race-conscious participation goals. The statistical evidence was also examined to determine if the Statute’s definition of minorities was overinclusive by including groups for which the 2004 disparity study did not establish sufficient evidence of discrimination.

In determining whether or not the defendant had met its evidentiary burden of a strong basis in evidence of discrimination, the *Rowe* Court began by analyzing particular minority groups that were statistically significantly underutilized on NCDOT contracts compared to their availability.<sup>349</sup> The 2004 study found that the underutilization of African American-owned firms and Native American-owned firms on NCDOT contracts was statistically significant.<sup>350</sup> The disparity index was statistically significant at a 95 percent confidence level for African Americans and an 85 percent confidence level for Native Americans. Although underutilized on NCDOT contracts, the study results for Hispanic- and Asian/Pacific Islander-owned firms were not statistically significant.<sup>351</sup> The utilization for nonminority women-owned firms on NCDOT contracts exceeded their availability in the geographic market and that difference was statistically significant.<sup>352</sup>

The *Rowe* Court applied an intermediate scrutiny standard to nonminority women-owned firms. While acknowledging that some of the evidence produced by the state was probative of discrimination, the Circuit Court concluded that the private sector evidence and the anecdotal evidence supporting discrimination against nonminority women was not sufficient to overcome the evidence of statistically significant utilization on NCDOT contracts in excess of availability. Accordingly, the Circuit Court ruled that evidence in the 2004 disparity study did not provide the “exceedingly persuasive justification” necessary to include gender-based remedies.<sup>353</sup>

Therefore, the Circuit Court ruled that the statute was facially constitutional and constitutional as applied to African American- and Native American-owned firms. However, it found that North Carolina’s application of the statute to Hispanic-, Asian- or women-owned firms was not constitutional.<sup>354</sup>

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<sup>348</sup> *Rowe*, 615 F.3d at 241. See also *Rothe Dev. Corp. v. Dep’t of Def.*, 545 F.3d 1023, 1049 (Fed. Civ. 2008) (“*Rothe II*”) (quoting *W.H. Scott Constr. Co.*, 199 F.3d 206, 218, n.11 (5<sup>th</sup> Cir. 1999)).

<sup>349</sup> *Id.* at 243.

<sup>350</sup> *Id.* at 244.

<sup>351</sup> *Id.* at 245.

<sup>352</sup> *Id.*

<sup>353</sup> *Id.* at 254-256.

<sup>354</sup> *Id.* at 258.

## 5. Strict Scrutiny as Applied to the Disadvantaged Business Enterprise Program

In response to *Adarand III*, the U.S. Department of Transportation (“USDOT”) revised its DBE regulations in 1999 to comply with the narrow tailoring requirement of strict scrutiny.<sup>355</sup> These revisions included the implementation of a personal net worth standard for DBE program eligibility and the requirement for setting race-neutral goals in conjunction with race-conscious goals.<sup>356</sup>

Since the 1999 revision to the DBE regulations in response to *Adarand III*, challenges to the revised regulations have arisen in several circuits—specifically in the Eighth, Ninth and Seventh Circuits. All of these circuit courts have upheld the facial validity of the DBE regulations.

The Eighth Circuit in *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation* held that Congress had a “compelling interest” in enacting the DBE legislation as it had a sufficient evidentiary basis to conclude that persistent racism and discrimination in highway subcontracting warranted a race-conscious procurement program.<sup>357</sup> The Eighth Circuit’s analysis also considered the Program’s application, and concluded that it was narrowly tailored on its face because the revised DBE program affords grantee States substantial discretion in setting the DBE goals.<sup>358</sup> Thus, the Eighth Circuit rejected plaintiff’s claim that the revised DOT regulations did not meet strict scrutiny standards.<sup>359</sup>

The Seventh Circuit in *Northern Contracting, Inc. v. State of Illinois Department of Transportation*,<sup>360</sup> concluded, even though not at issue, that the federal government had a compelling interest in remedying discrimination in highway construction.<sup>361</sup> The plaintiff argued

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<sup>355</sup> “Participation by Disadvantaged Business Enterprises in Department of Transportation Programs,” 64 Fed. Reg. 5096 (Feb. 2, 1999) (codified at 49 C.F.R. part 26); The Department of Transportation also revised in 2005 the rules and regulations related to participation by airport concessionaires in concession activities. See, “Participation by Disadvantaged Business Enterprises in Airport Concessions,” 70 Fed. Reg. 14496 (March 22, 2005) (codified 49 C.F.R. part 23).

<sup>356</sup> Congress reauthorized the DBE program in the Transportation Equity Act for the 21<sup>st</sup> Century (“TEA-21”), Pub. L. No. 105-178, 112 Stat. 107 (1998) (codified in scattered sections of 16, 23, 49 U.S.C.); Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (“SAFETEA-LU”), Pub. L. No. 109-59, 119 Stat. 1144 (2005) (codified in scattered sections of 2, 5, 6, 15, 16, 19, 21, 23, 26, 31, 33, 42, 45, 49 U.S.C.).

<sup>357</sup> *Sherbrooke Turf, Inc. v. Minn. Dep’t of Transp.*, 345 F.3d 964 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004).

<sup>358</sup> *Id.* at 973-974.

<sup>359</sup> *Id.* at 968. The constitutionality of the Minnesota DOT’s DBE Program was upheld against an as implemented challenge. See also *Geyer Signal, et al. v. Minnesota Department of Transportation, et al.*, CA 11-321, 2014 U.S. Dist. LEXIS 43945 (D. Minn. 2014).

<sup>360</sup> *Northern Contracting, Inc. v. Ill. Dep’t of Transp.*, 473 F.3d 715 (7th Cir. 2007) (affirming *Milwaukee County Pavers Ass’n v. Fiedler*, 922 F.2d 419 (7th Cir.), *cert. denied*, 500 U.S. 954 (1991)) (“*Northern Contracting*”).

<sup>361</sup> 473 F. 3d 719-721. A number of Courts have followed the ruling in *Northern Contracting* that states and their agencies are entitled to adopt the federal government’s compelling interest in enacting TEA-21. *Sherbrooke Turf, Inc. v. Minnesota Dept. of Transp.*, 345 F.3d 964, 970-971 (8<sup>th</sup> Cir. 2003); *Gross Seed v. United States Department of Transportation*, 345 F.3d 964 (8th Cir. 2003) *cert. denied*. 541 U.S. 1041 (2004); *Western States*

that IDOT had to show that its DBE program was narrowly tailored to remedy specific past discrimination by the State. The Seventh Circuit did not agree, however, and stated that the program was narrowly tailored to the compelling interest identified in remediating racial and gender discrimination in the federal highway construction market. Further, the Seventh Circuit reasoned that IDOT was insulated from a constitutional challenge unless the State exceeded the federal grant of statutory authority.<sup>362</sup>

The Ninth Circuit, in *Western States Paving Co., Inc. v. Washington State Department of Transportation*,<sup>363</sup> considered the plaintiff's request for declaratory judgment that the TEA-21 DBE preference program was unconstitutional.<sup>364</sup> The court subjected the State of Washington's Department of Transportation DBE program to the strict scrutiny standard in a two part analysis, with the first part of the analysis considering whether the DBE legislation was facially constitutional, and the second part examining whether the State's application of the DBE regulations was valid. The Ninth Circuit upheld the constitutionality of the DBE statute and regulations.<sup>365</sup> However, in an "as applied challenge," the court found that Washington State's application of the DBE program violated the Equal Protection Clause.

With respect to the as applied challenge to Washington State's program, the *Western States* Court looked to the utilization goal set by the State of Washington to determine whether this stated goal was unconstitutional. The Ninth Circuit Court interpreted the narrowly tailored prong of *Croson* to require that the State of Washington have independent evidence of discrimination in the State's contracting industry and the program be limited to those minority groups that have suffered discrimination.<sup>366</sup> Although the State of Washington offered a statistic comparing the percentage of DBEs in the State (11.7%) to the percentage of funds awarded to them on race-neutral contracts (9.0%), the Ninth Circuit Court struck down this evidence as invalid, holding that the statistic was oversimplified and that it did not capture factors such as the capacity of the DBEs to undertake the contracted work.<sup>367</sup> Unlike the Seventh Circuit in *Northern Contracting*, the Ninth Circuit in *Western States Paving* held that the State had failed to administer its program in a way that was constitutionally narrowly tailored.<sup>368</sup>

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*Paving Company, Inc. v. Washington State Dept. of Transportation*, 407 F.3d 983, 997 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

<sup>362</sup> *Northern Contracting*, 473 F.3d at 721. *See also* *GEOD Corp., et al. v. New Jersey Transit Corp.*, 746 F.Supp.2d 642, 655 (D. New Jersey 2010) (the New Jersey Transit DBE program was found constitutional because the transit authority did not exceed its federal authority). *See also* *Midwest Fence Corp. v. United States Department of Transportation, et al.*, 84 F.3d. 705 (N.D. Ill. 2014), *aff'd*, 2016 U.S App. LEXIS 19959 (7<sup>th</sup> Cir. November 4, 2016).

<sup>363</sup> *W. States Paving Co., Inc. v. Wash. Dep't of Transp.*, 407 F.3d 983 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

<sup>364</sup> *Id.* at 987.

<sup>365</sup> *Id.* at 996.

<sup>366</sup> *Id.* at 998.

<sup>367</sup> *Id.* at 1000.

<sup>368</sup> *Id.* In light of *Western States Paving*, the USDOT published a memorandum titled "FY 2006 DBE Goal Setting Approval Process and DBE Program Plans" (December 21, 2005) to provide guidance to Recipients. Two

## B. Compelling Interest

### 1. Burden of Proof

The party challenging the use of race-conscious measures bears the ultimate burden of proof throughout the course of the litigation—despite the government’s obligation to produce a strong factual predicate to support its program.<sup>369</sup> The plaintiff must persuade the court that a program is constitutionally flawed by challenging the government’s factual predicate for the program or by demonstrating that the program lacks a proper factual predicate.<sup>370</sup>

Justice O’Connor explained the nature of the plaintiff’s burden of proof in her concurring opinion in *Wygant, et al. v. Jackson Board of Education, et al.*<sup>371</sup> She stated that, following the production of the factual predicate supporting the program:

[I]t is incumbent upon the nonminority [plaintiffs] to prove their case; they continue to bear the ultimate burden of persuading the court that the [government’s] evidence did not support an inference of prior discrimination and thus a remedial purpose, or that the plan instituted on the basis of this evidence was not sufficiently ‘narrowly tailored’.<sup>372</sup>

### 2. Strong Basis in Evidence

It is undisputed that remedying racial discrimination is a legitimate compelling interest for the State of Maryland.<sup>373</sup> The procedural protocol established in contracting by *Croson* imposes an initial burden of production upon the governmental entity to demonstrate that there is a compelling governmental interest and that the challenged MBE program is supported by a strong basis in evidence, *i.e.*, documented evidence of past discrimination.<sup>374</sup>

In *Rowe*, the Fourth Circuit opined that a state does not have to conclusively prove past or present racial discrimination to establish a strong basis in evidence.<sup>375</sup> The state may meet its burden by relying on a statistically significant disparity between the availability of qualified, willing, and able minority subcontractors and their utilization by the governmental entity or its

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subsequent court opinions have followed the ruling in *Western States* that states and their agencies must have evidence of discrimination in the entity’s jurisdiction to meet the “narrowly tailored” prong. *Associated General Contractors of America, San Diego Chapter, Inc. v. California Department of Transportation, et al.*, 713 F.3d 1187, 2013 WL 1607239 (9<sup>th</sup> Cir. April 16, 2013); *Mountain West Holding Company, Inc. v. State of Montana, Montana DOT, et al.*, 2014 WL 6686734 (D. Mont. Nov. 26, 2014) appeal pending in the U.S. Court of Appeals, Ninth Circuit, Docket No. 14-36097.

<sup>369</sup> *Concrete Works IV*, 321 F.3d at 959; *Coral Constr.*, 941 F.2d at 921.

<sup>370</sup> *GEOD Corp. v. New Jersey Transit Corp.*, 678 F.Supp. 276, 282 (D. N.J. 2009) (holding that the compelling interest prong for the DBE program is established by the federal government in enacting TEA-21).

<sup>371</sup> *Wygant*, 476 U.S. at 293 (1986).

<sup>372</sup> *Id.* at 293.

<sup>373</sup> *Croson*, 488 U.S. at 500.

<sup>374</sup> *Croson*, 488 U.S. at 500-503 (quoting *Wygant*, 476 U.S. at 277).

<sup>375</sup> *Rowe*, 615 F.3d at 241.

prime contractors.<sup>376</sup> The *Rowe* Court also required that the state corroborate the statistical evidence by “significant anecdotal evidence of racial discrimination.”<sup>377</sup>

The case law indicates that a disparity study may rely upon the following types of evidence to support the strong basis of evidence requirement: direct statistical evidence, anecdotal evidence, and indirect statistical evidence or “passive participation” in a discriminatory market.<sup>378</sup> Each type of evidence will be briefly discussed in turn, along with additional guidance that courts have given with respect to each type of evidence.<sup>379</sup>

### 3. Statistical Evidence

The primary evidentiary requirement to show a compelling interest and allow an inference of discrimination is through statistics illustrating a disparity between the utilization of minority firms by the governmental entity and its contractors compared to the availability of minority firms. The disparity analysis results in a disparity index, or disparity ratio, that is then tested for statistical significance. However, for such statistics to be relevant, the state or local government must consider various factors, as discussed below.

*Availability.* In terms of defining “availability,” M/WBEs are deemed to be “available” if they are ready, willing, and able to perform. In determining the available pool of M/WBEs it is important to adopt an approach that is neither overinclusive or underinclusive of the universe of available firms. Several courts in considering the availability issue have approved using a “Custom Census” of M/WBEs and DBEs as a proper method in calculating availability. In *Northern Contracting*, the plaintiff attempted to argue that IDOT miscalculated the number of DBEs by using a custom census instead of a count of the number of DBEs registered and prequalified by IDOT. However, the Seventh Circuit upheld the broader count of DBEs that was captured by the custom census, concluding that it reflected an attempt by IDOT to arrive at more accurate numbers than what would be possible through a use of the registered vendors list.<sup>380</sup>

*Capacity.* The “able to perform” requirement of *Croson* was examined by the Tenth Circuit Court of Appeals in *Concrete Works of Colorado v. City and County of Denver* (“*Concrete Works IV*”).<sup>381</sup> The *Concrete Works IV* court recognized that the plaintiff identified a legitimate factual dispute regarding whether the City of Denver’s percentage of M/WBE firms overstated their ability to perform. In discussing this argument, the Circuit Court recognized that M/WBE firms are generally smaller and less experienced than majority firms. This, however, was not the

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<sup>376</sup> *Id.* quoting *Croson*, 488 U.S. at 509

<sup>377</sup> *Id.* See also *MD. Troopers Ass’n, Inc. v. Evans*, 993 F.2d 1072, 1077 (4<sup>th</sup> Cir. 1993).

<sup>378</sup> *Croson*, 488 U.S. at 492.

<sup>379</sup> See also Wainwright and Holt (2010), *Guidelines For Conducting A Disparity And Availability Study For The Federal DBE Program* (2010) [hereinafter “NCHRP Report”]. The NCHRP Report presents guidelines to conduct a legally defensible Disparity or Availability study for the DBE program.

<sup>380</sup> *Northern Contracting*, 473 F.3d at 723.

<sup>381</sup> *Concrete Works IV*, 321 F.3d at 950.

end of the inquiry because the Court of Appeals also recognized that “M/WBE construction firms are generally smaller and less experienced *because* of discrimination.”<sup>382</sup>

Other courts have also recognized the elastic nature of the construction industry in which the firm’s capacity expands and contracts based upon market demand. In *Concrete Works IV*, the City of Denver offered evidence at trial indicating that three employees is the median number of employees for all construction firms in the Denver Metropolitan Statistical Area and trial testimony that the number of permanent employees is not indicative of capacity because firms can hire temporary employees and rent equipment.<sup>383</sup> Similarly, the trial court in *North Shore Concrete and Assoc., Inc. v. City of New York*, rejected the Plaintiff’s argument that the study over stated the number of available M/WBE firms because it did not take into consideration certain criteria such as the size of the firm. The *North Shore* Court concluded that firm size was not a proper indicator of capacity in determining the pool of available firms and that a small construction firm with an owner and only one employee, a secretary, had bid on construction projects worth more than one million dollars.<sup>384</sup> In *Concrete Works IV*, the Court also held that the failure to control for prior business experience, religion, or cultural variables did not undermine the business formation studies reliability.<sup>385</sup>

In a contrary approach to the issue of capacity, *Rothe Development Corporation v. Department of Defense*, a challenge to the Section 8(d) of the Small Business Act, the Federal Circuit Court was critical of the six studies that were relied upon by the government to establish the compelling interest prong of *Croson*.<sup>386</sup> The Federal Circuit reasoned that the parameters of the studies failed to account for the relative capacity of the businesses to perform multiple construction projects.<sup>387</sup> The Federal Circuit Court concluded that the “capacity” issue can be addressed by regression analysis controlling for firm size in the disparity study.<sup>388</sup> However, the Tenth Circuit has held that a lack of statistical controls for factors such as education, business experience or cultural history did not undermine the disparity studies’ reliability.<sup>389</sup>

*Geographic Markets.* In order to ensure the relevance of the disparity study, the geographic market of the firms must also be taken into account. While *Croson* did not directly spell out how the geographic market is to be determined, the Ninth Circuit, in *Coral Construction Co. v. King County*, stated that “an MBE program must be limited in its geographical scope to the boundaries

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<sup>382</sup> *Id.* at 981 (emphasis in original). See also “Understanding Capacity,” above in Chapter III, Section B.5, for an extended discussion of how discrimination and capacity are intertwined.

<sup>383</sup> *Concrete Works IV*, 321 F.3d at 981.

<sup>384</sup> *North Shore Concrete and Assoc., Inc. v. City of New York*, No. 94-CV-4017, 1998 WL 273027 at \*25 (E.D.N.Y. April 12, 1998).

<sup>385</sup> *Concrete Works IV*, 321 F.3d at 979.

<sup>386</sup> *Rothe Development Corp. v. U.S. Department of Defense*, 545 F.3d 1023, 1041–1043 (Fed. Cir. 2008) (“*Rothe VII*”).

<sup>387</sup> *Id.* at 1044.

<sup>388</sup> *Id.*

<sup>389</sup> *Concrete Works IV*, 321 F.3d at 979.

of the enacting jurisdiction.”<sup>390</sup> *Croson* did not provide a bright line test for determining the local market area, thus the determination is fact-based and a governmental entity can limit the scope of evidence of discrimination to its own jurisdiction.

The recommended approach, however, is to determine the geographic market by determining where the governmental entity is spending the majority of its contracting dollars. The National Cooperative Highway Research Program (“NCHRP”) Report recommends that the relevant geographic market area encompass at least 75 percent of contract and subcontract dollars being spent by the governmental entity in a defined geographic area in order to determine the relevant geographic market, regardless of the jurisdictional boundaries of the governmental entity.<sup>391</sup> Although there are no cases directly on point approving a set percentage in the Fourth Circuit, the disparity study at issue in *Rowe*, like NERA’s studies, applied a 75 percent standard.<sup>392</sup>

*Study Period.* Additionally, it appears that the recommended study period be a minimum of three to a maximum of five to six years. The critical issue is that the study period be long enough in duration to provide a representative picture of the governmental entity’s spending profile and create a sufficiently large sample for statistical analysis. In *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*,<sup>393</sup> the Third Circuit Court reviewed a study relied upon by the City using data for three fiscal years.<sup>394</sup> In *H.B. Rowe Company v. Tippet*, the Fourth Circuit also affirmed North Carolina’s program, which was supported by a disparity study using data for a five-year period.<sup>395</sup>

Notwithstanding the above, if the data covered by the study dates back too far, then the court may find such data to be stale. In *Builders Association of Greater Chicago v. City of Chicago*, the City of Chicago used data from 1990 to justify the compelling need to continue the race-based program in 2003. The District Court stated that “viewed through the prism of 2003” the present program could not have been considered “narrowly tailored.”<sup>396</sup> This is in contrast to the District Court’s footnote in *Rothe Development Corp. v. U.S. Department of Defense*, where the District Court stated that “Congress cannot be expected to work in a vacuum” and that “Congress must have some sense of an institutional memory,” rejecting plaintiff’s objection to all evidence proffered by the Government that was prior to a certain year.<sup>397</sup>

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<sup>390</sup> *Coral Construction*, 941 F.2d at 922.

<sup>391</sup> NCHRP Report, *supra*, pg. 29 (courts in the 7<sup>th</sup>, 8<sup>th</sup> and 10<sup>th</sup> Circuits have upheld programs based on disparity studies using approximately 75 percent as the appropriate standard for geographic market definition).

<sup>392</sup> MGT of America, Inc. (2004), pp. 410-411.

<sup>393</sup> *Contractors Ass’n of E. Penn.*, 91 F.3d 586 (3<sup>rd</sup> Cir. 1996).

<sup>394</sup> *Id.* at 594.

<sup>395</sup> *Rowe*, 615 F.3d 233 (4<sup>th</sup> Cir. 2010). The NCHRP Report (p. 34) notes that the median time period studied in most disparity and availability studies was 5 years and the average was 5.3 years. The studies produced as evidence in the *Sherbrooke* and *Northern Contracting* cases both examined a 5 year period.

<sup>396</sup> *Builders Ass’n of Greater Chicago*, 298 F.Supp.2d at 742.

<sup>397</sup> *Rothe Development Corp. v. U.S. Dep’t of Defense*, 324 F.Supp.2d 840, 851, n. 8 (W.D. Tex. 2004) (“*Rothe IV*”).

*Non-goal contract data.* Furthermore, the use of non-goal contract data can be probative in supporting a finding of discrimination. In *Northern Contracting*, the State of Illinois introduced evidence regarding five percent of IDOT contracts that did not use DBE goals. On these “zero goal” contracts, DBE firms received just 1.5 percent of the total value of the contracts. This, in conjunction with evidence relating to much higher levels of documented DBE availability and much higher levels of DBE utilization on contracts with DBE goals, led the district court to conclude that IDOT’s program met the compelling evidence standard.<sup>398</sup>

#### 4. Passive Participation

A significant form of evidence that the government may present is passive participation in a discriminatory marketplace. In requiring that a state or local government show that it perpetuated the discrimination to be remedied by the M/WBE program, the *Croson* court noted that the government need not be an active participant in the discrimination. Rather, the Court stated that passive participation would suffice in satisfying the Court’s strict scrutiny standard.<sup>399</sup>

The difference between active and passive participation can be illustrated as follows. Evidence of active participation would be if the governmental entity actively created barriers to exclude M/WBEs from contracting opportunities. Evidence of passive participation would be the government’s infusion of tax dollars into a discriminatory industry. The *Croson* Court highlighted that a government could passively participate in private sector discrimination simply through its monetary involvement, stating “it is beyond dispute that any public entity, state or federal, has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.”<sup>400</sup>

In *Concrete Works IV*,<sup>401</sup> the City of Denver relied upon marketplace data that measured discrimination in the overall Denver construction market to satisfy the *Croson* compelling interest standard. The City produced evidence at trial that it indirectly contributed to private sector discrimination by awarding public contracts to firms that discriminated against M/WBEs in their private sector work.<sup>402</sup> Concrete Works argued that marketplace data was irrelevant because only discrimination by the City or its prime contractors could demonstrate a strong basis in evidence.<sup>403</sup> The Tenth Circuit Court of Appeals in *Concrete Works IV* rejected this argument and noted that it did not read *Croson* or the Court’s prior appellate rulings as requiring the municipality to identify an exact linkage between its award of public contracts and public discrimination.<sup>404</sup> Rather, the *Concrete Works IV* Court sided with the City in stating that the City’s strong basis in evidence of marketplace discrimination *can* assist in its burden of

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<sup>398</sup> *Northern Contracting*, 473 F.3d at 719.

<sup>399</sup> *Croson*, 488 U.S. at 509.

<sup>400</sup> *Id.* at 492.

<sup>401</sup> *Concrete Works IV*, 321 F.3d at 976.

<sup>402</sup> *Id.*

<sup>403</sup> *Id.* at 976-977.

<sup>404</sup> *Id.* at 973. See also *Concrete Works of Colo, Inc. v. City of Denver*, 36 F.3d 1513, 1529 (10<sup>th</sup> Cir. 1994) (“*Concrete Works II*”).

establishing a compelling interest.<sup>405</sup> The Court held that Denver's anecdotal evidence and evidence linking its spending practices to the evidence of marketplace discrimination sufficiently illustrated that it indirectly contributed to private discrimination and was a passive participant in private discrimination.<sup>406</sup>

The District Court in *Builders Association of Greater Chicago v. City of Chicago*,<sup>407</sup> also found evidence of the lack of M/WBE participation on private construction contracts probative. In explaining the import of marketplace discrimination, the District Court opined:

The anecdotal evidence indicates that M/WBEs are sometimes ignored because of racial, ethnic or gender animus or stereotyping. That cannot be quantified. But prime contractors, without any discriminatory intent or bias, are still likely to seek out the subcontractors with whom they have had a long and successful relationship. In a highly competitive industry, where the profit on a project, slim to begin with, can disappear because of the failure of one subcontractor to perform, why take a chance? The tendency to stick with the old and ignore the new affects all newer firms, not just M/WBEs. But here the vestiges of past discrimination linger on to skew the marketplace and adversely impact M/WBEs disproportionately as more recent entrants to the industry. Not too long ago white male firms had a near monopoly in the industry and they, therefore, are the beneficiaries of a continuing adherence to old relationships.<sup>408</sup>

The District Court affirmed that Chicago had a compelling interest not to perpetuate with tax dollars a market skewed by past discrimination that restricts M/WBE competition in the construction market.<sup>409</sup>

## 5. Anecdotal Evidence

Anecdotal evidence that reflects the personal experiences of individuals with discrimination in contracting opportunities is relevant because it goes to the question of whether observed statistical disparities are due to discrimination and not to some other nondiscriminatory cause or causes.<sup>410</sup> As observed by the Supreme Court, anecdotal evidence that is presented in a "pattern or practice" discrimination case may be persuasive because it "brought the cold [statistics] convincingly to life."<sup>411</sup> Testimony about discrimination by prime contractors, unions, bonding companies, suppliers and lenders has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.<sup>412</sup> While anecdotal evidence is generally insufficient standing alone, "[p]ersonal accounts of actual discrimination or

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<sup>405</sup> *Concrete Works IV*, 321 F.3d at 973 (emphasis added).

<sup>406</sup> *Id.* at 977.

<sup>407</sup> *Builders Ass'n of Greater Chi. v. City of Chi.*, 298 F.Supp.2d 725 (N.D. Ill. 2003).

<sup>408</sup> *Id.* at 738.

<sup>409</sup> *Id.* However, the court in this case nevertheless struck down the program on narrow tailoring grounds.

<sup>410</sup> *Webster v. Fulton Cnty.*, 51 F.Supp.2d 1354, 1363 (N.D. Ga. 1999).

<sup>411</sup> *Int'l Bhd. of Teamsters v. United States*, 431 U.S. 324, 339 (1977).

<sup>412</sup> *Adarand VII*, 228 F.3d at 1168-1172.

the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”<sup>413</sup>

More recently, the Fourth Circuit found in *Rowe* that anecdotal evidence from a telephone survey, personal interviews and focus groups to be relevant and probative of whether North Carolina met its burden. A telephone survey conducted by the consultant resulted in strong evidence of discriminatory treatment of both African American and Native American firms, including evidence of: discriminatory “good old boy networks;” double standards applied to both qualifications and performance; changes in bids when not required to use minority firms; and dropping minority subcontractors after winning contracts. Focus group and interview results corroborated these findings. As the Court summarized:

The surveys in the 2004 study exposed an informal, racially exclusive network that systemically disadvantaged minority subcontractors. The State could conclude with good reason that such networks exert a chronic and pernicious influence on the marketplace that calls for remedial action.... Here, however, majorities of African American and Native American respondents agreed that prime contractors have higher standards for minority subcontractors, view minority subcontractors as being less competent than nonminority businesses, change their bidding practices when not required to hire minority subcontractors, and drop minority subcontractors after winning contracts. Together, these responses suggest strongly that the underutilization of African American and Native American subcontractors is more than a mere byproduct of misguided yet color-blind cronyism.<sup>414</sup>

The *Rowe* Court specifically rejected the notion that anecdotal testimony must be “verified” or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. The Court found that the plaintiff “offered no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—and indeed cannot—be verified because it ‘is nothing more than a witness’ narrative told from the witness’ perspective and including the witness’ perception.”<sup>415</sup> Likewise, the Tenth Circuit held in *Concrete Works IV* that “Denver was not required to present corroborating evidence and [Plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”<sup>416</sup>

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<sup>413</sup> *Concrete Works II*, 36 F.3d at 1520, 1530. But cf. *Engineering Contractors*, 122 F.3d at 926: (“[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough”).

<sup>414</sup> *Rowe*, 615 F.3d at 251.

<sup>415</sup> *Id.* at 249 (quoting *Concrete Works IV*, 321 F.3d at 989) (citation omitted).

<sup>416</sup> *Concrete Works IV*, 321 F.3d at 989.

### C. Narrow Tailoring Analysis

*Croson* requires that an MBE program be “narrowly tailored” to remedy current evidence of discrimination.<sup>417</sup> In *Rowe*, the Fourth Circuit applied the narrow tailoring analysis to determine if the North Carolina statutory scheme met constitutional scrutiny. The Fourth Circuit identified five factors to consider in evaluating whether the state statute is narrowly tailored:

1. The necessity of the policy and the efficacy of alternative race neutral policies;
2. The planned duration of the policy;
3. The relationship between the numerical goal and the percentage of minority group members in the relevant population;
4. The flexibility of the policy, including the provision of waivers if the goal cannot be met; and
5. The burden of the policy on innocent third parties.<sup>418</sup>

After reviewing all of the factors outlined above, the *Rowe* Court found the North Carolina statutory scheme to be narrowly tailored with respect to those groups for which a compelling interest was established.<sup>419</sup>

### D. Conclusion

The decision of the U.S. Supreme Court in the *Croson* and *Adarand* cases established the legal landscape for affirmative action in public contracting programs. The U.S. Supreme Court altered the authority of state and local governments and the federal government to institute remedial race-conscious public contracting programs. This Study provides the statistical and anecdotal evidence to establish the strong basis in evidence predicate for the State of Maryland to continue to implement and to narrowly tailor a race- and gender-conscious public contracting program.

### E. List of Authorities

#### Cases

*Adarand Constructors, Inc. v. Federico Peña*, 515 U.S. 200 (1995) (“*Adarand III*”).

*Adarand Constructors, Inc. v. Slater*, 228 F3d 1147 (10<sup>th</sup> Cir., 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001) (“*Adarand VII*”).

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<sup>417</sup> See *Croson*, 488 U.S. at 507-508.

<sup>418</sup> *Rowe*, 615 F.3d at 252-254.

<sup>419</sup> *Id.* at 254.

*Brunet v. City of Columbus*, 1 F.3d 390 (6<sup>th</sup> Cir. 1993).

*Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003).

*City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

*Concrete Works of Colorado, Inc. v. City of Denver*, 36 F.3d 1513, 1529 (10<sup>th</sup> Cir. 1994)  
("Concrete Works II").

*Concrete Works of Colorado v. City and County of Denver*, 321 F.3d 950, *cert. denied* (10<sup>th</sup> Cir.  
2003) ("Concrete Works IV").

*Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990 (3<sup>rd</sup> Cir.  
1993).

*Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586 (3<sup>rd</sup> Cir.  
1996).

*Coral Construction Co. v. King County*, 941 F.2d 910 (9<sup>th</sup> Cir. 1991), *cert. denied*, 112 S.Ct. 875  
(1992).

*Craig v. Boren*, 429 U.S. 190 (1976).

*Engineering Contractors Association of South Florida v. Metropolitan Dade County*, 122 F.3d  
895 (11<sup>th</sup> Cir. 1997).

*GEOD Corp., et al. v. New Jersey Transit Corp.*, 746 F.Supp.2d 642 (D. New Jersey 2010).

*Geyer Signal, et al. v. Minnesota Department of Transportation, et al.*, CA. 11-321.2014 U.S.  
Dist. LEXIS 43945 (D. Minn.2014).

*International Brotherhood of Teamsters v. United States*, 431 U.S. 324 (1977).

*Michigan Road Builders Association v. Milliken*, 834 F.2d 583 (6<sup>th</sup> Cir. 1987).

*Mississippi University for Women v. Hogan*, 458 U.S. 718 (1982).

*Midwest Fence Corp. v. United States Department of Transportation, et al.*, 84 F.3d. 705 (N.D.  
Ill. 2014), *aff'd*, 2016 U.S App. LEXIS 19959 (7<sup>th</sup> Cir. November 4, 2016).

*Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir.  
2007).

*Northern Contracting, Inc. v. Illinois Department of Transportation*, No. 00-C-4515, 2005 WL.  
2230195 (N.D. Ill. Sept. 8, 2005).

*North Shore Concrete and Assoc., Inc. v. City of New York*, No. 94-CV-4017, 1998 WL 273027  
(E.D.N.Y. April 12, 1998).

*H. B. Rowe, Inc. v. Tippet, et al.*, 615 F.3d 233 (4<sup>th</sup> Cir. 2010).

*Rothe Development Corp. v. U.S. Department of Defense*, 324 F.Supp.2d 840 (W.D. Tex. 2004) (“*Rothe IV*”).

*Rothe Development Corp. v. U.S. Department of Defense*, 545 F.3d 1023, 1041–1043 (Fed. Cir. 2008) (“*Rothe VII*”).

*Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8<sup>th</sup> Cir. 2003), *cert. denied*, 124 S.Ct. 2158 (2004).

*United States v. Paradise*, 480 U.S. 149, 171 (1987).

*W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206 (5<sup>th</sup> Cir. 1999).

*Webster v. Fulton County*, 51 F.Supp.2d 1354 (N.D. Ga. 1999).

*Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

*Wygant v. Jackson Board of Education*, 476 U.S. 267 (1986).

### **Federal Regulations**

64 Fed. Reg. 5096 (Feb. 2, 1999).

49 C.F.R. Part 23.

49 C.F.R. Part 26.

### **Reports**

MGT of America, Inc. (2004), North Carolina Department of Transportation Second Generation Disparity Study: Final Report, Tallahassee, FL, 410-411.

Wainwright, J. and C. Holt (2010), Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program, Transportation Research Board of the National Academies, NCHRP Report, Issue No. 644.

## Appendix C—State Procurement Agencies Subject to the MBE Program Statute

Office of Administrative Hearings  
 Maryland African American Museum Corporation  
 Maryland Department of Aging  
 Maryland Department of Agriculture  
 Maryland State Archives  
 Office of the Attorney General  
 Maryland Automobile Insurance Fund  
 Baltimore City Community College  
 Board of Public Works  
 Bowie State University  
 Department of Budget & Management  
 Canal Place Preservation & Development Authority  
 Governor's Office for Children  
 Comptroller of Maryland  
 Maryland Board of College Savings Plans  
 Department of Commerce  
 Maryland State Board of Contract Appeals  
 Coppin State University  
 Maryland Schools for the Deaf  
 Office of the Deaf and Hard of Hearing  
 Department of Disabilities  
 Maryland State Department of Education  
 State Board of Elections  
 Maryland Institute for Emergency Medical Systems Services  
 Maryland Energy Administration  
 Maryland Department of the Environment  
 Maryland Environmental Service  
 State of Maryland Executive Department  
 Maryland Food Center Authority  
 Frostburg State University  
 Department of General Services  
 Department of Health & Mental Hygiene  
 Maryland Health Benefit Exchange  
 Maryland Higher Education Commission  
 Department of Housing & Community Development  
 Maryland Commission on Human Relations  
 Department of Human Resources  
 Department of Information Technology  
 Maryland Insurance Administration

Department of Juvenile Services  
 Department of Labor, Licensing and Regulation  
 Maryland State Lottery Agency  
 Department of the Military  
 Morgan State University  
 Department of Natural Resources  
 Office of the People's Counsel  
 Department of Planning  
 Department of State Police  
 Property Tax Assessment Appeals Board  
 Office of the State Prosecutor  
 The Public Defender System  
 The Department of Public Safety & Correctional Services  
 Public School Construction Program  
 Public Service Commission  
 Maryland Public Broadcasting Commission  
 Maryland State Retirement Agency  
 State Retirement & Pension System  
 Historic St. Mary's City Commission  
 St. Mary's College of Maryland  
 Salisbury University  
 The Maryland Stadium Authority  
 Subsequent Injury Fund  
 Uninsured Employers' Fund Board  
 MD Teachers & State Employees Supplemental Retirement Plans  
 Maryland Tax Court  
 Towson University  
 Maryland Department of Transportation – Maryland Aviation Administration  
 Maryland Department of Transportation – Motor Vehicle Administration  
 Maryland Department of Transportation – Office of the Secretary  
 Maryland Department of Transportation – Maryland Port Administration  
 Maryland Department of Transportation – State Highway Administration  
 Maryland Department of Transportation – Maryland Transit Administration

## Appendix C—State Procurement Agencies Subject to the MBE Program Statute

Maryland Department of Transportation –  
Maryland Transportation Authority  
Maryland State Treasurer’s Office  
University of Baltimore  
University of Maryland, Baltimore  
University System of Maryland, Baltimore  
County  
University System of Maryland, College  
Park

University System of Maryland, Eastern  
Shore  
University System of Maryland, University  
College  
Maryland Department of Veterans Affairs  
Worker’s Compensation Commission

## **Appendix D. Master M/WBE Directory Sources**

### **A. Entities with lists of M/WBE firms that were duplicative of previously collected lists**

African American Chamber of Commerce of Montgomery County  
Anne Arundel County Economic Development Corporation  
Baltimore City Public School System  
Baltimore County  
Baltimore County Office of Fair Practices and Community Affairs  
Baltimore County Public Schools  
Baltimore-Washington International Airport  
Bowie State University  
Carroll County  
Charles County Economic Development Commission  
City of Annapolis, Small and Minority Business Enterprise Development  
Department of State Police  
Dulles International Airport  
eVA – Virginia’s eProcurement Portal  
Frederick County Business Development and Retention  
Frostburg State University  
Governor's Commission on Asian Pacific American Affairs  
Harford County  
Maryland Aviation Administration  
Maryland Department of Budget and Management  
Maryland Department of Commerce  
Maryland Department of Education  
Maryland Department of General Services  
Maryland Department of Human Resources  
Maryland Department of Information Technology  
Maryland Department of Juvenile Services  
Maryland Department of Labor, Licensing & Regulation  
Maryland Department of Mental Health and Hygiene  
Maryland Department of Public Safety and Correctional Services  
Maryland Environmental Service  
Maryland Governor's Office of Minority Affairs  
Maryland Interagency Commission for Public School Construction  
Maryland Mass Transit Administration-Baltimore  
Maryland Port Authority  
Maryland Stadium Authority  
Maryland State Highway  
Maryland State Lottery Agency  
Maryland Transit Administration  
Maryland Transportation Authority  
Maryland Vehicle Administration  
MDOT-The Secretary's Office

## Appendix D. Master M/WBE Directory Sources

Metropolitan Washington Airports Authority  
Montgomery County Procurement  
Morgan State University  
National Association of Women in Construction (Delaware Chapter)  
National Association of Women in Construction (Roanoke, VA Chapter)  
Prince George's County  
Queen Anne's County  
Richmond International Airport  
Salisbury State University  
Southern Maryland Black Chamber of Commerce  
St. Mary's County  
Talbot County  
Towson University  
University of Baltimore  
University of Maryland Baltimore  
University of Maryland Baltimore County  
University of Maryland College Park  
University of Maryland Eastern Shore  
University of Maryland University College  
Upper Shore Workforce Investment Board  
Virginia Department of Transportation  
Washington County  
West Virginia Small Business Development Center  
Worcester County

### **B. Entities that had no directory, or their directory did not identify race and sex**

Airport Minority Advisory Council  
Baltimore County Dept. of Economic Development  
Baltimore Orioles  
Calvert County Minority Business Alliance  
Central Vendor Registration of Montgomery County  
City of Falls Church  
City of Hagerstown  
City of Richmond  
Dorchester County  
Downtown Partnership of Baltimore  
Frederick County Department of Human Relations  
Garrett County  
Hagerstown/Washington Economic Development Commission  
Jefferson County Development Authority  
Maryland Minority Contractors Association, Inc.  
Maryland R\*STARS Database  
Maryland Small Business Development Center (Western Region)  
Minority Business Network

## Appendix D. Master M/WBE Directory Sources

National Association of Women in Construction (National Chapter)  
Naval Air Systems Command  
Tri-County Council of Southern Maryland  
Virginia Department of Minority Business Enterprise

### **C. Entities that were non-responsive to repeated contacts**

American Minority Contractors & Business Association  
Arlington County  
Baltimore County Chamber of Commerce  
Capital Region Minority Supplier Development Council  
Cecil County  
Charles County Minority Business Advocacy Council  
DC Minority Business Enterprise Center  
District of Columbia Department of Small and Local Business Development  
Governor's Commission on Hispanic Affairs  
Greater Baltimore Black Chamber of Commerce  
Greater Baltimore Committee  
Maryland Small Business Development Center (Northern Region)  
Maryland-National Capital Park & Planning Commission  
National Association of Women in Construction (Maryland Chapter)  
National Association of Women in Construction (Greater Tidewater, VA Chapter)  
National Association of Women in Construction (Washington DC Chapter)  
Prince George's County Minority Business Opportunity Commission  
Queen Anne's County  
Somerset County  
Washington Suburban Sanitary Commission  
Women Construction Owners and Executives  
Women Presidents' Educational Organization

### **D. Entities that refused to provide the requested information**

Black Chamber of Commerce of Anne Arundel County  
Maryland Small Business Development Center (Corridor Region)  
National Association of Minority Contractors  
National Center for American Indian Enterprise Development  
Women's Business Enterprise National Council

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## **Appendix E. Detailed Utilization, Availability & Disparity Tables**

This appendix presents M/WBE utilization, availability, and disparity statistics analogous to those presented in Chapter VI, Tables 6.4 and 6.5, according to detailed NAICS Industry Groups.<sup>420</sup>

Twelve tables each are presented. Within each set, there are two each for Construction, AE-CRS, Maintenance, IT, Services, and CSE, respectively. Within each procurement category, the first table uses dollars awarded as the metric of utilization and the second table uses dollars paid.

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<sup>420</sup> Comparable statistics were calculated at the NAICS Industry level as well (five-digit and six-digit NAICS). In the interest of space, these results are not reported here. Four-digit NAICS codes are most comparable to four-digit Standard Industrial Classification (SIC) codes, which were used prior to the advent of the NAICS system.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.1. Industry Group Utilization, Availability, and Disparity Results for State of Maryland Construction Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	5.09	9.14	55.66***
Hispanic	0.92	4.67	19.64*****
Asian	0.27	1.52	17.88*****
Native American	0.14	0.64	22.08*
Minority	6.42	15.97	40.19*****
Nonminority female	2.59	12.45	20.78*****
M/WBE total	9.00	28.41	31.69*****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.19	13.59	1.37****
Hispanic	3.96	3.09	
Asian	0.65	3.70	17.52*****
Native American	0.33	0.38	86.05
Minority	5.12	20.75	24.67*****
Nonminority female	4.68	11.87	39.39*****
M/WBE total	9.80	32.62	30.03*****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	7.91	7.02	
Hispanic	11.36	5.87	
Asian	4.30	1.13	
Native American	1.52	0.48	
Minority	25.10	14.50	
Nonminority female	2.72	8.91	30.57*****
M/WBE total	27.82	23.41	
Nonresidential Building Construction (NAICS 2362)			
African American	3.02	12.17	24.79*****
Hispanic	4.22	6.74	62.56
Asian	1.89	4.46	42.43*
Native American	0.11	2.09	5.04*****
Minority	9.23	25.46	36.26*****
Nonminority female	1.21	10.01	12.12*****
M/WBE total	10.45	35.47	29.45*****
Other Specialty Trade Contractors (NAICS 2389)			
African American	5.32	6.79	78.29
Hispanic	2.02	4.54	44.50
Asian	0.24	3.68	6.41*****
Native American	0.00	2.92	0.12*****
Minority	7.58	17.94	42.25*****
Nonminority female	10.64	11.61	91.62
M/WBE total	18.22	29.55	61.66*****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	11.88	3.90	
Hispanic	5.34	12.26	43.58****
Asian	4.69	2.95	
Native American	0.05	0.17	29.45
Minority	21.96	19.28	
Nonminority female	14.54	13.32	
M/WBE total	36.50	32.59	
<b>Architectural and Structural Metals Manufacturing (NAICS 3323)</b>			
African American	0.12	5.93	2.10****
Hispanic	2.39	0.04	
Asian	19.96	0.23	
Native American	0.82	0.18	
Minority	23.29	6.38	
Nonminority female	7.17	14.05	51.00***
M/WBE total	30.46	20.43	
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	17.17	5.27	
Hispanic	0.38	2.10	18.30****
Asian	20.98	1.21	
Native American	0.00	0.87	0.00****
Minority	38.53	9.45	
Nonminority female	22.37	10.56	
M/WBE total	60.90	20.01	
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	1.64	8.55	19.24
Hispanic	23.74	0.23	
Asian	1.64	5.55	29.50
Native American	0.00	0.12	0.00
Minority	27.02	14.44	
Nonminority female	0.09	11.32	0.79****
M/WBE total	27.11	25.76	
<b>Utility System Construction (NAICS 2371)</b>			
African American	2.08	9.17	22.69**
Hispanic	0.56	1.81	30.76
Asian	1.10	2.38	46.22
Native American	0.05	1.14	4.19
Minority	3.79	14.50	26.12***
Nonminority female	8.61	10.38	82.94
M/WBE total	12.40	24.88	49.82

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.03	1.99	1.34****
Asian	0.00	3.41	0.00****
Native American	0.00	0.45	0.00****
Minority	0.03	14.61	0.18****
Nonminority female	18.03	10.28	
M/WBE total	18.05	24.89	72.53
Specialized Freight Trucking (NAICS 4842)			
African American	50.17	24.84	
Hispanic	8.68	7.48	
Asian	0.52	1.87	27.98*
Native American	2.41	0.12	
Minority	61.79	34.32	
Nonminority female	12.73	11.65	
M/WBE total	74.52	45.97	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.84	6.97	40.77****
Hispanic	0.78	1.98	39.63**
Asian	5.67	4.88	
Native American	3.18	1.37	
Minority	12.48	15.20	82.08
Nonminority female	4.99	10.25	48.72****
M/WBE total	17.47	25.45	68.65****
Services to Buildings and Dwellings (NAICS 5617)			
African American	8.30	17.57	47.25****
Hispanic	0.53	3.45	15.29****
Asian	0.87	2.70	32.13**
Native American	0.01	2.24	0.26****
Minority	9.71	25.97	37.37****
Nonminority female	21.41	11.53	
M/WBE total	31.11	37.50	82.96
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.65	4.86	
Hispanic	0.00	2.42	0.10****
Asian	9.24	6.60	
Native American	0.00	0.97	0.00****
Minority	17.90	14.85	
Nonminority female	19.27	9.83	
M/WBE total	37.16	24.68	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	7.92	10.28	77.07
Hispanic	0.02	0.06	30.53
Asian	0.00	7.17	0.00****
Native American	0.00	0.04	0.00
Minority	7.94	17.55	45.27****
Nonminority female	53.74	18.00	
M/WBE total	61.68	35.55	
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	3.08	0.00****
Hispanic	14.84	1.12	
Asian	0.00	0.51	0.00****
Native American	0.00	0.07	0.00
Minority	14.84	4.78	
Nonminority female	2.60	5.75	45.24
M/WBE total	17.44	10.53	
<b>Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)</b>			
African American	0.34	4.38	7.85****
Hispanic	0.00	1.02	0.00****
Asian	0.00	2.19	0.01****
Native American	0.00	0.94	0.00****
Minority	0.34	8.54	4.03****
Nonminority female	37.61	8.62	
M/WBE total	37.95	17.16	
<b>Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)</b>			
African American	23.51	1.80	
Hispanic	0.00	0.32	0.00****
Asian	0.03	2.60	1.22****
Native American	0.00	0.55	0.00****
Minority	23.54	5.27	
Nonminority female	5.01	6.67	75.15
M/WBE total	28.55	11.94	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.58	4.05	14.43****
Hispanic	0.04	0.08	55.77
Asian	0.00	0.15	0.41
Native American	0.00	4.75	0.00****
Minority	0.63	9.02	6.95****
Nonminority female	89.10	15.11	
M/WBE total	89.73	24.13	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.72	5.93	12.08****
Hispanic	0.23	0.82	27.78
Asian	9.18	3.36	
Native American	0.00	0.68	0.00****
Minority	10.12	10.79	93.75
Nonminority female	19.85	15.46	
M/WBE total	29.97	26.25	
Other Support Services (NAICS 5619)			
African American	0.00	18.71	0.01****
Hispanic	6.72	2.45	
Asian	0.00	2.57	0.00****
Native American	2.81	0.02	
Minority	9.53	23.75	40.13****
Nonminority female	73.79	28.54	
M/WBE total	83.32	52.30	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.02	11.81	0.17****
Hispanic	0.00	0.23	0.00
Asian	10.62	7.83	
Native American	0.00	0.23	0.00
Minority	10.65	20.11	52.94
Nonminority female	0.15	14.79	1.02****
M/WBE total	10.80	34.89	30.94****
Investigation and Security Services (NAICS 5616)			
African American	0.78	19.84	3.91****
Hispanic	0.17	1.44	11.94
Asian	0.02	5.00	0.48****
Native American	0.00	1.16	0.00****
Minority	0.97	27.43	3.54****
Nonminority female	0.17	11.73	1.42****
M/WBE total	1.14	39.16	2.90****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.02	8.83	0.21****
Hispanic	0.00	3.66	0.00****
Asian	0.00	4.95	0.00****
Native American	0.01	0.54	2.15**
Minority	0.03	17.98	0.17****
Nonminority female	42.84	16.02	
M/WBE total	42.87	34.00	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.16	16.35	0.97****
Hispanic	2.05	3.48	58.77
Asian	2.98	14.17	21.04****
Native American	0.00	1.27	0.00****
Minority	5.19	35.27	14.70****
Nonminority female	8.60	13.04	65.97
M/WBE total	13.79	48.31	28.55****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.41	7.16	5.68
Hispanic	0.30	1.54	19.63
Asian	0.00	1.07	0.00****
Native American	0.00	0.04	0.00
Minority	0.71	9.80	7.22
Nonminority female	38.90	27.72	
M/WBE total	39.60	37.52	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	1.29	0.00****
Hispanic	0.00	0.68	0.00****
Asian	0.00	0.64	0.00
Native American	0.00	0.00	0.00
Minority	0.00	2.61	0.00****
Nonminority female	0.00	3.78	0.00****
M/WBE total	0.00	6.40	0.00****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	6.44	4.48	
Hispanic	0.60	6.72	8.86****
Asian	9.96	6.65	
Native American	0.07	0.01	
Minority	17.07	17.86	95.59
Nonminority female	2.05	15.51	13.20****
M/WBE total	19.12	33.36	57.29*

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	30.32	0.00****
Hispanic	0.00	15.93	0.00****
Asian	0.00	7.11	0.00****
Native American	0.00	0.06	0.00
Minority	0.00	53.42	0.00****
Nonminority female	99.94	4.93	
M/WBE total	99.94	58.36	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.30	7.14	4.15****
M/WBE total	0.30	7.14	4.15****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	12.46	0.00****
Hispanic	0.00	4.15	0.00****
Asian	0.00	5.60	0.00****
Native American	0.00	0.89	0.00****
Minority	0.00	23.10	0.00****
Nonminority female	0.00	15.77	0.00****
M/WBE total	0.00	38.87	0.00****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	4.56	5.77	79.14
Hispanic	0.00	3.39	0.00****
Asian	0.00	1.78	0.00****
Native American	0.00	0.29	0.00****
Minority	4.56	11.23	40.63****
Nonminority female	0.05	10.03	0.55****
M/WBE total	4.62	21.26	21.73****
Home Furnishings Stores (NAICS 4422)			
African American	15.90	0.94	
Hispanic	0.13	9.73	1.30****
Asian	0.00	7.22	0.00****
Native American	0.00	0.01	0.00
Minority	16.03	17.90	89.51
Nonminority female	22.99	10.14	
M/WBE total	39.02	28.04	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	23.40	9.20	
Hispanic	3.64	2.44	
Asian	0.00	3.33	0.00****
Native American	0.20	0.03	
Minority	27.24	15.00	
Nonminority female	12.51	12.27	
M/WBE total	39.75	27.27	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	4.27	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.02	0.00
Minority	0.00	4.29	0.00****
Nonminority female	3.23	13.28	24.35****
M/WBE total	3.23	17.57	18.41****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	12.67	0.00****
Hispanic	0.00	6.33	0.00****
Asian	12.42	6.33	
Native American	0.00	0.00	
Minority	12.42	25.34	49.02*
Nonminority female	0.00	12.67	0.00****
M/WBE total	12.42	38.01	32.68****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	3.07	0.00****
Hispanic	0.41	0.03	
Asian	0.00	2.31	0.00****
Native American	0.00	0.01	0.00
Minority	0.41	5.43	7.62****
Nonminority female	9.48	16.87	56.19*
M/WBE total	9.89	22.30	44.37****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	11.81	0.00****
Hispanic	0.00	3.65	0.00****
Asian	0.00	4.95	0.00****
Native American	0.00	0.92	0.00
Minority	0.00	21.33	0.00****
Nonminority female	0.11	17.50	0.65****
M/WBE total	0.11	38.83	0.29****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.51	11.11	4.63****
Hispanic	0.00	2.69	0.00****
Asian	6.27	5.28	
Native American	0.00	1.59	0.00****
Minority	6.79	20.67	32.84****
Nonminority female	20.56	19.54	
M/WBE total	27.35	40.21	68.01*
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	0.19	0.00
Hispanic	0.00	1.51	0.00****
Asian	0.00	2.42	0.00****
Native American	0.00	4.43	0.00****
Minority	0.00	8.55	0.00****
Nonminority female	15.98	18.69	85.50
M/WBE total	15.98	27.24	58.66
Electronics and Appliance Stores (NAICS 4431)			
African American	0.10	10.01	1.02****
Hispanic	0.00	0.31	0.00
Asian	0.00	3.00	0.00****
Native American	0.00	0.29	0.00
Minority	0.10	13.62	0.75****
Nonminority female	38.91	15.37	
M/WBE total	39.01	28.99	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	3.95	0.00****
Hispanic	3.35	11.40	29.39
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	3.35	15.35	21.83
Nonminority female	26.72	20.48	
M/WBE total	30.07	35.83	83.92
Support Activities for Road Transportation (NAICS 4884)			
African American	0.53	6.71	7.96
Hispanic	0.00	9.01	0.00****
Asian	0.00	0.15	0.00
Native American	0.00	1.78	0.00****
Minority	0.53	17.65	3.03****
Nonminority female	92.48	16.46	
M/WBE total	93.02	34.11	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00****
Minority	0.00	3.34	0.00****
Nonminority female	1.84	21.37	8.60****
M/WBE total	1.84	24.70	7.44****
Rail Transportation (NAICS 4821)			
African American	0.00	0.65	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.08	0.00
Minority	0.00	1.06	0.00
Nonminority female	0.00	1.69	0.00****
M/WBE total	0.00	2.74	0.00****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.87	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.07	0.00
Minority	0.00	7.05	0.00****
Nonminority female	0.00	8.03	0.00****
M/WBE total	0.00	15.08	0.00****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.69	13.23	5.23****
Hispanic	0.24	3.63	6.58****
Asian	3.38	5.47	61.79
Native American	0.00	0.96	0.00****
Minority	4.31	23.28	18.51****
Nonminority female	19.51	17.77	
M/WBE total	23.82	41.06	58.02****
Direct Selling Establishments (NAICS 4543)			
African American	46.24	2.43	
Hispanic	0.00	0.82	0.00****
Asian	0.00	0.83	0.00****
Native American	0.00	0.01	0.00
Minority	46.24	4.08	
Nonminority female	27.49	8.60	
M/WBE total	73.73	12.68	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
<b>Offices of Real Estate Agents and Brokers (NAICS 5312)</b>			
African American	0.00	7.84	0.00****
Hispanic	0.00	1.56	0.00
Asian	0.00	4.25	0.00****
Native American	0.00	0.33	0.00
Minority	0.00	13.98	0.00****
Nonminority female	0.00	18.14	0.00****
M/WBE total	0.00	32.12	0.00****
<b>Office Furniture (including Fixtures) Manufacturing (NAICS 3372)</b>			
African American	0.00	16.68	0.00****
Hispanic	0.00	1.35	0.00****
Asian	0.00	3.58	0.00****
Native American	0.00	0.83	0.00
Minority	0.00	22.44	0.00****
Nonminority female	25.42	17.37	
M/WBE total	25.42	39.81	63.84
<b>Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)</b>			
African American	0.00	7.82	0.00****
Hispanic	0.00	0.81	0.00****
Asian	0.00	3.77	0.00****
Native American	0.00	0.00	
Minority	0.00	12.40	0.00****
Nonminority female	0.00	13.48	0.00****
M/WBE total	0.00	25.88	0.00****
<b>Electric Power Generation, Transmission and Distribution (NAICS 2211)</b>			
African American	0.00	1.22	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00****
Native American	0.00	1.11	0.00****
Minority	0.00	4.14	0.00****
Nonminority female	0.00	8.17	0.00****
M/WBE total	0.00	12.31	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Collection (NAICS 5621)			
African American	18.96	23.81	79.61
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	3.14	0.00****
Minority	18.96	26.96	70.33
Nonminority female	2.72	7.25	37.49
M/WBE total	21.68	34.21	63.36
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	13.54	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	13.54	0.00	
Nonminority female	0.31	22.22	1.38****
M/WBE total	13.85	22.22	62.32
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	2.08	0.00****
Hispanic	0.00	0.07	0.00
Asian	0.00	2.88	0.00****
Native American	0.00	0.95	0.00****
Minority	0.00	5.98	0.00****
Nonminority female	4.15	3.13	
M/WBE total	4.15	9.11	45.59
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.19	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.89	0.00****
Native American	0.00	0.00	
Minority	0.00	13.07	0.00****
Nonminority female	0.00	16.24	0.00****
M/WBE total	0.00	29.31	0.00****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	4.77	8.56	55.76
Hispanic	0.20	0.75	26.99
Asian	0.00	1.35	0.00****
Native American	0.00	0.07	0.00
Minority	4.98	10.73	46.37
Nonminority female	21.28	14.61	
M/WBE total	26.26	25.34	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Warehousing and Storage (NAICS 4931)			
African American	0.00	10.26	0.00****
Hispanic	0.00	3.17	0.00****
Asian	0.00	4.54	0.00****
Native American	0.00	0.76	0.00****
Minority	0.00	18.73	0.00****
Nonminority female	88.86	13.91	
M/WBE total	88.86	32.64	
Furniture Stores (NAICS 4421)			
African American	0.00	3.83	0.00****
Hispanic	0.00	0.05	0.00
Asian	0.00	0.52	0.00
Native American	0.00	1.19	0.00****
Minority	0.00	5.59	0.00****
Nonminority female	10.70	14.41	74.26
M/WBE total	10.70	20.00	53.52
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00****
Hispanic	0.00	2.37	0.00****
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00****
Minority	0.00	6.61	0.00****
Nonminority female	5.76	6.87	83.91
M/WBE total	5.76	13.48	42.75

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.2. Industry Group Utilization, Availability, and Disparity Results for State of Maryland Construction Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Equipment Contractors (NAICS 2382)			
African American	5.15	9.00	57.19***
Hispanic	1.00	4.60	21.82****
Asian	0.30	1.51	19.58****
Native American	0.15	0.61	24.47
Minority	6.60	15.73	41.96****
Nonminority female	2.52	12.44	20.28****
M/WBE total	9.12	28.16	32.38****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	7.82	6.84	
Hispanic	10.75	5.61	
Asian	4.28	1.08	
Native American	1.37	0.51	
Minority	24.22	14.04	
Nonminority female	2.86	9.02	31.75****
M/WBE total	27.09	23.07	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.20	13.59	1.47****
Hispanic	2.63	3.09	85.31
Asian	0.27	3.70	7.29****
Native American	0.35	0.38	91.25
Minority	3.45	20.75	16.62****
Nonminority female	5.84	11.87	49.23****
M/WBE total	9.29	32.62	28.49****
Nonresidential Building Construction (NAICS 2362)			
African American	2.58	12.17	21.23****
Hispanic	4.89	6.74	72.56
Asian	0.30	4.46	6.69****
Native American	0.13	2.09	6.21****
Minority	7.90	25.46	31.04****
Nonminority female	1.39	10.01	13.86****
M/WBE total	9.29	35.47	26.19****
Other Specialty Trade Contractors (NAICS 2389)			
African American	3.54	6.91	51.24
Hispanic	1.85	5.44	34.04
Asian	0.14	3.80	3.56****
Native American	0.00	2.59	0.06****
Minority	5.53	18.74	29.50****
Nonminority female	7.85	11.73	66.92
M/WBE total	13.38	30.47	43.90****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	10.68	3.90	
Hispanic	5.79	12.47	46.43****
Asian	4.85	2.98	
Native American	0.06	0.17	33.31
Minority	21.38	19.51	
Nonminority female	12.91	13.32	96.92
M/WBE total	34.30	32.84	
<b>Architectural and Structural Metals Manufacturing (NAICS 3323)</b>			
African American	0.14	5.91	2.33****
Hispanic	2.51	0.04	
Asian	21.44	0.23	
Native American	0.91	0.19	
Minority	24.99	6.37	
Nonminority female	7.21	13.98	51.59***
M/WBE total	32.20	20.34	
<b>Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)</b>			
African American	17.10	5.22	
Hispanic	0.44	2.07	21.31****
Asian	18.60	1.22	
Native American	0.00	0.89	0.00****
Minority	36.14	9.41	
Nonminority female	22.56	10.79	
M/WBE total	58.70	20.20	
<b>Utility System Construction (NAICS 2371)</b>			
African American	2.32	9.17	25.28*
Hispanic	0.63	1.81	34.60
Asian	1.07	2.38	44.74
Native American	0.05	1.14	4.71
Minority	4.07	14.50	28.03**
Nonminority female	6.99	10.38	67.36
M/WBE total	11.06	24.88	44.44*
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	1.61	8.55	18.85*
Hispanic	11.99	0.23	
Asian	0.21	5.55	3.74****
Native American	0.00	0.12	0.00
Minority	13.81	14.44	95.63
Nonminority female	0.05	11.32	0.45****
M/WBE total	13.86	25.76	53.80

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.04	1.99	1.84****
Asian	0.00	3.41	0.00****
Native American	0.00	0.45	0.00****
Minority	0.04	14.61	0.25****
Nonminority female	17.43	10.28	
M/WBE total	17.46	24.89	70.16
Specialized Freight Trucking (NAICS 4842)			
African American	43.43	24.84	
Hispanic	7.06	7.48	94.32
Asian	0.23	1.87	12.26****
Native American	2.32	0.12	
Minority	53.04	34.32	
Nonminority female	15.87	11.65	
M/WBE total	68.91	45.97	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.78	7.05	39.51****
Hispanic	0.95	1.99	47.98
Asian	5.28	4.82	
Native American	0.46	1.34	34.79
Minority	9.48	15.19	62.45***
Nonminority female	3.98	10.39	38.27****
M/WBE total	13.46	25.58	52.63****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	8.52	4.96	
Hispanic	0.00	2.39	0.07****
Asian	9.21	6.76	
Native American	0.00	0.95	0.00****
Minority	17.73	15.05	
Nonminority female	19.61	9.87	
M/WBE total	37.34	24.92	
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.32	4.38	7.32****
Hispanic	0.00	1.04	0.00****
Asian	0.00	2.20	0.01****
Native American	0.00	0.94	0.00****
Minority	0.32	8.56	3.75****
Nonminority female	36.63	8.63	
M/WBE total	36.95	17.19	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	7.51	10.28	73.06
Hispanic	0.02	0.06	37.41
Asian	0.00	7.17	0.00****
Native American	0.00	0.04	0.00
Minority	7.54	17.55	42.95****
Nonminority female	58.83	18.00	
M/WBE total	66.37	35.55	
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	9.57	17.80	53.73****
Hispanic	0.72	3.61	20.05****
Asian	0.11	2.74	3.86****
Native American	0.01	2.20	0.37****
Minority	10.40	26.35	39.48****
Nonminority female	20.77	11.59	
M/WBE total	31.17	37.94	82.17
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	3.28	0.00****
Hispanic	12.48	1.15	
Asian	0.00	0.58	0.00****
Native American	0.00	0.08	0.00****
Minority	12.48	5.09	
Nonminority female	2.73	5.88	46.48
M/WBE total	15.21	10.97	
<b>Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)</b>			
African American	23.63	1.82	
Hispanic	0.00	0.33	0.00****
Asian	0.03	2.60	1.28****
Native American	0.00	0.56	0.00****
Minority	23.66	5.31	
Nonminority female	5.22	6.74	77.45
M/WBE total	28.89	12.05	
<b>Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)</b>			
African American	0.77	6.00	12.90****
Hispanic	0.12	0.84	14.14****
Asian	6.34	3.56	
Native American	0.00	0.69	0.00****
Minority	7.23	11.09	65.20
Nonminority female	21.72	14.73	
M/WBE total	28.95	25.82	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.82	3.77	21.64**
Hispanic	0.06	0.07	83.63
Asian	0.00	0.14	0.62
Native American	0.00	4.91	0.00****
Minority	0.88	8.89	9.85****
Nonminority female	87.44	14.81	
M/WBE total	88.32	23.70	
Investigation and Security Services (NAICS 5616)			
African American	0.70	19.80	3.55****
Hispanic	0.19	1.41	13.73
Asian	0.03	5.10	0.53****
Native American	0.00	1.13	0.00****
Minority	0.92	27.44	3.36****
Nonminority female	0.19	11.74	1.59****
M/WBE total	1.11	39.18	2.83****
Other Support Services (NAICS 5619)			
African American	0.00	18.71	0.00****
Hispanic	5.98	2.45	
Asian	0.00	2.57	0.00****
Native American	2.21	0.02	
Minority	8.18	23.75	34.46****
Nonminority female	70.18	28.54	
M/WBE total	78.37	52.30	
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.01	8.80	0.13****
Hispanic	0.00	3.65	0.00****
Asian	0.00	4.95	0.00****
Native American	0.01	0.55	2.48
Minority	0.03	17.95	0.14****
Nonminority female	39.18	16.00	
M/WBE total	39.21	33.94	
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	1.26	0.00**
Hispanic	0.00	0.67	0.00
Asian	0.00	0.62	0.00
Native American	0.00	0.00	0.00
Minority	0.00	2.56	0.00****
Nonminority female	0.00	3.70	0.00****
M/WBE total	0.00	6.25	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.04	10.59	0.34****
Hispanic	0.00	0.41	0.00
Asian	18.42	7.62	
Native American	0.00	0.40	0.00
Minority	18.46	19.02	97.06
Nonminority female	0.26	14.03	1.87****
M/WBE total	18.72	33.04	56.65****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	4.66	4.49	
Hispanic	0.00	6.71	0.00****
Asian	10.71	6.63	
Native American	0.08	0.01	
Minority	15.45	17.83	86.63
Nonminority female	2.07	15.52	13.33****
M/WBE total	17.51	33.35	52.52**
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.21	16.28	1.28****
Hispanic	2.44	3.51	69.54
Asian	3.65	14.25	25.61****
Native American	0.00	1.28	0.00****
Minority	6.30	35.32	17.84****
Nonminority female	11.36	13.01	87.37
M/WBE total	17.67	48.33	36.56****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	30.32	0.00****
Hispanic	0.00	15.93	0.00****
Asian	0.00	7.11	0.00****
Native American	0.00	0.06	0.00
Minority	0.00	53.42	0.00****
Nonminority female	99.94	4.93	
M/WBE total	99.94	58.36	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.13	7.81	1.61****
Hispanic	0.23	1.46	15.68
Asian	0.00	1.08	0.00****
Native American	0.00	0.04	0.00
Minority	0.35	10.39	3.41***
Nonminority female	29.18	27.50	
M/WBE total	29.54	37.89	77.96

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.02	7.14	0.23****
M/WBE total	0.02	7.14	0.23****
Home Furnishings Stores (NAICS 4422)			
African American	16.85	0.94	
Hispanic	0.14	9.73	1.39****
Asian	0.00	7.22	0.00****
Native American	0.00	0.01	0.00
Minority	16.99	17.90	94.89
Nonminority female	24.46	10.14	
M/WBE total	41.45	28.04	
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	5.32	5.40	98.40
Hispanic	0.00	3.36	0.00****
Asian	0.00	1.57	0.00****
Native American	0.00	0.26	0.00****
Minority	5.32	10.60	50.18***
Nonminority female	0.07	9.64	0.69****
M/WBE total	5.38	20.23	26.61****
Employment Services (NAICS 5613)			
African American	21.82	9.20	
Hispanic	4.09	2.44	
Asian	0.00	3.33	0.00****
Native American	0.23	0.03	
Minority	26.13	15.00	
Nonminority female	13.09	12.27	
M/WBE total	39.22	27.27	
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	12.67	0.00****
Hispanic	0.00	6.33	0.00****
Asian	13.07	6.33	
Native American	0.00	0.00	
Minority	13.07	25.34	51.57*
Nonminority female	0.00	12.67	0.00****
M/WBE total	13.07	38.01	34.38****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	3.10	0.00****
Hispanic	0.42	0.03	
Asian	0.00	2.35	0.00****
Native American	0.00	0.01	0.00
Minority	0.42	5.50	7.72****
Nonminority female	9.74	16.94	57.46**
M/WBE total	10.16	22.44	45.27****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	11.81	0.00****
Hispanic	0.00	3.65	0.00
Asian	0.00	4.95	0.00*
Native American	0.00	0.92	0.00
Minority	0.00	21.33	0.00****
Nonminority female	0.00	17.50	0.00****
M/WBE total	0.00	38.83	0.00****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.57	11.39	4.99****
Hispanic	0.00	2.72	0.00****
Asian	5.79	5.34	
Native American	0.00	1.55	0.00****
Minority	6.35	21.00	30.27****
Nonminority female	22.68	19.59	
M/WBE total	29.03	40.59	71.53
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	0.19	0.00
Hispanic	0.00	1.51	0.00****
Asian	0.00	2.42	0.00****
Native American	0.00	4.43	0.00****
Minority	0.00	8.55	0.00****
Nonminority female	15.46	18.69	82.69
M/WBE total	15.46	27.24	56.74
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	12.46	0.00****
Hispanic	0.00	4.15	0.00****
Asian	0.00	5.60	0.00****
Native American	0.00	0.89	0.00***
Minority	0.00	23.10	0.00****
Nonminority female	0.00	15.77	0.00****
M/WBE total	0.00	38.87	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.11	10.01	1.07****
Hispanic	0.00	0.31	0.00
Asian	0.00	3.00	0.00****
Native American	0.00	0.29	0.00
Minority	0.11	13.62	0.79****
Nonminority female	40.93	15.37	
M/WBE total	41.03	28.99	
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00**
Minority	0.00	3.34	0.00****
Nonminority female	1.88	21.37	8.78****
M/WBE total	1.88	24.70	7.60****
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.87	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.07	0.00
Minority	0.00	7.05	0.00****
Nonminority female	0.00	8.03	0.00****
M/WBE total	0.00	15.08	0.00****
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	7.84	0.00****
Hispanic	0.00	1.56	0.00
Asian	0.00	4.25	0.00**
Native American	0.00	0.33	0.00
Minority	0.00	13.98	0.00****
Nonminority female	0.00	18.14	0.00****
M/WBE total	0.00	32.12	0.00****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	3.95	0.00****
Hispanic	0.00	11.40	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	15.35	0.00****
Nonminority female	34.34	20.48	
M/WBE total	34.34	35.83	95.84
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.22	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00****
Native American	0.00	1.11	0.00****
Minority	0.00	4.14	0.00****
Nonminority female	0.00	8.17	0.00****
M/WBE total	0.00	12.31	0.00****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.88	13.27	6.63****
Hispanic	0.30	3.63	8.37***
Asian	4.02	5.46	73.67
Native American	0.00	0.96	0.00*
Minority	5.20	23.32	22.31****
Nonminority female	17.44	17.82	97.85
M/WBE total	22.64	41.14	55.03****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.78	6.71	11.58**
Hispanic	0.00	9.01	0.00****
Asian	0.00	0.15	0.00
Native American	0.00	1.78	0.00****
Minority	0.78	17.65	4.40****
Nonminority female	90.45	16.46	
M/WBE total	91.23	34.11	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	7.82	0.00****
Hispanic	0.00	0.81	0.00*
Asian	0.00	3.77	0.00****
Native American	0.00	0.00	
Minority	0.00	12.40	0.00****
Nonminority female	0.00	13.48	0.00****
M/WBE total	0.00	25.88	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	12.59	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.05	0.00
Minority	0.00	12.65	0.00****
Nonminority female	4.51	0.16	
M/WBE total	4.51	12.81	35.16****
Direct Selling Establishments (NAICS 4543)			
African American	32.75	2.43	
Hispanic	0.00	0.82	0.00
Asian	0.00	0.83	0.00
Native American	0.00	0.01	0.00
Minority	32.75	4.08	
Nonminority female	30.72	8.60	
M/WBE total	63.48	12.68	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	14.48	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	14.48	0.00	
Nonminority female	0.33	22.22	1.47****
M/WBE total	14.81	22.22	66.65
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	2.08	0.00****
Hispanic	0.00	0.07	0.00
Asian	0.00	2.88	0.00****
Native American	0.00	0.95	0.00***
Minority	0.00	5.98	0.00****
Nonminority female	3.80	3.13	
M/WBE total	3.80	9.11	41.69
Waste Collection (NAICS 5621)			
African American	20.60	23.81	86.52
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	3.14	0.00****
Minority	20.60	26.96	76.43
Nonminority female	1.21	7.25	16.68**
M/WBE total	21.81	34.21	63.76

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Warehousing and Storage (NAICS 4931)			
African American	0.00	10.26	0.00****
Hispanic	0.00	3.17	0.00****
Asian	0.00	4.54	0.00****
Native American	0.00	0.76	0.00****
Minority	0.00	18.73	0.00****
Nonminority female	90.07	13.91	
M/WBE total	90.07	32.64	
Furniture Stores (NAICS 4421)			
African American	0.00	3.83	0.00****
Hispanic	0.00	0.05	0.00
Asian	0.00	0.52	0.00
Native American	0.00	1.19	0.00****
Minority	0.00	5.59	0.00****
Nonminority female	10.51	14.41	72.91
M/WBE total	10.51	20.00	52.55
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.19	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.89	0.00**
Native American	0.00	0.00	
Minority	0.00	13.07	0.00****
Nonminority female	0.00	16.24	0.00****
M/WBE total	0.00	29.31	0.00****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	5.53	8.56	64.62
Hispanic	0.23	0.75	31.28
Asian	0.00	1.35	0.00****
Native American	0.00	0.07	0.00
Minority	5.77	10.73	53.75
Nonminority female	24.67	14.61	
M/WBE total	30.43	25.34	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00**
Hispanic	0.00	2.37	0.00**
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00****
Minority	0.00	6.61	0.00****
Nonminority female	5.87	6.87	85.43
M/WBE total	5.87	13.48	43.53

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	18.41	0.00****
Hispanic	0.00	0.06	0.00
Asian	0.00	0.13	0.00
Native American	0.00	0.13	0.00
Minority	0.00	18.73	0.00****
Nonminority female	29.67	14.64	
M/WBE total	29.67	33.38	88.90
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	10.09	1.71	
Hispanic	0.00	0.61	0.00
Asian	0.00	0.79	0.00
Native American	0.00	0.12	0.00
Minority	10.09	3.24	
Nonminority female	58.23	21.41	
M/WBE total	68.32	24.64	
Clay Product and Refractory Manufacturing (NAICS 3271)			
African American	0.00	12.23	0.00****
Hispanic	0.00	3.35	0.00
Asian	78.11	4.48	
Native American	0.00	0.84	0.00
Minority	78.11	20.90	
Nonminority female	1.14	16.62	6.88****
M/WBE total	79.25	37.52	
Motion Picture and Video Industries (NAICS 5121)			
African American	0.50	14.52	3.47****
Hispanic	81.87	3.33	
Asian	0.00	2.18	0.00****
Native American	0.00	0.10	0.00
Minority	82.37	20.14	
Nonminority female	0.00	25.68	0.00****
M/WBE total	82.37	45.82	
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	3.11	0.00****
Hispanic	0.00	0.11	0.00
Asian	0.00	0.15	0.00
Native American	0.00	0.05	0.00
Minority	0.00	3.42	0.00****
Nonminority female	0.86	7.64	11.28
M/WBE total	0.86	11.06	7.80***

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.3. Industry Group Utilization, Availability, and Disparity Results for State of Maryland AE-CRS Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.44	7.21	61.58**
Hispanic	1.29	2.17	59.41
Asian	16.02	4.92	
Native American	0.02	1.35	1.32****
Minority	21.76	15.65	
Nonminority female	3.75	10.31	36.36****
M/WBE total	25.51	25.96	98.29
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	12.10	9.23	
Hispanic	2.06	2.09	98.36
Asian	2.72	4.30	63.22
Native American	0.00	1.52	0.00****
Minority	16.87	17.15	98.39
Nonminority female	53.53	15.85	
M/WBE total	70.41	33.00	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.00	1.99	0.00****
Asian	1.24	3.41	36.33
Native American	0.00	0.45	0.00****
Minority	1.24	14.61	8.47****
Nonminority female	0.00	10.28	0.00****
M/WBE total	1.24	24.89	4.97****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	13.59	0.00****
Hispanic	0.83	3.09	27.03****
Asian	1.49	3.70	40.33****
Native American	0.00	0.38	0.00****
Minority	2.32	20.75	11.20****
Nonminority female	29.97	11.87	
M/WBE total	32.29	32.62	98.99
Other Support Services (NAICS 5619)			
African American	11.52	18.71	61.59**
Hispanic	1.52	2.45	61.79
Asian	0.00	2.57	0.00****
Native American	0.00	0.02	0.00
Minority	13.04	23.75	54.90****
Nonminority female	65.38	28.54	
M/WBE total	78.42	52.30	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	8.43	5.81	
Hispanic	34.83	3.16	
Asian	0.00	1.43	0.00****
Native American	0.00	0.13	0.00****
Minority	43.26	10.53	
Nonminority female	0.34	12.18	2.83****
M/WBE total	43.61	22.72	
<b>Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)</b>			
African American	0.00	0.34	0.00****
Hispanic	0.00	1.66	0.00****
Asian	99.97	0.89	
Native American	0.00	0.04	0.00
Minority	99.97	2.91	
Nonminority female	0.00	0.92	0.00****
M/WBE total	99.97	3.84	
<b>Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	100.00	9.09	
M/WBE total	100.00	9.09	
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	3.61	7.68	47.09
Hispanic	0.00	4.62	0.00****
Asian	0.00	1.70	0.00****
Native American	0.00	0.34	0.00****
Minority	3.61	14.33	25.22***
Nonminority female	96.39	26.75	
M/WBE total	100.00	41.08	
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	0.00	4.59	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.12	0.00****
Native American	0.00	0.41	0.00
Minority	0.00	6.13	0.00****
Nonminority female	78.89	6.95	
M/WBE total	78.89	13.08	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	3.32	17.01	19.52****
Hispanic	3.73	3.19	
Asian	48.91	13.33	
Native American	11.94	1.24	
Minority	67.90	34.76	
Nonminority female	18.28	13.39	
M/WBE total	86.17	48.15	
Employment Services (NAICS 5613)			
African American	27.16	9.20	
Hispanic	0.00	2.44	0.00****
Asian	0.00	3.33	0.00****
Native American	0.00	0.03	0.00
Minority	27.16	15.00	
Nonminority female	72.84	12.27	
M/WBE total	100.00	27.27	
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.49	0.00****
Hispanic	0.00	0.02	0.00
Asian	31.23	1.44	
Native American	0.00	1.24	0.00****
Minority	31.23	7.19	
Nonminority female	0.00	8.16	0.00****
M/WBE total	31.23	15.35	

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.4. Industry Group Utilization, Availability, and Disparity Results for State of Maryland AE-CRS Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.50	7.26	61.95*
Hispanic	1.08	2.13	50.76
Asian	16.75	4.94	
Native American	0.02	1.34	1.57****
Minority	22.36	15.67	
Nonminority female	3.77	10.40	36.27****
M/WBE total	26.13	26.07	
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.00	1.99	0.00****
Asian	0.72	3.41	21.11
Native American	0.00	0.45	0.00****
Minority	0.72	14.61	4.92****
Nonminority female	0.00	10.28	0.00****
M/WBE total	0.72	24.89	2.89****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	13.85	9.44	
Hispanic	1.66	2.25	73.89
Asian	3.24	4.49	72.15
Native American	0.00	1.52	0.00****
Minority	18.75	17.71	
Nonminority female	60.10	16.18	
M/WBE total	78.85	33.88	
Building Equipment Contractors (NAICS 2382)			
African American	4.21	6.47	64.99*
Hispanic	37.24	3.49	
Asian	0.00	1.46	0.00****
Native American	0.00	0.24	0.00****
Minority	41.45	11.67	
Nonminority female	0.37	12.23	3.01****
M/WBE total	41.81	23.89	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	13.59	0.00****
Hispanic	1.59	3.09	51.63**
Asian	1.57	3.70	42.51***
Native American	0.00	0.38	0.00****
Minority	3.16	20.75	15.25****
Nonminority female	31.61	11.87	
M/WBE total	34.77	32.62	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)</b>			
African American	0.00	0.34	0.00***
Hispanic	0.00	1.66	0.00****
Asian	99.97	0.89	
Native American	0.00	0.04	0.00
Minority	99.97	2.91	
Nonminority female	0.00	0.92	0.00****
M/WBE total	99.97	3.84	
<b>Other Support Services (NAICS 5619)</b>			
African American	8.07	18.71	43.15****
Hispanic	0.47	2.45	19.19***
Asian	0.00	2.57	0.00****
Native American	0.00	0.02	0.00
Minority	8.54	23.75	35.97****
Nonminority female	63.59	28.54	
M/WBE total	72.13	52.30	
<b>Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	100.00	9.09	
M/WBE total	100.00	9.09	
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	7.68	0.00****
Hispanic	0.00	4.62	0.00****
Asian	0.00	1.70	0.00****
Native American	0.00	0.34	0.00****
Minority	0.00	14.33	0.00****
Nonminority female	100.00	26.75	
M/WBE total	100.00	41.08	
<b>Scientific Research and Development Services (NAICS 5417)</b>			
African American	0.00	4.59	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.12	0.00*
Native American	0.00	0.41	0.00
Minority	0.00	6.13	0.00****
Nonminority female	87.70	6.95	
M/WBE total	87.70	13.08	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.56	17.01	3.28****
Hispanic	7.96	3.19	
Asian	20.15	13.33	
Native American	12.59	1.24	
Minority	41.26	34.76	
Nonminority female	33.31	13.39	
M/WBE total	74.57	48.15	
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.49	0.00****
Hispanic	0.00	0.02	0.00
Asian	31.23	1.44	
Native American	0.00	1.24	0.00****
Minority	31.23	7.19	
Nonminority female	0.00	8.16	0.00****
M/WBE total	31.23	15.35	
Employment Services (NAICS 5613)			
African American	46.71	9.20	
Hispanic	0.00	2.44	0.00****
Asian	0.00	3.33	0.00****
Native American	0.00	0.03	0.00
Minority	46.71	15.00	
Nonminority female	53.28	12.27	
M/WBE total	100.00	27.27	
Specialized Design Services (NAICS 5414)			
African American	1.29	17.26	7.48****
Hispanic	0.00	3.04	0.00****
Asian	0.00	4.75	0.00****
Native American	0.00	1.21	0.00***
Minority	1.29	26.26	4.92****
Nonminority female	78.19	21.53	
M/WBE total	79.48	47.79	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	7.14	0.00****
Hispanic	0.00	0.00	
Asian	99.93	0.00	
Native American	0.00	0.00	
Minority	99.93	7.14	
Nonminority female	0.07	35.71	0.20****
M/WBE total	100.00	42.86	

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.5. Industry Group Utilization, Availability, and Disparity Results for State of Maryland  
Maintenance Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	0.00	
Hispanic	0.55	0.00	
Asian	0.00	0.00	
Native American	0.19	0.00	
Minority	0.74	0.00	
Nonminority female	6.42	0.00	
M/WBE total	7.16	0.00	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	0.00	8.55	0.00****
Hispanic	0.00	0.23	0.64
Asian	0.00	5.55	0.00****
Native American	0.00	0.12	0.00
Minority	0.00	14.44	0.01****
Nonminority female	0.00	11.32	0.00****
M/WBE total	0.00	25.76	0.01****
Building Equipment Contractors (NAICS 2382)			
African American	12.54	10.69	
Hispanic	1.46	3.56	41.11****
Asian	0.38	1.04	36.83
Native American	0.07	0.47	15.58*
Minority	14.46	15.77	91.73
Nonminority female	6.23	13.07	47.70****
M/WBE total	20.70	28.84	71.78****
Facilities Support Services (NAICS 5612)			
African American	0.78	26.39	2.97****
Hispanic	0.74	3.77	19.66
Asian	0.05	2.52	1.92*
Native American	0.00	1.15	0.00****
Minority	1.57	33.83	4.66****
Nonminority female	0.00	9.10	0.00****
M/WBE total	1.57	42.92	3.67****
Investigation and Security Services (NAICS 5616)			
African American	22.11	20.58	
Hispanic	0.00	1.89	0.00****
Asian	0.00	3.21	0.00****
Native American	0.00	1.48	0.00****
Minority	22.11	27.17	81.40
Nonminority female	26.58	11.62	
M/WBE total	48.69	38.79	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	21.64	22.48	96.26
Hispanic	2.99	6.98	42.81***
Asian	1.27	3.48	36.66*
Native American	0.00	1.19	0.00****
Minority	25.91	34.13	75.89*
Nonminority female	11.64	12.62	92.19
M/WBE total	37.54	46.76	80.29*
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.86	13.59	6.33****
Hispanic	3.08	3.09	99.65
Asian	4.54	3.70	
Native American	0.00	0.38	0.00****
Minority	8.47	20.75	40.84****
Nonminority female	17.30	11.87	
M/WBE total	25.77	32.62	79.00****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.67	6.64	10.09****
Hispanic	1.99	3.38	58.96
Asian	0.00	3.51	0.00****
Native American	0.00	3.36	0.00****
Minority	2.66	16.89	15.76****
Nonminority female	17.05	11.47	
M/WBE total	19.71	28.36	69.52**
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	2.21	4.28	51.68***
Hispanic	18.60	6.80	
Asian	4.34	1.58	
Native American	0.00	1.57	0.00****
Minority	25.15	14.23	
Nonminority female	0.25	11.29	2.20****
M/WBE total	25.40	25.52	99.52
Business Support Services (NAICS 5614)			
African American	0.00	18.77	0.02****
Hispanic	0.00	4.72	0.00****
Asian	0.00	4.66	0.00****
Native American	0.00	5.24	0.00****
Minority	0.00	33.41	0.01****
Nonminority female	0.00	15.17	0.00****
M/WBE total	0.00	48.58	0.01****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Interurban and Rural Bus Transportation (NAICS 4852)			
African American	0.00	20.62	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	20.62	0.00****
Nonminority female	0.00	14.38	0.00****
M/WBE total	0.00	35.00	0.00****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.71	0.00****
Hispanic	0.00	9.01	0.00****
Asian	0.00	0.15	0.00
Native American	0.00	1.78	0.00****
Minority	0.00	17.65	0.00****
Nonminority female	0.08	16.46	0.49****
M/WBE total	0.08	34.11	0.24****
Nonresidential Building Construction (NAICS 2362)			
African American	2.90	12.17	23.82****
Hispanic	2.80	6.74	41.57***
Asian	0.86	4.46	19.23****
Native American	0.00	2.09	0.00****
Minority	6.56	25.46	25.76****
Nonminority female	2.52	10.01	25.22****
M/WBE total	9.08	35.47	25.61****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.00	1.99	0.00****
Asian	0.37	3.41	10.90
Native American	0.00	0.45	0.00****
Minority	0.37	14.61	2.54****
Nonminority female	94.48	10.28	
M/WBE total	94.85	24.89	
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	18.21	0.00****
Hispanic	0.00	12.34	0.00****
Asian	0.00	3.80	0.00****
Native American	0.00	2.17	0.00****
Minority	0.00	36.52	0.00****
Nonminority female	1.00	13.75	7.28
M/WBE total	1.00	50.27	1.99****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.10	4.46	2.19****
Hispanic	0.00	0.28	0.00****
Asian	0.00	1.64	0.00****
Native American	0.00	1.16	0.00****
Minority	0.10	7.54	1.30****
Nonminority female	0.38	8.28	4.62****
M/WBE total	0.48	15.82	3.04****
Direct Selling Establishments (NAICS 4543)			
African American	33.28	2.43	
Hispanic	0.00	0.82	0.00****
Asian	0.00	0.83	0.00****
Native American	0.00	0.01	0.00
Minority	33.28	4.08	
Nonminority female	64.99	8.60	
M/WBE total	98.27	12.68	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.24	6.75	18.39****
Hispanic	0.37	2.06	18.04****
Asian	10.13	5.33	
Native American	0.00	1.57	0.00****
Minority	11.75	15.71	74.77**
Nonminority female	6.79	9.40	72.22
M/WBE total	18.54	25.12	73.81***
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.42	0.00****
Hispanic	0.00	4.79	0.00****
Asian	0.00	10.65	0.00****
Native American	0.00	0.12	0.00
Minority	0.00	57.97	0.00****
Nonminority female	0.00	5.04	0.00****
M/WBE total	0.00	63.02	0.00****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00****
Hispanic	0.00	2.37	0.00****
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00****
Minority	0.00	6.61	0.00****
Nonminority female	0.29	6.87	4.26
M/WBE total	0.29	13.48	2.17****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Collection (NAICS 5621)			
African American	36.08	23.81	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	3.14	0.00****
Minority	36.08	26.96	
Nonminority female	0.49	7.25	6.74***
M/WBE total	36.57	34.21	
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	5.95	0.00****
Hispanic	0.00	2.11	0.00****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00****
Nonminority female	0.01	3.20	0.35****
M/WBE total	0.01	11.68	0.10****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	1.79	0.00****
Hispanic	0.00	3.65	0.00****
Asian	0.00	2.27	0.00****
Native American	0.00	1.22	0.00****
Minority	0.00	8.94	0.00****
Nonminority female	0.30	7.00	4.30****
M/WBE total	0.30	15.93	1.89****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.61	0.00****
Hispanic	0.00	2.28	0.00****
Asian	0.00	4.18	0.00****
Native American	0.00	0.01	0.00
Minority	0.00	13.08	0.00****
Nonminority female	0.00	7.40	0.00****
M/WBE total	0.00	20.48	0.00****
Specialized Freight Trucking (NAICS 4842)			
African American	49.66	24.84	
Hispanic	0.61	7.48	8.10****
Asian	0.56	1.87	29.91
Native American	0.00	0.12	0.00****
Minority	50.82	34.32	
Nonminority female	0.32	11.65	2.75****
M/WBE total	51.14	45.97	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	6.41	4.84	
Hispanic	0.00	1.78	0.00****
Asian	10.37	1.16	
Native American	0.00	1.23	0.00****
Minority	16.77	9.01	
Nonminority female	31.99	11.47	
M/WBE total	48.77	20.48	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	3.82	3.61	
Hispanic	0.00	0.27	0.00****
Asian	0.07	0.82	8.93****
Native American	0.00	0.52	0.00****
Minority	3.90	5.22	74.68
Nonminority female	10.91	11.17	97.74
M/WBE total	14.81	16.38	90.40
Automobile Dealers (NAICS 4411)			
African American	0.00	4.17	0.00****
Hispanic	0.00	2.71	0.00****
Asian	0.00	2.96	0.00****
Native American	0.00	0.05	0.00
Minority	0.00	9.89	0.00****
Nonminority female	0.00	10.16	0.00****
M/WBE total	0.00	20.05	0.00****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.06	0.00	
M/WBE total	0.06	0.00	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	2.88	1.23	
Hispanic	0.00	0.00	0.00
Asian	0.00	2.83	0.00****
Native American	0.00	0.00	0.00
Minority	2.88	4.06	70.99
Nonminority female	0.34	4.07	8.34****
M/WBE total	3.22	8.13	39.63***

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	8.77	0.00****
Hispanic	0.00	2.81	0.00****
Asian	1.23	0.97	
Native American	0.00	0.00	
Minority	1.23	12.54	9.81****
Nonminority female	6.57	22.25	29.51**
M/WBE total	7.80	34.80	22.41****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	10.38	6.85	
Hispanic	47.27	2.26	
Asian	0.00	4.41	0.00****
Native American	0.00	2.20	0.00****
Minority	57.66	15.72	
Nonminority female	0.00	18.78	0.00****
M/WBE total	57.66	34.50	
Building Finishing Contractors (NAICS 2383)			
African American	0.95	5.24	18.05****
Hispanic	39.14	17.85	
Asian	1.54	3.19	48.14*
Native American	0.69	0.05	
Minority	42.31	26.33	
Nonminority female	19.65	12.89	
M/WBE total	61.96	39.23	
Traveler Accommodation (NAICS 7211)			
African American	0.00	0.13	0.00
Hispanic	0.00	1.43	0.00****
Asian	0.76	10.56	7.17****
Native American	0.00	3.60	0.00****
Minority	0.76	15.72	4.82****
Nonminority female	0.76	9.94	7.62****
M/WBE total	1.51	25.65	5.91****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	10.59	0.00****
Hispanic	0.00	3.98	0.00****
Asian	1.89	5.58	33.87**
Native American	0.00	0.11	0.00
Minority	1.89	20.27	9.33****
Nonminority female	63.36	17.56	
M/WBE total	65.25	37.82	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	60.07	11.34	
Hispanic	0.00	2.41	0.00****
Asian	0.00	4.18	0.00****
Native American	0.00	0.19	0.00****
Minority	60.07	18.13	
Nonminority female	12.97	13.84	93.74
M/WBE total	73.05	31.97	
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.07	0.00****
Hispanic	0.97	0.42	
Asian	68.52	1.68	
Native American	0.00	0.24	0.00****
Minority	69.49	10.41	
Nonminority female	6.61	28.55	23.15****
M/WBE total	76.10	38.96	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	12.59	0.00****
Hispanic	0.00	0.00	
Asian	0.83	0.00	
Native American	0.00	0.05	0.00
Minority	0.83	12.65	6.54****
Nonminority female	0.00	0.16	0.00****
M/WBE total	0.83	12.81	6.46****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.34	2.16	15.95**
Hispanic	0.00	0.04	0.00
Asian	0.00	0.08	0.00
Native American	0.00	5.87	0.00****
Minority	0.34	8.15	4.23****
Nonminority female	12.29	13.06	94.14
M/WBE total	12.64	21.21	59.60***
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	6.29	0.00****
Hispanic	0.00	2.91	0.00****
Asian	0.00	1.99	0.00****
Native American	0.00	0.05	0.00
Minority	0.00	11.24	0.00****
Nonminority female	59.86	14.80	
M/WBE total	59.86	26.04	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.47	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.84	0.00****
Minority	0.00	4.41	0.00****
Nonminority female	5.53	12.76	43.34****
M/WBE total	5.53	17.17	32.22****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	91.38	6.23	
Hispanic	0.00	4.13	0.00****
Asian	0.00	7.07	0.00****
Native American	0.00	1.19	0.00****
Minority	91.38	18.62	
Nonminority female	4.19	6.46	64.87
M/WBE total	95.57	25.08	
Utility System Construction (NAICS 2371)			
African American	0.00	9.16	0.00****
Hispanic	0.00	1.81	0.00****
Asian	0.00	2.38	0.00****
Native American	0.00	1.15	0.00****
Minority	0.00	14.49	0.00****
Nonminority female	36.70	10.41	
M/WBE total	36.70	24.90	
Computer Systems Design and Related Services (NAICS 5415)			
African American	9.33	17.02	54.82
Hispanic	38.14	3.15	
Asian	0.00	15.07	0.00****
Native American	0.00	1.04	0.00****
Minority	47.48	36.29	
Nonminority female	0.00	11.45	0.00****
M/WBE total	47.48	47.74	99.45
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.01	10.28	0.06****
Hispanic	0.00	0.06	0.00
Asian	0.00	7.17	0.00****
Native American	0.00	0.04	0.00
Minority	0.01	17.55	0.03****
Nonminority female	0.41	18.00	2.27****
M/WBE total	0.41	35.55	1.16****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00****
Minority	0.00	3.34	0.00****
Nonminority female	0.00	21.37	0.00****
M/WBE total	0.00	24.70	0.00****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.34	8.22	4.16****
Hispanic	0.00	3.96	0.00****
Asian	0.00	9.00	0.00****
Native American	0.00	0.18	0.00
Minority	0.34	21.36	1.60****
Nonminority female	0.00	11.62	0.00****
M/WBE total	0.34	32.98	1.04****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	6.82	0.00****
Hispanic	0.11	3.48	3.07****
Asian	0.00	2.38	0.00****
Native American	0.00	0.40	0.00****
Minority	0.11	13.08	0.82****
Nonminority female	0.07	11.15	0.64****
M/WBE total	0.18	24.23	0.74****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	4.87	0.00****
Hispanic	0.00	1.40	0.00****
Asian	0.00	1.91	0.00****
Native American	0.00	0.35	0.00****
Minority	0.00	8.53	0.00****
Nonminority female	0.00	10.96	0.00****
M/WBE total	0.00	19.49	0.00****
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	7.82	0.00****
Hispanic	0.00	0.81	0.00****
Asian	0.00	3.77	0.00****
Native American	0.00	0.00	
Minority	0.00	12.40	0.00****
Nonminority female	0.00	13.48	0.00****
M/WBE total	0.00	25.88	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	18.32	0.00****
Hispanic	0.00	1.91	0.00
Asian	0.00	2.91	0.00****
Native American	0.00	0.13	0.00
Minority	0.00	23.27	0.00****
Nonminority female	0.00	2.42	0.00
M/WBE total	0.00	25.69	0.00****
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	0.00	
Hispanic	0.00	4.35	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.35	0.00****
Nonminority female	0.00	19.13	0.00****
M/WBE total	0.00	23.48	0.00****
Couriers and Express Delivery Services (NAICS 4921)			
African American	5.93	24.20	24.52
Hispanic	0.00	3.10	0.00****
Asian	72.94	0.10	
Native American	0.00	2.52	0.00****
Minority	78.88	29.93	
Nonminority female	0.00	1.80	0.00****
M/WBE total	78.88	31.73	
Rail Transportation (NAICS 4821)			
African American	0.00	0.65	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.08	0.00
Minority	0.00	1.06	0.00
Nonminority female	0.00	1.69	0.00****
M/WBE total	0.00	2.74	0.00****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.95	0.00****
Hispanic	23.48	0.05	
Asian	0.00	0.07	0.00
Native American	0.00	0.01	0.00
Minority	23.48	3.08	
Nonminority female	1.44	0.19	
M/WBE total	24.92	3.27	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	17.82	0.00****
Hispanic	0.00	4.09	0.00
Asian	0.00	7.34	0.00****
Native American	0.00	0.18	0.00
Minority	0.00	29.44	0.00****
Nonminority female	0.00	11.67	0.00****
M/WBE total	0.00	41.11	0.00****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	7.69	0.00****
Hispanic	0.00	0.00	
Asian	0.00	15.38	0.00****
Native American	0.00	0.00	
Minority	0.00	23.08	0.00****
Nonminority female	1.36	24.62	5.51****
M/WBE total	1.36	47.69	2.84****
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	13.63	0.00****
Hispanic	0.00	4.02	0.00****
Asian	0.00	5.48	0.00****
Native American	0.00	0.90	0.00
Minority	0.00	24.02	0.00****
Nonminority female	0.00	16.19	0.00****
M/WBE total	0.00	40.22	0.00****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.22	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00****
Native American	0.00	1.11	0.00****
Minority	0.00	4.14	0.00****
Nonminority female	0.00	8.17	0.00****
M/WBE total	0.00	12.31	0.00****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.6. Industry Group Utilization, Availability, and Disparity Results for State of Maryland  
Maintenance Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	1.19	26.39	4.50***
Hispanic	1.12	3.77	29.78
Asian	0.07	2.52	2.90
Native American	0.00	1.15	0.00****
Minority	2.39	33.83	7.05***
Nonminority female	0.00	9.10	0.00****
M/WBE total	2.39	42.92	5.56****
Services to Buildings and Dwellings (NAICS 5617)			
African American	21.62	24.05	89.92
Hispanic	2.48	8.07	30.72****
Asian	1.70	3.73	45.54
Native American	0.00	0.88	0.00****
Minority	25.80	36.74	70.24***
Nonminority female	14.10	13.01	
M/WBE total	39.90	49.75	80.20**
Building Equipment Contractors (NAICS 2382)			
African American	4.58	9.54	48.04****
Hispanic	1.50	4.14	36.19****
Asian	0.98	1.33	73.66
Native American	0.19	0.54	35.44
Minority	7.25	15.55	46.63****
Nonminority female	12.44	12.67	98.13
M/WBE total	19.69	28.22	69.76****
Investigation and Security Services (NAICS 5616)			
African American	24.45	20.72	
Hispanic	0.00	1.97	0.00****
Asian	0.00	2.96	0.00****
Native American	0.00	1.56	0.00****
Minority	24.45	27.22	89.83
Nonminority female	8.37	11.51	72.74
M/WBE total	32.83	38.73	84.75
Business Support Services (NAICS 5614)			
African American	0.00	19.11	0.00****
Hispanic	0.00	4.83	0.00****
Asian	0.00	4.34	0.00****
Native American	0.00	5.33	0.00****
Minority	0.00	33.61	0.00****
Nonminority female	0.00	15.31	0.00****
M/WBE total	0.00	48.92	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.04	13.59	0.32****
Hispanic	2.16	3.09	70.07
Asian	0.00	3.70	0.00****
Native American	0.00	0.38	0.00****
Minority	2.21	20.75	10.63****
Nonminority female	8.78	11.87	73.95**
M/WBE total	10.99	32.62	33.68****
Nonresidential Building Construction (NAICS 2362)			
African American	3.29	12.17	27.02****
Hispanic	2.26	6.74	33.55****
Asian	1.06	4.46	23.83****
Native American	0.00	2.09	0.00****
Minority	6.61	25.46	25.97****
Nonminority female	2.97	10.01	29.68****
M/WBE total	9.58	35.47	27.02****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	4.82	5.87	82.03
Hispanic	27.77	7.64	
Asian	0.18	1.73	10.65****
Native American	0.00	1.07	0.00****
Minority	32.77	16.31	
Nonminority female	0.46	10.23	4.51****
M/WBE total	33.24	26.55	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00**
Hispanic	0.00	2.37	0.00**
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00****
Minority	0.00	6.61	0.00****
Nonminority female	0.00	6.87	0.00****
M/WBE total	0.00	13.48	0.00****
Other Specialty Trade Contractors (NAICS 2389)			
African American	2.26	6.73	33.54**
Hispanic	8.41	4.03	
Asian	0.00	3.60	0.00****
Native American	0.00	3.12	0.00****
Minority	10.67	17.48	61.04
Nonminority female	0.46	11.55	3.96****
M/WBE total	11.12	29.02	38.33****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	1.78	0.00****
Hispanic	0.00	3.65	0.00****
Asian	0.00	2.27	0.00****
Native American	0.00	1.22	0.00****
Minority	0.00	8.92	0.00****
Nonminority female	0.00	6.99	0.00****
M/WBE total	0.00	15.91	0.00****
Automobile Dealers (NAICS 4411)			
African American	0.00	4.17	0.00****
Hispanic	0.00	2.71	0.00****
Asian	0.00	2.96	0.00****
Native American	0.00	0.05	0.00
Minority	0.00	9.89	0.00****
Nonminority female	0.00	10.16	0.00****
M/WBE total	0.00	20.05	0.00****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.00	1.99	0.00****
Asian	0.00	3.41	0.00****
Native American	0.00	0.45	0.00****
Minority	0.00	14.61	0.00****
Nonminority female	78.93	10.28	
M/WBE total	78.93	24.89	
Building Finishing Contractors (NAICS 2383)			
African American	0.98	4.88	20.02****
Hispanic	39.09	17.36	
Asian	1.59	3.80	41.77***
Native American	0.71	0.09	
Minority	42.37	26.12	
Nonminority female	19.80	12.93	
M/WBE total	62.17	39.05	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	7.99	4.95	
Hispanic	0.00	1.91	0.00****
Asian	11.05	1.20	
Native American	0.00	1.07	0.00****
Minority	19.04	9.12	
Nonminority female	32.47	11.25	
M/WBE total	51.51	20.37	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	5.95	0.00****
Hispanic	0.00	2.11	0.00****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00****
Nonminority female	0.03	3.20	0.82****
M/WBE total	0.03	11.68	0.22****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	7.74	0.00****
Hispanic	1.02	0.48	
Asian	67.88	1.88	
Native American	0.00	0.30	0.00****
Minority	68.91	10.40	
Nonminority female	6.86	26.80	25.60****
M/WBE total	75.77	37.20	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	7.20	4.37	
Hispanic	0.00	0.42	0.00****
Asian	0.14	1.68	8.20****
Native American	0.00	0.72	0.00****
Minority	7.34	7.20	
Nonminority female	16.52	11.46	
M/WBE total	23.86	18.66	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	12.59	0.00****
Hispanic	0.00	0.00	
Asian	0.84	0.00	
Native American	0.00	0.05	0.00
Minority	0.84	12.65	6.61****
Nonminority female	0.00	0.16	0.00**
M/WBE total	0.84	12.81	6.52****
Employment Services (NAICS 5613)			
African American	47.07	11.95	
Hispanic	0.00	2.41	0.00****
Asian	0.00	4.42	0.00****
Native American	0.00	0.24	0.00***
Minority	47.07	19.02	
Nonminority female	18.51	14.28	
M/WBE total	65.58	33.30	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	7.19	0.00****
Hispanic	2.23	2.09	
Asian	5.66	5.07	
Native American	0.00	1.39	0.00****
Minority	7.89	15.74	50.09****
Nonminority female	17.22	10.16	
M/WBE total	25.10	25.90	96.92
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00**
Minority	0.00	3.34	0.00****
Nonminority female	0.00	21.37	0.00****
M/WBE total	0.00	24.70	0.00****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.52	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	7.14	0.00****
Minority	0.52	7.14	7.27****
Nonminority female	16.66	10.71	
M/WBE total	17.18	17.86	96.20
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.87	4.46	19.44****
Hispanic	0.00	0.30	0.00****
Asian	0.00	1.65	0.00****
Native American	0.00	1.15	0.00****
Minority	0.87	7.57	11.45****
Nonminority female	1.49	8.29	17.95****
M/WBE total	2.36	15.86	14.85****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.00	18.06	0.00****
Hispanic	51.56	2.69	
Asian	0.00	14.38	0.00****
Native American	0.00	0.92	0.00****
Minority	51.56	36.04	
Nonminority female	0.00	11.31	0.00****
M/WBE total	51.56	47.35	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	9.30	1.14	
Hispanic	0.00	0.01	0.00
Asian	0.00	2.86	0.00****
Native American	0.00	0.00	0.00
Minority	9.30	4.01	
Nonminority female	0.08	3.98	1.91****
M/WBE total	9.38	7.99	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	3.15	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.06	0.00
Native American	0.00	0.91	0.00****
Minority	0.00	4.16	0.00****
Nonminority female	2.17	12.48	17.41****
M/WBE total	2.17	16.64	13.06****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	5.65	0.00****
Hispanic	0.00	1.68	0.00****
Asian	0.00	2.30	0.00****
Native American	0.00	0.42	0.00****
Minority	0.00	10.05	0.00****
Nonminority female	0.00	11.17	0.00****
M/WBE total	0.00	21.22	0.00****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	8.61	0.00****
Hispanic	0.00	3.62	0.00****
Asian	7.11	4.88	
Native American	0.00	0.59	0.00***
Minority	7.11	17.70	40.17****
Nonminority female	4.47	15.83	28.24****
M/WBE total	11.58	33.53	34.53****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Automotive Repair and Maintenance (NAICS 8111)</b>			
African American	0.60	6.39	9.41***
Hispanic	0.00	2.50	0.00****
Asian	0.00	10.64	0.00****
Native American	0.00	0.10	0.00
Minority	0.60	19.63	3.06****
Nonminority female	0.00	12.76	0.00****
M/WBE total	0.60	32.40	1.85****
<b>Waste Collection (NAICS 5621)</b>			
African American	0.00	23.81	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	3.14	0.00****
Minority	0.00	26.96	0.00****
Nonminority female	5.14	7.25	70.89
M/WBE total	5.14	34.21	15.03****
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	0.01	10.28	0.12****
Hispanic	0.00	0.06	0.00
Asian	0.00	7.17	0.00****
Native American	0.00	0.04	0.00
Minority	0.01	17.55	0.07****
Nonminority female	0.36	18.00	2.01****
M/WBE total	0.37	35.55	1.05****
<b>Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)</b>			
African American	0.00	7.82	0.00****
Hispanic	0.00	0.81	0.00*
Asian	0.00	3.77	0.00****
Native American	0.00	0.00	
Minority	0.00	12.40	0.00****
Nonminority female	0.00	13.48	0.00****
M/WBE total	0.00	25.88	0.00****
<b>Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)</b>			
African American	0.00	6.14	0.00****
Hispanic	0.00	3.43	0.00****
Asian	0.00	1.99	0.00****
Native American	0.00	0.33	0.00****
Minority	0.00	11.88	0.00****
Nonminority female	0.00	10.42	0.00****
M/WBE total	0.00	22.30	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
<b>Management, Scientific, and Technical Consulting Services (NAICS 5416)</b>			
African American	57.80	14.05	
Hispanic	0.00	2.73	0.00****
Asian	0.00	6.00	0.00****
Native American	0.00	1.11	0.00****
Minority	57.80	23.89	
Nonminority female	0.00	18.83	0.00****
M/WBE total	57.80	42.72	
<b>Utility System Construction (NAICS 2371)</b>			
African American	0.00	9.16	0.00****
Hispanic	0.00	1.81	0.00****
Asian	0.00	2.38	0.00****
Native American	0.00	1.15	0.00****
Minority	0.00	14.49	0.00****
Nonminority female	0.00	10.41	0.00****
M/WBE total	0.00	24.90	0.00****
<b>Communications Equipment Manufacturing (NAICS 3342)</b>			
African American	0.00	3.95	0.00****
Hispanic	0.00	11.40	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	15.35	0.00****
Nonminority female	0.00	20.48	0.00****
M/WBE total	0.00	35.83	0.00****
<b>Remediation and Other Waste Management Services (NAICS 5629)</b>			
African American	0.00	3.19	0.00****
Hispanic	0.00	8.67	0.00****
Asian	0.00	9.26	0.00****
Native American	0.00	0.00	
Minority	0.00	21.12	0.00****
Nonminority female	0.74	14.17	5.19****
M/WBE total	0.74	35.29	2.08****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Rail Transportation (NAICS 4821)</b>			
African American	0.00	0.65	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.08	0.00
Minority	0.00	1.06	0.00
Nonminority female	0.00	1.69	0.00**
M/WBE total	0.00	2.74	0.00**
<b>Other General Purpose Machinery Manufacturing (NAICS 3339)</b>			
African American	0.00	7.69	0.00****
Hispanic	0.00	0.00	
Asian	0.00	15.38	0.00****
Native American	0.00	0.00	
Minority	0.00	23.08	0.00****
Nonminority female	1.48	24.62	6.02****
M/WBE total	1.48	47.69	3.11****
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.82	0.00****
Hispanic	9.94	0.55	
Asian	0.00	0.05	0.00
Native American	0.00	0.01	0.00
Minority	9.94	3.43	
Nonminority female	0.14	2.68	5.16****
M/WBE total	10.08	6.11	
<b>Vocational Rehabilitation Services (NAICS 6243)</b>			
African American	0.00	13.63	0.00****
Hispanic	0.00	4.02	0.00****
Asian	0.00	5.48	0.00****
Native American	0.00	0.90	0.00
Minority	0.00	24.02	0.00****
Nonminority female	0.00	16.19	0.00****
M/WBE total	0.00	40.22	0.00****
<b>Electric Power Generation, Transmission and Distribution (NAICS 2211)</b>			
African American	0.00	1.22	0.00****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00****
Native American	0.00	1.11	0.00****
Minority	0.00	4.14	0.00****
Nonminority female	0.00	8.17	0.00****
M/WBE total	0.00	12.31	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Waste Treatment and Disposal (NAICS 5622)</b>			
African American	0.00	8.77	0.00****
Hispanic	0.00	2.81	0.00****
Asian	14.19	0.97	
Native American	0.00	0.00	
Minority	14.19	12.54	
Nonminority female	48.45	22.25	
M/WBE total	62.64	34.80	
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	18.71	0.00****
Hispanic	0.00	2.45	0.00****
Asian	0.00	2.57	0.00****
Native American	0.00	0.02	0.00
Minority	0.00	23.75	0.00****
Nonminority female	2.69	28.54	9.44****
M/WBE total	2.69	52.30	5.15****
<b>Paper and Paper Product Merchant Wholesalers (NAICS 4241)</b>			
African American	0.00	13.25	0.00****
Hispanic	0.00	3.47	0.00****
Asian	0.00	4.58	0.00****
Native American	0.00	0.91	0.00
Minority	0.00	22.21	0.00****
Nonminority female	0.00	16.14	0.00****
M/WBE total	0.00	38.35	0.00****
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	0.00	8.55	0.00****
Hispanic	0.00	0.23	0.00*
Asian	0.00	5.55	0.00****
Native American	0.00	0.12	0.00
Minority	0.00	14.44	0.00****
Nonminority female	0.00	11.32	0.00****
M/WBE total	0.00	25.76	0.00****
<b>Chemical and Allied Products Merchant Wholesalers (NAICS 4246)</b>			
African American	84.87	6.23	
Hispanic	0.00	4.13	0.00****
Asian	0.00	7.07	0.00****
Native American	0.00	1.19	0.00***
Minority	84.87	18.62	
Nonminority female	0.00	6.46	0.00****
M/WBE total	84.87	25.08	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Home Furnishings Stores (NAICS 4422)			
African American	0.00	0.94	0.00**
Hispanic	0.00	9.73	0.00****
Asian	0.00	7.22	0.00****
Native American	0.00	0.01	0.00
Minority	0.00	17.90	0.00****
Nonminority female	0.00	10.14	0.00****
M/WBE total	0.00	28.04	0.00****
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	12.34	0.00****
Hispanic	0.00	4.39	0.00***
Asian	0.00	4.63	0.00***
Native American	0.00	0.89	0.00
Minority	0.00	22.26	0.00****
Nonminority female	0.00	17.86	0.00****
M/WBE total	0.00	40.12	0.00****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	1.71	0.00****
Hispanic	0.00	0.61	0.00
Asian	0.00	0.79	0.00
Native American	0.00	0.12	0.00
Minority	0.00	3.24	0.00****
Nonminority female	3.27	21.41	15.26****
M/WBE total	3.27	24.64	13.26****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	11.11	0.00****
Hispanic	0.00	3.84	0.00****
Asian	0.00	7.43	0.00****
Native American	0.00	1.12	0.00*
Minority	0.00	23.49	0.00****
Nonminority female	0.35	14.91	2.35****
M/WBE total	0.35	38.40	0.91****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	13.94	0.00****
Hispanic	0.00	3.66	0.00****
Asian	0.00	5.26	0.00****
Native American	0.00	0.98	0.00*
Minority	0.00	23.83	0.00****
Nonminority female	0.00	18.45	0.00****
M/WBE total	0.00	42.28	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Freight Trucking (NAICS 4842)			
African American	11.30	24.84	45.48****
Hispanic	1.18	7.48	15.74****
Asian	19.58	1.87	
Native American	0.00	0.12	0.00****
Minority	32.06	34.32	93.41
Nonminority female	7.33	11.65	62.89
M/WBE total	39.39	45.97	85.68
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	12.67	0.00****
Hispanic	0.00	3.63	0.00****
Asian	0.00	5.93	0.00****
Native American	0.00	0.86	0.00
Minority	0.00	23.09	0.00****
Nonminority female	0.00	16.66	0.00****
M/WBE total	0.00	39.74	0.00****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	12.24	0.00****
Hispanic	0.00	4.03	0.00****
Asian	0.00	5.88	0.00****
Native American	0.00	1.00	0.00
Minority	0.00	23.14	0.00****
Nonminority female	0.00	18.58	0.00****
M/WBE total	0.00	41.73	0.00****
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	8.61	0.00****
Hispanic	0.00	3.07	0.00
Asian	0.00	4.00	0.00
Native American	0.00	0.61	0.00
Minority	0.00	16.29	0.00****
Nonminority female	0.00	11.37	0.00****
M/WBE total	0.00	27.66	0.00****
Warehousing and Storage (NAICS 4931)			
African American	0.00	10.26	0.00****
Hispanic	0.00	3.17	0.00****
Asian	0.00	4.54	0.00****
Native American	0.00	0.76	0.00****
Minority	0.00	18.73	0.00****
Nonminority female	100.00	13.91	
M/WBE total	100.00	32.64	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.19	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.89	0.00**
Native American	0.00	0.00	
Minority	0.00	13.07	0.00****
Nonminority female	0.00	16.24	0.00****
M/WBE total	0.00	29.31	0.00****
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	2.64	0.00***
Hispanic	0.00	0.02	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.07	0.00
Minority	0.00	2.76	0.00***
Nonminority female	0.00	0.80	0.00
M/WBE total	0.00	3.56	0.00****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	2.43	0.00****
Hispanic	0.00	0.82	0.00
Asian	0.00	0.83	0.00
Native American	0.00	0.01	0.00
Minority	0.00	4.08	0.00****
Nonminority female	0.00	8.60	0.00****
M/WBE total	0.00	12.68	0.00****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.7. Industry Group Utilization, Availability, and Disparity Results for State of Maryland IT Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	3.23	17.55	18.40****
Hispanic	12.92	2.95	
Asian	19.08	14.21	
Native American	0.00	1.45	0.00****
Minority	35.24	36.16	97.45
Nonminority female	5.45	11.58	47.03
M/WBE total	40.68	47.74	85.22
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.01	6.82	0.15****
Hispanic	0.00	1.00	0.00****
Asian	0.02	4.65	0.37****
Native American	0.00	0.01	0.00
Minority	0.03	12.49	0.22****
Nonminority female	0.00	5.96	0.00****
M/WBE total	0.03	18.44	0.15****
Software Publishers (NAICS 5112)			
African American	13.97	11.92	
Hispanic	0.00	3.54	0.00****
Asian	1.68	8.00	20.93
Native American	0.00	0.28	0.00****
Minority	15.65	23.74	65.91
Nonminority female	13.34	13.22	
M/WBE total	28.99	36.96	78.42
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	4.68	10.53	44.39****
Hispanic	0.00	1.55	0.00****
Asian	65.76	6.15	
Native American	1.64	0.88	
Minority	72.07	19.11	
Nonminority female	5.90	9.50	62.11
M/WBE total	77.97	28.61	
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.06	0.00****
Hispanic	0.00	4.06	0.00****
Asian	0.00	4.48	0.00****
Native American	0.00	0.05	0.00
Minority	0.00	12.65	0.00****
Nonminority female	0.37	10.02	3.73****
M/WBE total	0.37	22.68	1.65****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	8.86	14.33	61.82
Hispanic	0.00	2.70	0.00****
Asian	26.62	5.94	
Native American	0.00	1.04	0.00****
Minority	35.48	24.01	
Nonminority female	3.47	18.83	18.40****
M/WBE total	38.95	42.85	90.90
Employment Services (NAICS 5613)			
African American	11.23	12.43	90.37
Hispanic	0.00	2.40	0.00****
Asian	27.90	4.61	
Native American	0.00	0.28	0.00****
Minority	39.13	19.72	
Nonminority female	7.15	14.63	48.87
M/WBE total	46.28	34.36	
Nonresidential Building Construction (NAICS 2362)			
African American	20.27	12.17	
Hispanic	0.07	6.74	1.03****
Asian	0.00	4.46	0.00****
Native American	0.00	2.09	0.00****
Minority	20.34	25.46	79.88
Nonminority female	0.00	10.01	0.00****
M/WBE total	20.34	35.47	57.34****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	7.68	0.00****
Hispanic	0.00	4.62	0.00****
Asian	0.00	1.70	0.00****
Native American	0.00	0.34	0.00****
Minority	0.00	14.33	0.00****
Nonminority female	99.06	26.75	
M/WBE total	99.06	41.08	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.94	6.29	62.65*
Hispanic	4.27	1.93	
Asian	0.00	4.00	0.00****
Native American	0.00	1.28	0.00****
Minority	8.21	13.50	60.85****
Nonminority female	6.19	10.08	61.39****
M/WBE total	14.40	23.57	61.09****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.05	10.23	0.54****
Hispanic	0.24	2.27	10.40
Asian	93.39	2.41	
Native American	0.00	0.51	0.00****
Minority	93.68	15.41	
Nonminority female	0.21	8.48	2.46****
M/WBE total	93.89	23.89	
Business Support Services (NAICS 5614)			
African American	0.00	12.36	0.00****
Hispanic	3.08	0.10	
Asian	0.00	0.12	0.00
Native American	0.00	0.02	0.00
Minority	3.08	12.60	24.47
Nonminority female	0.00	12.45	0.00****
M/WBE total	3.08	25.04	12.31
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	50.48	9.83	
Hispanic	5.57	8.13	68.47***
Asian	0.00	1.81	0.00****
Native American	0.00	0.10	0.00****
Minority	56.05	19.88	
Nonminority female	0.00	6.74	0.00****
M/WBE total	56.05	26.61	
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	13.60	0.00****
Hispanic	0.00	3.53	0.00****
Asian	0.00	6.14	0.00****
Native American	0.00	0.96	0.00****
Minority	0.00	24.24	0.00****
Nonminority female	0.00	16.46	0.00****
M/WBE total	0.00	40.69	0.00****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	4.78	0.00****
Hispanic	0.00	0.89	0.00****
Asian	0.00	5.29	0.00****
Native American	0.00	2.80	0.00****
Minority	0.00	13.77	0.00****
Nonminority female	0.00	5.71	0.00****
M/WBE total	0.00	19.48	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wired Telecommunications Carriers (NAICS 5171)			
African American	98.27	14.59	
Hispanic	0.00	0.20	0.00
Asian	0.00	2.02	0.00****
Native American	0.00	0.05	0.00
Minority	98.27	16.86	
Nonminority female	0.00	6.34	0.00****
M/WBE total	98.27	23.20	
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	13.34	0.00****
Hispanic	0.00	3.93	0.00****
Asian	99.16	7.38	
Native American	0.00	0.65	0.00
Minority	99.16	25.30	
Nonminority female	0.00	17.53	0.00****
M/WBE total	99.16	42.83	
Other Telecommunications (NAICS 5179)			
African American	0.00	4.61	0.00****
Hispanic	0.00	2.56	0.00**
Asian	0.00	1.77	0.00**
Native American	0.00	0.43	0.00
Minority	0.00	9.38	0.00****
Nonminority female	0.00	3.00	0.00**
M/WBE total	0.00	12.38	0.00****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	21.33	0.00****
Hispanic	0.00	1.91	0.00****
Asian	49.72	5.77	
Native American	0.00	0.14	0.00
Minority	49.72	29.16	
Nonminority female	41.54	15.34	
M/WBE total	91.27	44.50	
Educational Support Services (NAICS 6117)			
African American	0.00	25.75	0.00****
Hispanic	0.00	0.71	0.00
Asian	0.00	3.31	0.00****
Native American	0.00	2.37	0.00
Minority	0.00	32.14	0.00****
Nonminority female	0.00	10.40	0.00****
M/WBE total	0.00	42.54	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	10.01	0.00****
Hispanic	1.19	0.31	
Asian	9.89	3.00	
Native American	0.00	0.29	0.00
Minority	11.08	13.62	81.36
Nonminority female	9.32	15.37	60.60
M/WBE total	20.39	28.99	70.35
Building Finishing Contractors (NAICS 2383)			
African American	0.00	3.32	0.00****
Hispanic	0.00	8.87	0.00****
Asian	0.00	1.91	0.00****
Native American	0.00	0.05	0.00****
Minority	0.00	14.16	0.00****
Nonminority female	0.00	14.38	0.00****
M/WBE total	0.00	28.54	0.00****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	2.20	0.00****
Hispanic	0.00	0.39	0.00****
Asian	0.00	0.51	0.00****
Native American	0.00	0.08	0.00
Minority	0.00	3.18	0.00****
Nonminority female	0.00	16.21	0.00****
M/WBE total	0.00	19.40	0.00****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.37	0.00****
Hispanic	0.00	1.28	0.00****
Asian	0.00	3.21	0.00****
Native American	0.00	4.14	0.00****
Minority	0.00	15.01	0.00****
Nonminority female	7.29	11.20	65.11
M/WBE total	7.29	26.21	27.81****
Printing and Related Support Activities (NAICS 3231)			
African American	86.79	4.82	
Hispanic	0.00	1.60	0.00****
Asian	0.00	5.27	0.00****
Native American	0.00	0.98	0.00****
Minority	86.79	12.67	
Nonminority female	0.02	17.92	0.08****
M/WBE total	86.81	30.59	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	7.15	13.07	54.75****
Hispanic	0.00	6.81	0.00****
Asian	3.85	1.73	
Native American	0.00	1.31	0.00****
Minority	11.01	22.90	48.06****
Nonminority female	0.00	12.66	0.00****
M/WBE total	11.01	35.56	30.95****
<b>Architectural and Structural Metals Manufacturing (NAICS 3323)</b>			
African American	0.00	7.09	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.04	0.00
Minority	0.00	7.25	0.00****
Nonminority female	0.00	15.98	0.00****
M/WBE total	0.00	23.23	0.00****
<b>Specialized Design Services (NAICS 5414)</b>			
African American	73.51	15.06	
Hispanic	0.00	3.76	0.00****
Asian	0.00	4.93	0.00****
Native American	0.00	1.27	0.00****
Minority	73.51	25.01	
Nonminority female	0.00	24.71	0.00****
M/WBE total	73.51	49.73	
<b>Other Heavy and Civil Engineering Construction (NAICS 2379)</b>			
African American	0.00	8.76	0.00****
Hispanic	29.80	1.99	
Asian	0.00	3.41	0.00****
Native American	0.00	0.45	0.00****
Minority	29.80	14.61	
Nonminority female	0.00	10.28	0.00****
M/WBE total	29.80	24.89	
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	0.55	16.65	3.31****
Hispanic	0.00	2.83	0.00****
Asian	0.00	2.56	0.00****
Native American	0.00	2.41	0.00****
Minority	0.55	24.45	2.26****
Nonminority female	0.00	11.31	0.00****
M/WBE total	0.55	35.76	1.54****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.8. Industry Group Utilization, Availability, and Disparity Results for State of Maryland IT Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	5.27	16.72	31.53****
Hispanic	19.10	3.31	
Asian	12.97	14.64	88.60
Native American	0.00	1.34	0.00****
Minority	37.34	36.01	
Nonminority female	5.59	12.03	46.47*
M/WBE total	42.93	48.04	89.37
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	6.16	10.53	58.47**
Hispanic	0.00	1.57	0.00****
Asian	75.97	6.21	
Native American	0.00	0.90	0.00****
Minority	82.13	19.21	
Nonminority female	5.27	9.16	57.55**
M/WBE total	87.40	28.37	
Software Publishers (NAICS 5112)			
African American	1.43	11.92	11.99****
Hispanic	0.00	3.54	0.00****
Asian	2.14	8.00	26.67*
Native American	0.00	0.28	0.00****
Minority	3.56	23.74	15.01****
Nonminority female	0.08	13.22	0.58****
M/WBE total	3.64	36.96	9.85****
Employment Services (NAICS 5613)			
African American	13.07	14.58	89.63
Hispanic	0.00	2.37	0.00****
Asian	15.62	5.47	
Native American	0.00	0.44	0.00****
Minority	28.69	22.87	
Nonminority female	2.67	16.21	16.49****
M/WBE total	31.36	39.07	80.27
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	10.58	16.61	63.66
Hispanic	0.00	2.83	0.00****
Asian	17.21	6.30	
Native American	0.00	0.65	0.00****
Minority	27.79	26.40	
Nonminority female	6.89	18.39	37.45***
M/WBE total	34.68	44.78	77.43

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.17	0.00****
Hispanic	0.12	6.74	1.78****
Asian	0.00	4.46	0.00****
Native American	0.00	2.09	0.00****
Minority	0.12	25.46	0.47****
Nonminority female	0.00	10.01	0.00****
M/WBE total	0.12	35.47	0.34****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	50.48	9.21	
Hispanic	5.57	7.62	73.06
Asian	0.00	1.72	0.00****
Native American	0.00	0.20	0.00****
Minority	56.05	18.75	
Nonminority female	0.00	6.95	0.00****
M/WBE total	56.05	25.70	
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	4.78	0.00****
Hispanic	0.00	0.89	0.00*
Asian	0.00	5.29	0.00****
Native American	0.00	2.80	0.00****
Minority	0.00	13.77	0.00****
Nonminority female	0.00	5.71	0.00****
M/WBE total	0.00	19.48	0.00****
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	13.70	0.00****
Hispanic	0.00	3.59	0.00****
Asian	0.00	6.17	0.00****
Native American	0.00	0.95	0.00****
Minority	0.00	24.42	0.00****
Nonminority female	0.00	16.54	0.00****
M/WBE total	0.00	40.96	0.00****
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	13.34	0.00****
Hispanic	0.00	3.93	0.00
Asian	99.16	7.38	
Native American	0.00	0.65	0.00
Minority	99.16	25.30	
Nonminority female	0.00	17.53	0.00****
M/WBE total	99.16	42.83	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.15	0.00****
Hispanic	0.00	3.23	0.00****
Asian	0.00	3.85	0.00****
Native American	0.00	0.30	0.00****
Minority	0.00	11.52	0.00****
Nonminority female	3.06	9.64	31.74****
M/WBE total	3.06	21.16	14.46****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	21.33	0.00****
Hispanic	0.00	1.91	0.00**
Asian	51.23	5.77	
Native American	0.00	0.14	0.00
Minority	51.23	29.16	
Nonminority female	44.06	15.34	
M/WBE total	95.29	44.50	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	9.47	8.05	
Hispanic	16.04	2.12	
Asian	0.00	4.98	0.00****
Native American	0.00	1.23	0.00****
Minority	25.51	16.38	
Nonminority female	21.30	11.43	
M/WBE total	46.81	27.81	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.97	0.00****
Hispanic	0.00	1.03	0.00****
Asian	1.07	4.75	22.61
Native American	0.00	0.01	0.00
Minority	1.07	12.77	8.42****
Nonminority female	0.00	5.59	0.00****
M/WBE total	1.07	18.36	5.85****
Building Finishing Contractors (NAICS 2383)			
African American	0.00	2.79	0.00****
Hispanic	0.00	9.38	0.00****
Asian	0.00	1.57	0.00****
Native American	0.00	0.34	0.00****
Minority	0.00	14.09	0.00****
Nonminority female	0.00	13.98	0.00****
M/WBE total	0.00	28.07	0.00****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronics and Appliance Stores (NAICS 4431)			
African American	0.00	10.01	0.00****
Hispanic	1.33	0.31	
Asian	0.00	3.00	0.00****
Native American	0.00	0.29	0.00
Minority	1.33	13.62	9.79****
Nonminority female	10.45	15.37	67.97
M/WBE total	11.78	28.99	40.64**
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.37	0.00****
Hispanic	0.00	1.28	0.00****
Asian	0.00	3.21	0.00****
Native American	0.00	4.14	0.00****
Minority	0.00	15.01	0.00****
Nonminority female	0.45	11.20	3.99****
M/WBE total	0.45	26.21	1.71****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	7.09	0.00****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.04	0.00
Minority	0.00	7.25	0.00****
Nonminority female	0.00	15.98	0.00****
M/WBE total	0.00	23.23	0.00****
Printing and Related Support Activities (NAICS 3231)			
African American	97.37	4.82	
Hispanic	0.00	1.60	0.00****
Asian	0.00	5.27	0.00****
Native American	0.00	0.98	0.00****
Minority	97.37	12.67	
Nonminority female	0.00	17.92	0.00****
M/WBE total	97.37	30.59	
Building Equipment Contractors (NAICS 2382)			
African American	12.05	11.02	
Hispanic	0.00	5.78	0.00****
Asian	5.19	1.64	
Native American	0.00	0.98	0.00****
Minority	17.24	19.42	88.78
Nonminority female	0.00	12.52	0.00****
M/WBE total	17.24	31.95	53.98****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Design Services (NAICS 5414)			
African American	73.51	15.06	
Hispanic	0.00	3.76	0.00****
Asian	0.00	4.93	0.00****
Native American	0.00	1.27	0.00***
Minority	73.51	25.01	
Nonminority female	0.00	24.71	0.00****
M/WBE total	73.51	49.73	
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.55	16.65	3.32****
Hispanic	0.00	2.83	0.00****
Asian	0.00	2.56	0.00****
Native American	0.00	2.41	0.00****
Minority	0.55	24.45	2.26****
Nonminority female	0.00	11.31	0.00****
M/WBE total	0.55	35.76	1.54****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	5.26	0.00****
Hispanic	0.00	0.98	0.00****
Asian	6.41	6.38	
Native American	0.00	0.29	0.00****
Minority	6.41	12.91	49.65****
Nonminority female	0.29	10.15	2.82****
M/WBE total	6.70	23.07	29.04****
Other Telecommunications (NAICS 5179)			
African American	0.00	4.61	0.00****
Hispanic	0.00	2.56	0.00**
Asian	0.00	1.77	0.00**
Native American	0.00	0.43	0.00
Minority	0.00	9.38	0.00****
Nonminority female	0.00	3.00	0.00**
M/WBE total	0.00	12.38	0.00****
Utility System Construction (NAICS 2371)			
African American	0.98	10.23	9.55****
Hispanic	4.20	2.27	
Asian	0.00	2.41	0.00****
Native American	0.00	0.51	0.00**
Minority	5.18	15.41	33.61*
Nonminority female	3.70	8.48	43.66
M/WBE total	8.88	23.89	37.18**

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00****
Hispanic	0.00	1.99	0.00****
Asian	0.00	3.41	0.00****
Native American	0.00	0.45	0.00****
Minority	0.00	14.61	0.00****
Nonminority female	0.00	10.28	0.00****
M/WBE total	0.00	24.89	0.00****
Business Support Services (NAICS 5614)			
African American	0.00	12.36	0.00****
Hispanic	95.70	0.10	
Asian	0.00	0.12	0.00
Native American	0.00	0.02	0.00
Minority	95.70	12.60	
Nonminority female	0.00	12.45	0.00****
M/WBE total	95.70	25.04	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	6.22	0.00****
Hispanic	0.00	2.39	0.00****
Asian	0.00	0.86	0.00****
Native American	0.00	0.79	0.00****
Minority	0.00	10.27	0.00****
Nonminority female	0.00	4.74	0.00****
M/WBE total	0.00	15.01	0.00****
Home Furnishings Stores (NAICS 4422)			
African American	0.00	0.94	0.00**
Hispanic	0.00	9.73	0.00****
Asian	0.00	7.22	0.00****
Native American	0.00	0.01	0.00
Minority	0.00	17.90	0.00****
Nonminority female	0.00	10.14	0.00****
M/WBE total	0.00	28.04	0.00****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	13.46	0.00****
Hispanic	0.00	0.00	
Asian	0.00	8.12	0.00****
Native American	0.00	0.00	
Minority	0.00	21.58	0.00****
Nonminority female	0.00	15.81	0.00****
M/WBE total	0.00	37.39	0.00****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	13.08	0.00****
Hispanic	0.00	3.87	0.00****
Asian	50.08	5.22	
Native American	0.00	0.96	0.00****
Minority	50.08	23.13	
Nonminority female	0.00	17.87	0.00****
M/WBE total	50.08	41.00	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	6.12	0.00****
Hispanic	0.00	0.11	0.00
Asian	0.00	0.23	0.00***
Native American	0.00	3.52	0.00****
Minority	0.00	9.99	0.00****
Nonminority female	1.90	17.36	10.97****
M/WBE total	1.90	27.34	6.97****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.9. Industry Group Utilization, Availability, and Disparity Results for State of Maryland Services Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.22	0.00 ****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00 ****
Native American	0.00	1.11	0.00 ****
Minority	0.00	4.14	0.00 ****
Nonminority female	0.00	8.17	0.00 ****
M/WBE total	0.00	12.31	0.00 ****
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.01	13.34	0.04 ****
Hispanic	0.00	3.93	0.00 ****
Asian	0.46	7.38	6.27
Native American	0.00	0.65	0.00
Minority	0.47	25.30	1.85 **
Nonminority female	0.00	17.53	0.00 ****
M/WBE total	0.47	42.83	1.09 ****
Office Administrative Services (NAICS 5611)			
African American	0.00	12.78	0.00 ****
Hispanic	0.00	2.34	0.00 ****
Asian	0.00	2.67	0.00 ****
Native American	0.00	0.81	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	19.74	0.00 ****
M/WBE total	0.00	38.34	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	21.79	0.00 ****
Hispanic	0.00	5.95	0.00 ****
Asian	0.00	1.10	0.00 ****
Native American	0.00	0.00	
Minority	0.00	28.85	0.00 ****
Nonminority female	0.00	16.94	0.01 ****
M/WBE total	0.00	45.79	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	2.10	8.06	26.08 *
Hispanic	1.22	3.08	39.49
Asian	0.26	1.44	17.90
Native American	0.00	0.60	0.13 ****
Minority	3.58	13.18	27.15 **
Nonminority female	9.40	25.75	36.51 ****
M/WBE total	12.98	38.92	33.34 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.42	0.00 ****
Hispanic	0.00	4.79	0.00 ****
Asian	0.00	10.65	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	57.97	0.00 ****
Nonminority female	0.00	5.04	0.00 ****
M/WBE total	0.00	63.02	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	0.65	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.08	0.00
Minority	0.00	1.06	0.00
Nonminority female	0.00	1.69	0.00 ****
M/WBE total	0.00	2.74	0.00 ****
Other Residential Care Facilities (NAICS 6239)			
African American	0.51	13.45	3.82 ****
Hispanic	0.00	0.69	0.00
Asian	0.00	0.70	0.00
Native American	0.00	0.03	0.00
Minority	0.51	14.86	3.46 ****
Nonminority female	0.00	10.36	0.00 ****
M/WBE total	0.51	25.22	2.04 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	28.24	29.55	95.57
Hispanic	0.00	4.35	0.00 ****
Asian	2.41	3.85	62.72
Native American	0.00	0.80	0.00
Minority	30.66	38.55	79.53
Nonminority female	0.00	14.10	0.00 ****
M/WBE total	30.66	52.65	58.23
Insurance Carriers (NAICS 5241)			
African American	0.00	5.75	0.00 ****
Hispanic	0.00	1.57	0.00 ****
Asian	0.00	0.10	0.00
Native American	0.00	1.39	0.00 ****
Minority	0.00	8.81	0.00 ****
Nonminority female	0.00	1.62	0.00 ****
M/WBE total	0.00	10.43	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	2.87	13.69	20.96 ****
Hispanic	0.49	2.46	20.07 ***
Asian	0.89	5.22	16.97 ****
Native American	0.00	0.93	0.00 ****
Minority	4.25	22.30	19.05 ****
Nonminority female	11.65	16.81	69.28
M/WBE total	15.90	39.11	40.64 ****
Business Support Services (NAICS 5614)			
African American	1.16	17.29	6.68 **
Hispanic	1.11	3.83	28.89
Asian	0.00	3.25	0.00 ****
Native American	0.00	3.96	0.00 ****
Minority	2.26	28.34	7.98 ***
Nonminority female	0.47	14.73	3.22 ***
M/WBE total	2.74	43.07	6.35 ****
Computer Systems Design and Related Services (NAICS 5415)			
African American	18.35	16.82	
Hispanic	8.13	3.26	
Asian	8.78	14.14	62.09
Native American	0.04	1.18	3.53 ****
Minority	35.30	35.41	99.71
Nonminority female	3.45	12.66	27.25 ****
M/WBE total	38.75	48.07	80.63
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	1.20	7.07	17.00 ****
Hispanic	0.10	1.94	5.11 ****
Asian	1.64	5.15	31.91 ****
Native American	0.03	1.41	2.47 ****
Minority	2.98	15.58	19.13 ****
Nonminority female	21.01	10.28	
M/WBE total	23.99	25.86	92.77
Offices of Dentists (NAICS 6212)			
African American	99.57	6.41	
Hispanic	0.00	2.30	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	1.80	0.00
Minority	99.57	20.61	
Nonminority female	0.00	17.54	0.00 ****
M/WBE total	99.57	38.15	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Employment Services (NAICS 5613)			
African American	37.27	14.90	
Hispanic	0.00	2.37	0.00 ****
Asian	0.00	5.60	0.00 ****
Native American	0.06	0.47	12.82
Minority	37.33	23.33	
Nonminority female	49.47	16.44	
M/WBE total	86.80	39.78	
Special Food Services (NAICS 7223)			
African American	52.81	16.39	
Hispanic	0.00	0.43	0.00 ****
Asian	0.00	3.94	0.00 ****
Native American	0.00	0.11	0.00
Minority	52.81	20.87	
Nonminority female	1.56	2.02	77.24
M/WBE total	54.37	22.89	
Individual and Family Services (NAICS 6241)			
African American	51.84	9.52	
Hispanic	0.00	0.64	0.00
Asian	0.00	2.46	0.00 ****
Native American	0.00	1.82	0.00
Minority	51.84	14.43	
Nonminority female	0.04	11.27	0.36 **
M/WBE total	51.89	25.71	
Natural Gas Distribution (NAICS 2212)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	4.87	0.00 ****
Native American	0.00	0.00	
Minority	0.00	10.50	0.00 ****
Nonminority female	0.00	0.00	
M/WBE total	0.00	10.50	0.00 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.97	0.00 ****
Hispanic	0.00	1.03	0.00 ****
Asian	0.00	4.75	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	12.77	0.00 ****
Nonminority female	0.00	5.59	0.00 ****
M/WBE total	0.00	18.36	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	13.37	8.73	
Hispanic	9.89	5.41	
Asian	2.98	4.34	68.67
Native American	0.00	1.20	0.00 ****
Minority	26.25	19.68	
Nonminority female	0.23	16.25	1.43 ****
M/WBE total	26.48	35.93	73.70
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	57.03	8.55	
Hispanic	0.00	0.23	0.00 ****
Asian	0.00	5.55	0.00 ****
Native American	0.00	0.12	0.00
Minority	57.03	14.44	
Nonminority female	0.00	11.32	0.00 ****
M/WBE total	57.03	25.76	
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.89	0.00 ****
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	7.70	0.00 ****
Native American	0.00	0.02	0.00
Minority	0.00	19.91	0.00 ****
Nonminority female	0.00	14.10	0.00 ****
M/WBE total	0.00	34.00	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.07	4.82	1.46 ****
Hispanic	0.00	1.60	0.00 ****
Asian	0.11	5.27	2.06 ****
Native American	0.00	0.98	0.00 ****
Minority	0.18	12.67	1.41 ****
Nonminority female	45.26	17.92	
M/WBE total	45.44	30.59	
Other Information Services (NAICS 5191)			
African American	0.00	12.97	0.00 ****
Hispanic	0.00	0.73	0.00 ****
Asian	0.00	7.46	0.00 ****
Native American	0.00	6.67	0.00 ****
Minority	0.00	27.82	0.00 ****
Nonminority female	0.00	11.06	0.00 ****
M/WBE total	0.00	38.88	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.13	0.00
Asian	0.00	1.69	0.00 ****
Native American	0.00	2.13	0.00 ****
Minority	0.00	9.34	0.00 ****
Nonminority female	0.90	2.21	40.80
M/WBE total	0.90	11.55	7.79 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.14	22.66	0.61 ****
Hispanic	0.00	4.26	0.00 ****
Asian	28.22	11.86	
Native American	0.00	1.63	0.00
Minority	28.36	40.41	70.19
Nonminority female	1.33	8.65	15.39
M/WBE total	29.69	49.06	60.53
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	4.91	4.42	
Hispanic	0.00	0.39	0.00 ****
Asian	0.00	0.70	0.00 ****
Native American	0.00	0.04	0.00
Minority	4.91	5.54	88.48
Nonminority female	0.80	14.11	5.63 ****
M/WBE total	5.70	19.66	29.00
Direct Selling Establishments (NAICS 4543)			
African American	99.36	2.43	
Hispanic	0.00	0.82	0.00 ****
Asian	0.00	0.83	0.00 ****
Native American	0.00	0.01	0.00
Minority	99.36	4.08	
Nonminority female	0.00	8.60	0.00 ****
M/WBE total	99.36	12.68	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	50.00	0.00 ****
M/WBE total	0.00	50.00	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.52	0.00	
Minority	0.52	0.00	
Nonminority female	15.66	0.00	
M/WBE total	16.18	0.00	
<b>Services to Buildings and Dwellings (NAICS 5617)</b>			
African American	17.50	27.20	64.33 ****
Hispanic	9.55	9.96	95.84
Asian	0.69	4.17	16.44 ****
Native American	0.00	0.48	0.00 ****
Minority	27.73	41.81	66.32 ****
Nonminority female	12.08	13.86	87.16
M/WBE total	39.81	55.67	71.51 ****
<b>Facilities Support Services (NAICS 5612)</b>			
African American	0.00	26.39	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	0.14	2.52	5.44
Native American	0.00	1.15	0.00 ****
Minority	0.14	33.83	0.41 ****
Nonminority female	11.23	9.10	
M/WBE total	11.36	42.92	26.47
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	43.56	11.91	
Hispanic	25.71	6.22	
Asian	0.00	1.68	0.00 ****
Native American	0.00	1.12	0.00 ****
Minority	69.27	20.93	
Nonminority female	1.08	12.58	8.56 ****
M/WBE total	70.35	33.51	
<b>Other Personal Services (NAICS 8129)</b>			
African American	0.00	4.15	0.00 ****
Hispanic	0.00	0.96	0.00
Asian	0.00	0.50	0.00
Native American	0.00	0.01	0.00
Minority	0.00	5.62	0.00 ****
Nonminority female	43.73	2.61	
M/WBE total	43.73	8.24	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	11.47	13.66	83.95
Hispanic	0.00	0.96	0.00
Asian	0.00	1.41	0.00 ****
Native American	0.00	1.92	0.00 ****
Minority	11.47	17.96	63.87
Nonminority female	4.72	24.85	18.98
M/WBE total	16.19	42.80	37.81
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	0.01	0.00
Hispanic	0.00	4.85	0.00 ****
Asian	0.00	0.06	0.00
Native American	0.17	0.00	
Minority	0.17	4.92	3.48 ****
Nonminority female	0.00	16.04	0.00 ****
M/WBE total	0.17	20.96	0.82 ****
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.57	9.50	5.96 ****
Hispanic	0.00	3.00	0.00 ****
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.57	17.74	3.19 ****
Nonminority female	0.00	12.18	0.00 ****
M/WBE total	0.57	29.92	1.89 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	8.13	0.00 ****
Hispanic	0.00	0.00	
Asian	0.62	2.03	30.67
Native American	0.00	2.03	0.00
Minority	0.62	12.20	5.11
Nonminority female	0.00	7.10	0.00 ****
M/WBE total	0.62	19.30	3.23
Outpatient Care Centers (NAICS 6214)			
African American	34.35	4.10	
Hispanic	0.00	0.67	0.00
Asian	0.18	0.64	28.76
Native American	0.00	0.71	0.00
Minority	34.54	6.12	
Nonminority female	52.15	7.67	
M/WBE total	86.68	13.79	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Telecommunications (NAICS 5179)			
African American	0.00	4.61	0.00 ****
Hispanic	0.00	2.56	0.00 ***
Asian	0.00	1.77	0.00 ***
Native American	0.00	0.43	0.00
Minority	0.00	9.38	0.00 ****
Nonminority female	0.05	3.00	1.78
M/WBE total	0.05	12.38	0.43 ****
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities (NAICS 6232)			
African American	31.65	20.85	
Hispanic	0.00	0.02	0.00
Asian	0.00	4.87	0.00
Native American	0.00	0.00	0.00
Minority	31.65	25.73	
Nonminority female	0.00	10.89	0.00
M/WBE total	31.65	36.62	86.42
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	20.26	1.73	
Hispanic	0.00	0.68	0.00 ****
Asian	0.00	1.09	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	20.26	4.19	
Nonminority female	0.35	14.01	2.50 ****
M/WBE total	20.61	18.19	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	15.13	2.24	
Hispanic	55.16	15.73	
Asian	4.32	4.23	
Native American	0.00	2.66	0.00 ****
Minority	74.61	24.87	
Nonminority female	6.91	29.19	23.69 ****
M/WBE total	81.52	54.06	
Investigation and Security Services (NAICS 5616)			
African American	4.93	20.42	24.16 ***
Hispanic	0.00	1.88	0.00 ****
Asian	0.00	2.44	0.00 ****
Native American	0.00	1.88	0.00 ****
Minority	4.93	26.62	18.53 ****
Nonminority female	0.59	11.94	4.92 ****
M/WBE total	5.52	38.56	14.32 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Legal Services (NAICS 5411)			
African American	10.67	5.16	
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	0.26	0.00
Native American	0.00	0.04	0.00
Minority	10.67	9.00	
Nonminority female	17.00	21.42	79.38
M/WBE total	27.67	30.42	90.96
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.99	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	1.89	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	5.06	0.00 ****
Nonminority female	4.47	14.43	30.96
M/WBE total	4.47	19.48	22.92
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.00	0.00
Asian	0.00	0.42	0.00
Native American	0.00	0.00	0.00
Minority	0.00	0.61	0.00
Nonminority female	8.06	0.44	
M/WBE total	8.06	1.06	
Motion Picture and Video Industries (NAICS 5121)			
African American	19.37	14.52	
Hispanic	0.00	3.33	0.00 ****
Asian	0.00	2.18	0.00 ****
Native American	0.00	0.10	0.00
Minority	19.37	20.14	96.18
Nonminority female	51.94	25.68	
M/WBE total	71.31	45.82	
Charter Bus Industry (NAICS 4855)			
African American	0.00	29.84	0.00 ****
Hispanic	0.00	0.97	0.00
Asian	0.00	0.39	0.00
Native American	0.00	0.18	0.00
Minority	0.00	31.39	0.00 ****
Nonminority female	0.00	17.80	0.00 ****
M/WBE total	0.00	49.19	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Other Health Practitioners (NAICS 6213)			
African American	23.14	5.02	
Hispanic	0.00	1.31	0.00 ****
Asian	1.40	4.01	34.93
Native American	0.00	2.03	0.00 ****
Minority	24.54	12.37	
Nonminority female	3.80	21.09	18.02
M/WBE total	28.34	33.46	84.70
Interurban and Rural Bus Transportation (NAICS 4852)			
African American	0.00	20.62	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	20.62	0.00 ****
Nonminority female	0.00	14.38	0.00 ****
M/WBE total	0.00	35.00	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	3.66	4.75	77.18
Hispanic	0.00	0.73	0.00 ****
Asian	0.28	4.52	6.15 ****
Native American	0.00	2.36	0.00 ****
Minority	3.94	12.35	31.92
Nonminority female	5.16	5.94	86.90
M/WBE total	9.10	18.29	49.78
Other Support Services (NAICS 5619)			
African American	4.02	18.71	21.47 ****
Hispanic	0.00	2.45	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.02	0.00
Minority	4.02	23.75	16.91 ****
Nonminority female	1.49	28.54	5.22 ****
M/WBE total	5.51	52.30	10.53 ****
Software Publishers (NAICS 5112)			
African American	0.01	11.92	0.05 ****
Hispanic	0.00	3.54	0.00 ****
Asian	78.55	8.00	
Native American	0.00	0.28	0.00 ****
Minority	78.55	23.74	
Nonminority female	0.00	13.22	0.00 ****
M/WBE total	78.55	36.96	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Freight Trucking (NAICS 4842)			
African American	4.43	24.84	17.85 ****
Hispanic	0.00	7.48	0.00 ****
Asian	0.00	1.87	0.00 ****
Native American	0.00	0.12	0.00 ****
Minority	4.43	34.32	12.92 ****
Nonminority female	2.03	11.65	17.44 ****
M/WBE total	6.46	45.97	14.06 ****
Home Health Care Services (NAICS 6216)			
African American	3.65	37.69	9.68 **
Hispanic	0.00	3.81	0.00
Asian	0.00	0.92	0.00
Native American	0.00	0.04	0.00
Minority	3.65	42.46	8.59 ***
Nonminority female	74.11	11.38	
M/WBE total	77.75	53.84	
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.69	0.00 ****
Hispanic	0.00	4.81	0.00 ****
Asian	0.00	1.66	0.00
Native American	0.00	0.01	0.00
Minority	0.00	18.18	0.00 ****
Nonminority female	0.00	20.62	0.00 ****
M/WBE total	0.00	38.79	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	36.26	11.90	
Hispanic	2.91	7.57	38.40
Asian	0.00	4.57	0.00 ****
Native American	0.00	0.95	0.00 ****
Minority	39.17	24.99	
Nonminority female	0.04	8.85	0.41 ****
M/WBE total	39.20	33.84	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	5.08	6.80	74.75
Hispanic	0.02	1.35	1.56 ****
Asian	0.00	6.89	0.00 ****
Native American	0.00	1.03	0.00 ****
Minority	5.10	16.07	31.76 ****
Nonminority female	0.27	12.40	2.21 ****
M/WBE total	5.38	28.46	18.89 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	3.62	0.00 ****
Hispanic	0.00	0.87	0.00 ****
Asian	0.00	11.46	0.00 ****
Native American	0.00	4.33	0.00 ****
Minority	0.00	20.29	0.00 ****
Nonminority female	0.00	6.84	0.00 ****
M/WBE total	0.00	27.12	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	8.77	0.00 ****
Hispanic	0.00	2.81	0.00 ****
Asian	7.59	0.97	
Native American	0.00	0.00	
Minority	7.59	12.54	60.54
Nonminority female	0.83	22.25	3.74 ****
M/WBE total	8.43	34.80	24.22 ****
Local Messengers and Local Delivery (NAICS 4922)			
African American	0.00	13.55	0.00 ****
Hispanic	0.00	3.26	0.00 ****
Asian	0.82	4.98	16.40
Native American	0.00	0.78	0.00
Minority	0.82	22.57	3.62 **
Nonminority female	0.00	15.17	0.00 ****
M/WBE total	0.82	37.75	2.16 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	0.93	0.00 ****
Hispanic	0.00	3.40	0.00 ****
Asian	0.00	2.39	0.00 ****
Native American	0.00	1.14	0.00 ****
Minority	0.00	7.86	0.00 ****
Nonminority female	0.13	6.68	1.87 ****
M/WBE total	0.13	14.55	0.86 ****
Gambling Industries (NAICS 7132)			
African American	0.00	15.62	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	15.62	0.00 ****
Nonminority female	0.00	31.25	0.00 ****
M/WBE total	0.00	46.88	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	0.05	0.00
Hispanic	0.00	1.11	0.00
Asian	0.00	0.83	0.00
Native American	0.00	1.10	0.00
Minority	0.00	3.08	0.00 ****
Nonminority female	0.00	15.30	0.00 ****
M/WBE total	0.00	18.38	0.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	12.25	0.00 ****
Hispanic	0.00	1.93	0.00 ****
Asian	2.61	2.59	
Native American	0.00	0.41	0.00 ****
Minority	2.61	17.18	15.18 ****
Nonminority female	4.81	12.52	38.39 ****
M/WBE total	7.42	29.70	24.97 ****
Offices of Physicians (NAICS 6211)			
African American	16.66	6.70	
Hispanic	0.14	2.32	6.14 ***
Asian	14.72	7.35	
Native American	5.04	3.95	
Minority	36.56	20.32	
Nonminority female	3.10	18.47	16.81 ****
M/WBE total	39.66	38.79	
Waste Collection (NAICS 5621)			
African American	0.62	23.81	2.59 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	3.14	0.00 ****
Minority	0.62	26.96	2.29 ****
Nonminority female	0.22	7.25	3.07 ****
M/WBE total	0.84	34.21	2.45 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	11.26	13.33	84.42
Hispanic	0.74	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	11.99	13.33	89.95
Nonminority female	0.39	0.00	
M/WBE total	12.38	13.33	92.84

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	36.15	21.33	
Hispanic	0.00	1.91	0.00 ****
Asian	0.00	5.77	0.00 ****
Native American	0.00	0.14	0.00
Minority	36.15	29.16	
Nonminority female	0.18	15.34	1.16 ****
M/WBE total	36.32	44.50	81.62
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	33.82	3.41	
Native American	0.00	0.45	0.00 ****
Minority	33.82	14.61	
Nonminority female	9.22	10.28	89.64
M/WBE total	43.04	24.89	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	5.14	0.00 ****
Hispanic	0.02	0.05	40.32
Asian	0.83	0.10	
Native American	0.00	0.10	0.00
Minority	0.85	5.39	15.83 ****
Nonminority female	0.00	2.22	0.00 ****
M/WBE total	0.85	7.61	11.20 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	5.49	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.00	4.00	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	13.10	0.00 ****
Nonminority female	0.00	3.25	0.00 ****
M/WBE total	0.00	16.35	0.00 ****
Vending Machine Operators (NAICS 4542)			
African American	6.20	21.89	28.35
Hispanic	0.00	0.72	0.00
Asian	0.00	4.46	0.00 ****
Native American	0.00	0.01	0.00
Minority	6.20	27.07	22.92
Nonminority female	0.00	7.43	0.00 ****
M/WBE total	6.20	34.49	17.99 ***

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Logging (NAICS 1133)			
African American	0.00	2.24	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.24	0.00
Nonminority female	0.00	26.78	0.00 ****
M/WBE total	0.00	29.02	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.89	13.59	6.54 ****
Hispanic	11.87	3.09	
Asian	6.41	3.70	
Native American	0.00	0.38	0.00 ****
Minority	19.17	20.75	92.39
Nonminority female	6.58	11.87	55.43 ****
M/WBE total	25.75	32.62	78.94 ***
Educational Support Services (NAICS 6117)			
African American	70.34	25.75	
Hispanic	0.00	0.71	0.00
Asian	0.00	3.31	0.00 ****
Native American	0.00	2.37	0.00 ****
Minority	70.34	32.14	
Nonminority female	0.41	10.40	3.95 *
M/WBE total	70.75	42.54	
Nonresidential Building Construction (NAICS 2362)			
African American	0.82	12.17	6.75 ****
Hispanic	0.45	6.74	6.69 ****
Asian	0.00	4.46	0.00 ****
Native American	3.96	2.09	
Minority	5.23	25.46	20.56 ****
Nonminority female	0.00	10.01	0.00 ****
M/WBE total	5.23	35.47	14.76 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	6.12	0.00 ****
Hispanic	0.00	0.11	0.00
Asian	0.00	0.23	0.00 ****
Native American	0.00	3.52	0.00 ****
Minority	0.00	9.99	0.00 ****
Nonminority female	6.16	17.36	35.50 ****
M/WBE total	6.16	27.34	22.54 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Health and Personal Care Stores (NAICS 4461)			
African American	0.00	6.28	0.00 ****
Hispanic	0.00	2.68	0.00 ****
Asian	0.84	2.00	41.76 ***
Native American	0.00	0.01	0.00
Minority	0.84	10.97	7.63 ****
Nonminority female	3.73	4.90	76.12
M/WBE total	4.57	15.87	28.79 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	4.17	0.00 ****
Hispanic	0.00	2.71	0.00 ****
Asian	0.00	2.96	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	9.89	0.00 ****
Nonminority female	0.00	10.16	0.00 ****
M/WBE total	0.00	20.05	0.00 ****
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	5.95	0.00 ****
Hispanic	0.00	2.11	0.00 ****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00 ****
Nonminority female	0.00	3.20	0.00 ****
M/WBE total	0.00	11.68	0.00 ****
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)			
African American	0.00	14.25	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	0.00	4.97	0.00 ****
Native American	0.00	1.04	0.00
Minority	0.00	24.02	0.00 ****
Nonminority female	0.09	19.46	0.46 ****
M/WBE total	0.09	43.48	0.20 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	0.13	0.00
Hispanic	0.00	1.43	0.00 ****
Asian	0.04	10.56	0.35 ****
Native American	0.00	3.60	0.00 ****
Minority	0.04	15.72	0.24 ****
Nonminority female	0.00	9.94	0.00 ****
M/WBE total	0.04	25.65	0.15 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)</b>			
African American	2.90	11.62	24.98
Hispanic	0.00	4.08	0.00 ****
Asian	0.00	5.30	0.00 ****
Native American	0.00	0.82	0.00
Minority	2.90	21.82	13.30
Nonminority female	0.00	15.09	0.00 ****
M/WBE total	2.90	36.91	7.86 **
<b>Colleges, Universities, and Professional Schools (NAICS 6113)</b>			
African American	0.00	10.98	0.00 ****
Hispanic	0.00	3.89	0.00
Asian	0.00	5.08	0.00 ****
Native American	0.00	0.78	0.00
Minority	0.00	20.74	0.00 ****
Nonminority female	0.00	14.37	0.00 ****
M/WBE total	0.00	35.10	0.00 ****
<b>Other Specialty Trade Contractors (NAICS 2389)</b>			
African American	0.00	6.37	0.00 ****
Hispanic	6.96	1.28	
Asian	0.55	3.21	16.97 ****
Native American	0.00	4.14	0.00 ****
Minority	7.51	15.01	50.02 ****
Nonminority female	16.15	11.20	
M/WBE total	23.66	26.21	90.28
<b>Specialized Design Services (NAICS 5414)</b>			
African American	48.67	15.06	
Hispanic	0.00	3.76	0.00 ****
Asian	0.00	4.93	0.00 ****
Native American	0.00	1.27	0.00 ****
Minority	48.67	25.01	
Nonminority female	9.13	24.71	36.95 ****
M/WBE total	57.80	49.73	

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.10. Industry Group Utilization, Availability, and Disparity Results for State of Maryland Services Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.22	0.00 ****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00 ****
Native American	0.00	1.11	0.00 ****
Minority	0.00	4.14	0.00 ****
Nonminority female	0.00	8.17	0.00 ****
M/WBE total	0.00	12.31	0.00 ****
Office Administrative Services (NAICS 5611)			
African American	0.00	12.78	0.00 ****
Hispanic	0.00	2.34	0.00 ****
Asian	0.00	2.67	0.00 ****
Native American	0.00	0.81	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	19.74	0.00 ****
M/WBE total	0.00	38.34	0.00 ****
Other Residential Care Facilities (NAICS 6239)			
African American	0.00	13.45	0.00 ****
Hispanic	0.00	0.69	0.00
Asian	0.00	0.70	0.00
Native American	0.00	0.03	0.00
Minority	0.00	14.86	0.00 ****
Nonminority female	0.00	10.36	0.00 ****
M/WBE total	0.00	25.22	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	1.38	14.29	9.68 ****
Hispanic	0.47	2.50	18.67 **
Asian	0.02	5.29	0.35 ****
Native American	0.00	0.84	0.00 ****
Minority	1.87	22.92	8.15 ****
Nonminority female	8.42	16.91	49.82
M/WBE total	10.29	39.83	25.84 ****
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.04	13.34	0.31
Hispanic	0.00	3.93	0.00
Asian	1.65	7.38	22.32
Native American	0.00	0.65	0.00
Minority	1.69	25.30	6.67
Nonminority female	0.00	17.53	0.00 ****
M/WBE total	1.69	42.83	3.94 ***

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	4.15	9.13	45.43 ***
Hispanic	0.00	2.29	0.10 ****
Asian	0.56	1.18	47.71
Native American	0.00	0.54	0.00 ****
Minority	4.71	13.13	35.87 ****
Nonminority female	0.56	26.84	2.10 ****
M/WBE total	5.28	39.98	13.20 ****
Rail Transportation (NAICS 4821)			
African American	0.00	0.65	0.00
Hispanic	0.00	0.14	0.00
Asian	0.00	0.20	0.00
Native American	0.00	0.08	0.00
Minority	0.00	1.06	0.00
Nonminority female	0.00	1.69	0.00 **
M/WBE total	0.00	2.74	0.00 **
Business Support Services (NAICS 5614)			
African American	0.00	17.14	0.00 ****
Hispanic	0.00	3.82	0.00 ****
Asian	0.00	3.18	0.00 ****
Native American	0.00	3.87	0.00 ****
Minority	0.00	28.00	0.00 ****
Nonminority female	0.26	14.74	1.75 ****
M/WBE total	0.26	42.74	0.60 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	59.47	29.55	
Hispanic	0.00	4.35	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.80	0.00
Minority	59.47	38.55	
Nonminority female	0.00	14.10	0.00 ****
M/WBE total	59.47	52.65	
Computer Systems Design and Related Services (NAICS 5415)			
African American	20.36	16.98	
Hispanic	13.73	3.19	
Asian	2.98	14.17	21.03 ****
Native American	0.09	1.15	7.61 ****
Minority	37.16	35.48	
Nonminority female	4.97	12.49	39.81 ***
M/WBE total	42.13	47.97	87.82

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	6.97	0.00 ****
Hispanic	0.00	1.03	0.00 ****
Asian	0.00	4.75	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	12.77	0.00 ****
Nonminority female	0.00	5.59	0.00 ****
M/WBE total	0.00	18.36	0.00 ****
Insurance Carriers (NAICS 5241)			
African American	0.00	3.29	0.00 ****
Hispanic	0.00	0.08	0.00
Asian	0.00	0.11	0.00
Native American	0.00	0.03	0.00
Minority	0.00	3.51	0.00 ****
Nonminority female	0.00	4.60	0.00 ****
M/WBE total	0.00	8.11	0.00 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.00	4.82	0.00 ****
Hispanic	0.00	1.60	0.00 ****
Asian	0.00	5.27	0.00 ****
Native American	0.00	0.98	0.00 ****
Minority	0.00	12.67	0.00 ****
Nonminority female	45.67	17.92	
M/WBE total	45.67	30.59	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	49.67	8.55	
Hispanic	0.00	0.23	0.00 **
Asian	0.00	5.55	0.00 ****
Native American	0.00	0.12	0.00
Minority	49.67	14.44	
Nonminority female	0.00	11.32	0.00 ****
M/WBE total	49.67	25.76	
Individual and Family Services (NAICS 6241)			
African American	99.03	9.52	
Hispanic	0.00	0.64	0.00
Asian	0.00	2.46	0.00
Native American	0.00	1.82	0.00
Minority	99.03	14.43	
Nonminority female	0.00	11.27	0.00 ****
M/WBE total	99.03	25.71	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Natural Gas Distribution (NAICS 2212)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	4.87	0.00 ****
Native American	0.00	0.00	
Minority	0.00	10.50	0.00 ****
Nonminority female	0.00	0.00	
M/WBE total	0.00	10.50	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	3.43	6.70	51.26 ****
Hispanic	0.16	2.04	7.68 ****
Asian	0.52	5.36	9.79 ****
Native American	0.00	1.59	0.00 ****
Minority	4.11	15.69	26.23 ****
Nonminority female	0.44	9.36	4.75 ****
M/WBE total	4.56	25.04	18.20 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.19	20.41	0.94 ****
Hispanic	0.00	3.19	0.00 ****
Asian	0.45	12.24	3.71
Native American	0.00	2.26	0.00 ****
Minority	0.65	38.10	1.70 ****
Nonminority female	1.85	6.75	27.37
M/WBE total	2.49	44.86	5.56 ***
Building Equipment Contractors (NAICS 2382)			
African American	43.75	11.96	
Hispanic	25.82	6.25	
Asian	0.00	1.68	0.00 ****
Native American	0.00	1.13	0.00 ****
Minority	69.57	21.02	
Nonminority female	0.85	12.59	6.79 ****
M/WBE total	70.42	33.61	
Offices of Dentists (NAICS 6212)			
African American	98.88	6.41	
Hispanic	0.00	2.30	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	1.80	0.00
Minority	98.88	20.61	
Nonminority female	0.00	17.54	0.00 ****
M/WBE total	98.88	38.15	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	2.15	26.52	8.12 ****
Hispanic	6.30	9.66	65.19
Asian	0.00	4.09	0.00 ****
Native American	0.00	0.49	0.00 ****
Minority	8.45	40.76	20.73 ****
Nonminority female	16.16	13.62	
M/WBE total	24.61	54.38	45.27 ****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	12.26	0.00 ****
Hispanic	30.84	3.97	
Asian	8.68	7.13	
Native American	0.00	0.51	0.00 ****
Minority	39.52	23.86	
Nonminority female	0.72	19.53	3.70 ****
M/WBE total	40.24	43.39	92.74
Other Telecommunications (NAICS 5179)			
African American	0.00	4.61	0.00 ****
Hispanic	0.00	2.56	0.00 **
Asian	0.00	1.77	0.00 **
Native American	0.00	0.43	0.00
Minority	0.00	9.38	0.00 ****
Nonminority female	0.01	3.00	0.47
M/WBE total	0.01	12.38	0.11 ****
Employment Services (NAICS 5613)			
African American	31.50	14.91	
Hispanic	0.00	2.40	0.00 ****
Asian	0.00	5.57	0.00 ****
Native American	0.27	0.50	54.36
Minority	31.77	23.38	
Nonminority female	52.58	16.60	
M/WBE total	84.35	39.98	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	12.14	14.57	83.33
Hispanic	0.00	0.87	0.00
Asian	0.00	0.94	0.00
Native American	0.00	2.10	0.00 ****
Minority	12.14	18.49	65.67
Nonminority female	1.48	24.82	5.97 ****
M/WBE total	13.62	43.31	31.45

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Special Food Services (NAICS 7223)			
African American	5.42	16.90	32.07 ****
Hispanic	0.00	0.68	0.00 ****
Asian	0.00	3.79	0.00 ****
Native American	0.00	0.11	0.00
Minority	5.42	21.47	25.24 ****
Nonminority female	6.76	3.31	
M/WBE total	12.18	24.78	49.13 ***
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	17.22	2.21	
Hispanic	0.00	0.69	0.00 ****
Asian	0.00	1.08	0.00 ****
Native American	0.00	0.70	0.00 ****
Minority	17.22	4.68	
Nonminority female	0.40	14.34	2.76 ****
M/WBE total	17.61	19.02	92.61
Investigation and Security Services (NAICS 5616)			
African American	4.66	20.38	22.88 ***
Hispanic	0.00	1.84	0.00 ****
Asian	0.00	2.72	0.00 ****
Native American	0.00	1.80	0.00 ****
Minority	4.66	26.73	17.44 ****
Nonminority female	0.71	11.90	6.00 ****
M/WBE total	5.37	38.63	13.91 ****
Other Personal Services (NAICS 8129)			
African American	0.00	4.15	0.00 **
Hispanic	0.00	0.96	0.00
Asian	0.00	0.50	0.00
Native American	0.00	0.01	0.00
Minority	0.00	5.62	0.00 **
Nonminority female	0.44	2.61	16.92
M/WBE total	0.44	8.24	5.36
Lessors of Real Estate (NAICS 5311)			
African American	0.00	2.99	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	1.89	0.00 ****
Native American	0.00	0.03	0.00
Minority	0.00	5.06	0.00 ****
Nonminority female	0.00	14.43	0.00 ****
M/WBE total	0.00	19.48	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.82	9.50	8.68 ****
Hispanic	0.00	3.00	0.00 ****
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.82	17.74	4.65 ****
Nonminority female	0.00	12.18	0.00 ****
M/WBE total	0.82	29.92	2.76 ****
Urban Transit Systems (NAICS 4851)			
African American	0.00	42.42	0.00 ****
Hispanic	0.00	4.79	0.00 *
Asian	0.00	10.65	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	57.97	0.00 ****
Nonminority female	0.00	5.04	0.00 *
M/WBE total	0.00	63.02	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.32	8.56	3.79 ****
Hispanic	0.00	0.75	0.00 ***
Asian	0.00	1.35	0.00 ****
Native American	0.00	0.07	0.00
Minority	0.32	10.73	3.03 ****
Nonminority female	0.77	14.61	5.24 ****
M/WBE total	1.09	25.34	4.30 ****
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	5.39	0.00 ****
Hispanic	0.00	0.13	0.00
Asian	0.00	1.69	0.00 ***
Native American	0.00	2.13	0.00 ****
Minority	0.00	9.34	0.00 ****
Nonminority female	0.00	2.21	0.00 ****
M/WBE total	0.00	11.55	0.00 ****
Charter Bus Industry (NAICS 4855)			
African American	0.00	29.84	0.00 ****
Hispanic	0.00	0.97	0.00
Asian	0.00	0.39	0.00
Native American	0.00	0.18	0.00
Minority	0.00	31.39	0.00 ****
Nonminority female	0.00	17.80	0.00 ****
M/WBE total	0.00	49.19	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Railroad Rolling Stock Manufacturing (NAICS 3365)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	1.35	0.00	
Minority	1.35	0.00	
Nonminority female	40.31	0.00	
M/WBE total	41.66	0.00	
<b>Water, Sewage and Other Systems (NAICS 2213)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	50.00	0.00 ****
M/WBE total	0.00	50.00	0.00 ****
<b>Other Professional, Scientific, and Technical Services (NAICS 5419)</b>			
African American	0.00	2.53	0.00 ****
Hispanic	70.36	17.12	
Asian	6.35	4.32	
Native American	0.00	2.70	0.00 ****
Minority	76.71	26.67	
Nonminority female	4.20	29.92	14.04 ****
M/WBE total	80.91	56.60	
<b>Other Support Services (NAICS 5619)</b>			
African American	0.00	18.71	0.00 ****
Hispanic	0.00	2.45	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.02	0.00
Minority	0.00	23.75	0.00 ****
Nonminority female	1.52	28.54	5.31 ****
M/WBE total	1.52	52.30	2.90 ****
<b>Depository Credit Intermediation (NAICS 5221)</b>			
African American	0.00	0.19	0.00
Hispanic	0.00	0.00	0.00
Asian	0.00	0.42	0.00
Native American	0.00	0.00	0.00
Minority	0.00	0.61	0.00
Nonminority female	0.00	0.44	0.00
M/WBE total	0.00	1.06	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	11.69	0.00 ****
Hispanic	0.00	4.81	0.00 **
Asian	0.00	1.66	0.00
Native American	0.00	0.01	0.00
Minority	0.00	18.18	0.00 ****
Nonminority female	0.00	20.62	0.00 ****
M/WBE total	0.00	38.79	0.00 ****
Legal Services (NAICS 5411)			
African American	3.70	5.16	71.73
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	0.26	0.00
Native American	0.00	0.04	0.00
Minority	3.70	9.00	41.14
Nonminority female	17.96	21.42	83.84
M/WBE total	21.66	30.42	71.21
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	6.59	0.00 ****
Hispanic	0.03	1.32	1.98 ****
Asian	0.00	6.15	0.00 ****
Native American	0.00	1.10	0.00 ****
Minority	0.03	15.17	0.17 ****
Nonminority female	0.32	12.95	2.50 ****
M/WBE total	0.35	28.12	1.24 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	2.69	0.00 ****
Hispanic	0.00	3.52	0.00 ****
Asian	0.00	2.64	0.00 ****
Native American	0.00	1.09	0.00 ****
Minority	0.00	9.94	0.00 ****
Nonminority female	0.12	7.69	1.58 ****
M/WBE total	0.12	17.63	0.69 ****
Local Messengers and Local Delivery (NAICS 4922)			
African American	0.00	13.55	0.00 ****
Hispanic	0.00	3.26	0.00
Asian	0.81	4.98	16.18
Native American	0.00	0.78	0.00
Minority	0.81	22.57	3.57 *
Nonminority female	0.00	15.17	0.00 ****
M/WBE total	0.81	37.75	2.14 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	12.07	0.00 ****
Hispanic	0.00	1.90	0.00 ****
Asian	1.20	3.00	40.04 ***
Native American	0.00	0.46	0.00 ****
Minority	1.20	17.43	6.89 ****
Nonminority female	3.54	12.11	29.19 ****
M/WBE total	4.74	29.54	16.03 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	3.17	14.52	21.85 ***
Hispanic	0.00	3.33	0.00 ****
Asian	0.00	2.18	0.00 ****
Native American	0.00	0.10	0.00
Minority	3.17	20.14	15.75 ****
Nonminority female	7.51	25.68	29.24 ****
M/WBE total	10.68	45.82	23.31 ****
Scientific Research and Development Services (NAICS 5417)			
African American	9.12	4.70	
Hispanic	0.00	0.51	0.00 **
Asian	0.84	3.49	24.12
Native American	0.00	1.76	0.00 ****
Minority	9.96	10.46	95.24
Nonminority female	10.89	6.25	
M/WBE total	20.86	16.71	
Facilities Support Services (NAICS 5612)			
African American	0.00	26.39	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	1.21	2.52	47.98
Native American	0.00	1.15	0.00 ***
Minority	1.21	33.83	3.57 ****
Nonminority female	90.87	9.10	
M/WBE total	92.08	42.92	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	4.19	13.33	31.42
Hispanic	0.81	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	5.00	13.33	37.51
Nonminority female	0.12	0.00	
M/WBE total	5.12	13.33	38.42

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Repair and Maintenance (NAICS 8111)			
African American	73.95	10.50	
Hispanic	6.07	7.20	84.38
Asian	0.00	4.63	0.00 ****
Native American	0.00	1.53	0.00 ****
Minority	80.02	23.86	
Nonminority female	0.08	9.22	0.82 ****
M/WBE total	80.09	33.08	
Other Information Services (NAICS 5191)			
African American	0.00	13.45	0.00 ****
Hispanic	0.00	0.74	0.00 ****
Asian	0.00	7.00	0.00 ****
Native American	0.00	5.97	0.00 ****
Minority	0.00	27.16	0.00 ****
Nonminority female	0.00	11.26	0.00 ****
M/WBE total	0.00	38.42	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	5.49	0.00 ***
Hispanic	0.00	3.55	0.00
Asian	0.00	4.00	0.00 ***
Native American	0.00	0.06	0.00
Minority	0.00	13.10	0.00 ****
Nonminority female	0.00	3.25	0.00
M/WBE total	0.00	16.35	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	47.22	21.33	
Hispanic	0.00	1.91	0.00 **
Asian	0.00	5.77	0.00 ****
Native American	0.00	0.14	0.00
Minority	47.22	29.16	
Nonminority female	0.24	15.34	1.54 ****
M/WBE total	47.46	44.50	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	5.93	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.50	0.00 ****
Native American	1.39	0.03	
Minority	1.39	6.46	21.45 ****
Nonminority female	0.00	5.21	0.00 ****
M/WBE total	1.39	11.67	11.88 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Logging (NAICS 1133)			
African American	0.00	2.24	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.24	0.00
Nonminority female	0.00	26.78	0.00 ****
M/WBE total	0.00	29.02	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	27.16	8.17	
Hispanic	0.00	2.71	0.00 ****
Asian	7.73	6.79	
Native American	1.89	3.14	60.29
Minority	36.79	20.81	
Nonminority female	0.00	18.47	0.00 ****
M/WBE total	36.79	39.28	93.65
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	5.14	0.00 ****
Hispanic	0.00	0.05	0.00
Asian	1.04	0.10	
Native American	0.00	0.10	0.00
Minority	1.04	5.39	19.37 ***
Nonminority female	0.00	2.22	0.00 ****
M/WBE total	1.04	7.61	13.71 ****
Vending Machine Operators (NAICS 4542)			
African American	7.05	21.89	32.19
Hispanic	0.00	0.72	0.00
Asian	0.00	4.46	0.00 ****
Native American	0.00	0.01	0.00
Minority	7.05	27.07	26.03
Nonminority female	0.00	7.43	0.00 ****
M/WBE total	7.05	34.49	20.43
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.89	13.59	6.53 ****
Hispanic	12.36	3.09	
Asian	6.67	3.70	
Native American	0.00	0.38	0.00 ****
Minority	19.92	20.75	96.01
Nonminority female	5.35	11.87	45.04 ****
M/WBE total	25.27	32.62	77.46 ***

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.41	6.10	6.65 ****
Hispanic	0.00	2.02	0.00 ****
Asian	0.01	3.22	0.18 ****
Native American	0.00	0.78	0.00 ****
Minority	0.41	12.11	3.40 ****
Nonminority female	25.70	10.34	
M/WBE total	26.11	22.45	
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.17	0.00 ****
Hispanic	0.48	6.74	7.05 ****
Asian	0.00	4.46	0.00 ****
Native American	4.17	2.09	
Minority	4.65	25.46	18.25 ****
Nonminority female	0.00	10.01	0.00 ****
M/WBE total	4.65	35.47	13.10 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	0.94	3.41	27.52
Native American	0.00	0.45	0.00 ****
Minority	0.94	14.61	6.41 ****
Nonminority female	7.80	10.28	75.89
M/WBE total	8.74	24.89	35.12 **
Outpatient Care Centers (NAICS 6214)			
African American	0.39	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.39	0.00	
Nonminority female	0.00	12.93	0.00 ****
M/WBE total	0.39	12.93	3.00
Automobile Dealers (NAICS 4411)			
African American	0.00	4.17	0.00 ****
Hispanic	0.00	2.71	0.00 ****
Asian	0.00	2.96	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	9.89	0.00 ****
Nonminority female	0.00	10.16	0.00 ****
M/WBE total	0.00	20.05	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	5.95	0.00 ****
Hispanic	0.00	2.11	0.00 ****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00 ****
Nonminority female	0.00	3.20	0.00 ****
M/WBE total	0.00	11.68	0.00 ****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	6.88	0.00 ****
Hispanic	8.72	5.24	
Asian	0.00	3.78	0.00 ****
Native American	0.00	2.66	0.00 ****
Minority	8.72	18.56	47.00 ***
Nonminority female	3.17	11.70	27.13 ****
M/WBE total	11.90	30.26	39.31 ****
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	2.97	11.62	25.56
Hispanic	0.00	4.08	0.00 ****
Asian	0.00	5.30	0.00 ****
Native American	0.00	0.82	0.00
Minority	2.97	21.82	13.61
Nonminority female	0.00	15.09	0.00 ****
M/WBE total	2.97	36.91	8.05 **
Software Publishers (NAICS 5112)			
African American	0.04	11.92	0.35 ****
Hispanic	0.00	3.54	0.00 ****
Asian	1.96	8.00	24.43 ***
Native American	0.00	0.28	0.00 ****
Minority	2.00	23.74	8.41 ****
Nonminority female	0.00	13.22	0.00 ****
M/WBE total	2.00	36.96	5.40 ****
Colleges, Universities, and Professional Schools (NAICS 6113)			
African American	0.00	10.98	0.00
Hispanic	0.00	3.89	0.00
Asian	0.00	5.08	0.00
Native American	0.00	0.78	0.00
Minority	0.00	20.74	0.00 **
Nonminority female	0.00	14.37	0.00 **
M/WBE total	0.00	35.10	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	9.57	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	0.00	2.39	0.00 ****
Native American	0.00	0.90	0.00 ****
Minority	0.00	14.85	0.00 ****
Nonminority female	3.59	9.66	37.18
M/WBE total	3.59	24.51	14.66 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	2.59	0.00 ****
Hispanic	0.00	3.52	0.00 ****
Asian	0.00	1.66	0.00 **
Native American	0.00	0.48	0.00
Minority	0.00	8.25	0.00 ****
Nonminority female	0.00	4.74	0.00 ****
M/WBE total	0.00	13.00	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	0.13	0.00
Hispanic	0.00	1.43	0.00 **
Asian	0.00	10.56	0.00 ****
Native American	0.00	3.60	0.00 ****
Minority	0.00	15.72	0.00 ****
Nonminority female	0.00	9.94	0.00 ****
M/WBE total	0.00	25.65	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	83.50	2.43	
Hispanic	0.00	0.82	0.00
Asian	0.00	0.83	0.00
Native American	0.00	0.01	0.00
Minority	83.50	4.08	
Nonminority female	0.00	8.60	0.00 ****
M/WBE total	83.50	12.68	
General Freight Trucking (NAICS 4841)			
African American	0.00	14.27	0.00 ****
Hispanic	0.00	4.15	0.00 ****
Asian	0.00	5.16	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	24.42	0.00 ****
Nonminority female	51.70	15.91	
M/WBE total	51.70	40.33	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Restaurants and Other Eating Places (NAICS 7225)</b>			
African American	0.00	2.73	0.00 ***
Hispanic	0.00	2.77	0.00 ***
Asian	0.00	8.55	0.00 ****
Native American	0.00	0.08	0.00
Minority	0.00	14.13	0.00 ****
Nonminority female	0.00	8.22	0.00 ****
M/WBE total	0.00	22.34	0.00 ****
<b>Specialty Food Stores (NAICS 4452)</b>			
African American	0.00	0.07	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	1.68	0.00
Native American	0.00	0.00	0.00
Minority	0.00	1.78	0.00
Nonminority female	0.00	21.47	0.00 ****
M/WBE total	0.00	23.25	0.00 ****
<b>Cattle Ranching and Farming (NAICS 1121)</b>			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	2.06	0.00 *
Minority	0.00	2.06	0.00 *
Nonminority female	0.00	17.26	0.00 ****
M/WBE total	0.00	19.31	0.00 ****
<b>Specialized Design Services (NAICS 5414)</b>			
African American	45.50	15.06	
Hispanic	0.00	3.76	0.00 ****
Asian	0.00	4.93	0.00 ****
Native American	0.00	1.27	0.00 ****
Minority	45.50	25.01	
Nonminority female	11.44	24.71	46.30 ***
M/WBE total	56.94	49.73	
<b>Gambling Industries (NAICS 7132)</b>			
African American	0.00	15.62	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	15.62	0.00 ****
Nonminority female	0.00	31.25	0.00 ****
M/WBE total	0.00	46.88	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	9.15	0.00 ****
Hispanic	0.00	3.17	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.66	0.00 **
Minority	0.00	16.97	0.00 ****
Nonminority female	0.00	12.53	0.00 ****
M/WBE total	0.00	29.49	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	8.77	0.00 ****
Hispanic	0.00	2.81	0.00 ****
Asian	44.20	0.97	
Native American	0.00	0.00	
Minority	44.20	12.54	
Nonminority female	0.00	22.25	0.00 ****
M/WBE total	44.20	34.80	
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	11.97	0.00 ****
Asian	0.00	0.31	0.00
Native American	0.00	0.06	0.00
Minority	0.00	21.07	0.00 ****
Nonminority female	0.00	16.15	0.00 ****
M/WBE total	0.00	37.22	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	6.12	0.00 ****
Hispanic	0.00	0.11	0.00
Asian	0.00	0.23	0.00 ***
Native American	0.00	3.52	0.00 ****
Minority	0.00	9.99	0.00 ****
Nonminority female	17.16	17.36	98.86
M/WBE total	17.16	27.34	62.76 ***
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	12.97	0.00 ****
Hispanic	0.00	2.87	0.00 ****
Asian	53.46	11.06	
Native American	0.00	1.29	0.00 ****
Minority	53.46	28.19	
Nonminority female	0.00	16.05	0.00 ****
M/WBE total	53.46	44.24	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	12.13	0.00 ****
Hispanic	0.00	4.00	0.00 ****
Asian	0.00	5.45	0.00 ****
Native American	0.00	0.87	0.00 ***
Minority	0.00	22.44	0.00 ****
Nonminority female	0.00	16.22	0.00 ****
M/WBE total	0.00	38.66	0.00 ****
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	7.69	0.00 ****
Hispanic	0.00	2.63	0.00 ****
Asian	0.00	5.59	0.00 ****
Native American	0.00	0.66	0.00
Minority	0.00	16.57	0.00 ****
Nonminority female	0.00	10.19	0.00 ****
M/WBE total	0.00	26.75	0.00 ****
Offices of Real Estate Agents and Brokers (NAICS 5312)			
African American	0.00	7.84	0.00 ****
Hispanic	0.00	1.56	0.00
Asian	0.00	4.25	0.00 **
Native American	0.00	0.33	0.00
Minority	0.00	13.98	0.00 ****
Nonminority female	0.00	18.14	0.00 ****
M/WBE total	0.00	32.12	0.00 ****
Other Financial Investment Activities (NAICS 5239)			
African American	0.00	11.69	0.00 ****
Hispanic	0.00	3.70	0.00 ****
Asian	0.00	5.05	0.00 ****
Native American	0.00	0.82	0.00
Minority	0.00	21.26	0.00 ****
Nonminority female	0.00	15.25	0.00 ****
M/WBE total	0.00	36.52	0.00 ****
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	10.96	0.00 ****
Hispanic	0.00	3.98	0.00 ****
Asian	0.00	5.60	0.00 ****
Native American	0.00	0.75	0.00 **
Minority	0.00	21.29	0.00 ****
Nonminority female	0.00	13.75	0.00 ****
M/WBE total	0.00	35.04	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	4.21	0.00 ****
Hispanic	0.00	0.08	0.00 ****
Asian	0.00	0.12	0.00 ****
Native American	0.00	3.80	0.00 ****
Minority	0.00	8.22	0.00 ****
Nonminority female	2.89	7.76	37.30 ****
M/WBE total	2.89	15.98	18.12 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	9.21	0.00 ****
Hispanic	0.00	2.65	0.00 **
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	17.03	0.00 ****
Nonminority female	0.00	12.44	0.00 ****
M/WBE total	0.00	29.48	0.00 ****
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)			
African American	0.00	14.25	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	0.00	4.97	0.00 ****
Native American	0.00	1.04	0.00
Minority	0.00	24.02	0.00 ****
Nonminority female	0.00	19.46	0.00 ****
M/WBE total	0.00	43.48	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	19.38	24.84	78.01
Hispanic	0.00	7.48	0.00 ****
Asian	0.00	1.87	0.00 ****
Native American	0.00	0.12	0.00 ****
Minority	19.38	34.32	56.47 ****
Nonminority female	38.81	11.65	
M/WBE total	58.19	45.97	
Nondepository Credit Intermediation (NAICS 5222)			
African American	0.00	8.16	0.00 ****
Hispanic	0.00	2.68	0.00 ****
Asian	0.00	3.51	0.00 ****
Native American	0.00	0.57	0.00
Minority	0.00	14.92	0.00 ****
Nonminority female	0.00	10.62	0.00 ****
M/WBE total	0.00	25.53	0.00 ****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.11. Industry Group Utilization, Availability, and Disparity Results for State of Maryland CSE Contracting (Dollars Awarded)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	0.11	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.08	0.00
Native American	0.00	0.01	0.00
Minority	0.00	0.25	0.00
Nonminority female	0.00	0.16	0.00
M/WBE total	0.00	0.41	0.00
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	2.03	8.67	23.41 ****
Hispanic	0.00	1.43	0.00 ****
Asian	15.01	5.44	
Native American	0.00	0.38	0.00 ****
Minority	17.04	15.92	
Nonminority female	1.95	11.26	17.35 ****
M/WBE total	18.99	27.17	69.88 ***
Automobile Dealers (NAICS 4411)			
African American	0.09	4.17	2.15 ****
Hispanic	0.00	2.71	0.00 ****
Asian	0.00	2.96	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.09	9.89	0.91 ****
Nonminority female	1.32	10.16	12.99 ****
M/WBE total	1.41	20.05	7.03 ****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.32	6.23	5.11 ****
Hispanic	0.00	4.13	0.00 ****
Asian	0.00	7.07	0.00 ****
Native American	0.00	1.19	0.00 ****
Minority	0.32	18.62	1.71 ****
Nonminority female	4.93	6.46	76.37
M/WBE total	5.25	25.08	20.95 ***
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.57	0.00 ****
Hispanic	9.89	5.42	
Asian	1.98	4.23	46.69
Native American	0.00	1.22	0.00 ****
Minority	11.87	19.44	61.06
Nonminority female	1.48	16.08	9.22 ****
M/WBE total	13.35	35.52	37.58 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Aerospace Product and Parts Manufacturing (NAICS 3364)</b>			
African American	0.00	2.40	0.00 ****
Hispanic	0.02	0.28	7.46
Asian	0.00	0.03	0.00
Native American	0.00	0.07	0.00
Minority	0.02	2.79	0.74
Nonminority female	0.00	3.99	0.00 ****
M/WBE total	0.02	6.78	0.31 ****
<b>Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)</b>			
African American	0.00	2.05	0.00 ****
Hispanic	0.00	0.60	0.00 ****
Asian	0.00	1.30	0.00 ****
Native American	0.34	0.02	
Minority	0.34	3.96	8.70 ****
Nonminority female	0.02	9.20	0.23 ****
M/WBE total	0.37	13.16	2.78 ****
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.33	0.00 ****
Hispanic	0.00	1.70	0.00 ****
Asian	0.00	3.25	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.00	10.96	0.00 ****
Nonminority female	0.73	11.48	6.35 ****
M/WBE total	0.73	22.44	3.25 ****
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.06	9.50	0.62 ****
Hispanic	0.00	3.00	0.00 ****
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.06	17.74	0.33 ****
Nonminority female	0.00	12.18	0.00 ****
M/WBE total	0.06	29.92	0.20 ****
<b>Special Food Services (NAICS 7223)</b>			
African American	0.00	16.60	0.00 ****
Hispanic	0.00	0.53	0.00 ****
Asian	21.58	3.87	
Native American	0.00	0.11	0.00
Minority	21.58	21.12	
Nonminority female	0.00	2.55	0.00 ****
M/WBE total	21.58	23.67	91.14

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Natural Gas Distribution (NAICS 2212)			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	4.87	0.00 ****
Native American	0.00	0.00	
Minority	0.00	10.50	0.00 ****
Nonminority female	0.00	0.00	
M/WBE total	0.00	10.50	0.00 ****
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.51	0.00 ****
Hispanic	0.00	1.96	0.00 ****
Asian	0.00	2.93	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.00	10.08	0.00 ****
Nonminority female	1.64	9.21	17.85 ****
M/WBE total	1.64	19.30	8.52 ****
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	5.09	0.00 ****
Hispanic	0.00	7.48	0.00 ****
Asian	0.00	1.80	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	14.37	0.00 ****
Nonminority female	0.02	14.86	0.16 ****
M/WBE total	0.02	29.23	0.08 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.26	6.29	4.10 **
Hispanic	0.00	0.03	0.00
Asian	9.61	1.59	
Native American	0.00	0.01	0.00
Minority	9.87	7.92	
Nonminority female	29.71	11.88	
M/WBE total	39.57	19.80	
Computer Systems Design and Related Services (NAICS 5415)			
African American	0.16	16.18	0.97 ****
Hispanic	6.12	3.55	
Asian	3.97	14.71	27.02 ****
Native American	0.00	1.24	0.00 ****
Minority	10.25	35.69	28.73 ****
Nonminority female	1.81	12.59	14.40 ****
M/WBE total	12.07	48.27	24.99 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	0.00	8.59	0.00 ****
Hispanic	0.00	0.27	0.00 ****
Asian	0.00	5.53	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	14.52	0.00 ****
Nonminority female	0.00	11.38	0.00 ****
M/WBE total	0.00	25.90	0.00 ****
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	28.24	9.18	
Hispanic	1.49	4.77	31.13 ****
Asian	0.00	1.55	0.00 ****
Native American	0.00	0.66	0.00 ****
Minority	29.73	16.16	
Nonminority female	1.51	12.42	12.17 ****
M/WBE total	31.24	28.58	
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	7.80	0.00 ****
Hispanic	0.00	3.73	0.00 ****
Asian	0.00	1.66	0.00 ****
Native American	0.00	1.08	0.00 ****
Minority	0.00	14.27	0.00 ****
Nonminority female	0.00	21.77	0.00 ****
M/WBE total	0.00	36.04	0.00 ****
<b>Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)</b>			
African American	4.24	2.51	
Hispanic	0.00	3.86	0.00 ****
Asian	0.00	2.18	0.00 ****
Native American	0.00	1.29	0.00 ****
Minority	4.24	9.83	43.16 ***
Nonminority female	0.00	7.26	0.00 ****
M/WBE total	4.24	17.09	24.83 ****
<b>Computer and Peripheral Equipment Manufacturing (NAICS 3341)</b>			
African American	0.00	13.60	0.00 ****
Hispanic	0.00	3.56	0.00 ****
Asian	0.03	6.07	0.46 ****
Native American	0.00	0.95	0.00 ****
Minority	0.03	24.18	0.12 ****
Nonminority female	0.00	16.37	0.00 ****
M/WBE total	0.03	40.55	0.07 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Software Publishers (NAICS 5112)			
African American	1.13	11.92	9.45 ****
Hispanic	0.00	3.54	0.00 ****
Asian	3.51	8.00	43.90
Native American	0.00	0.28	0.00 ****
Minority	4.64	23.74	19.54 ****
Nonminority female	1.16	13.22	8.78 ****
M/WBE total	5.80	36.96	15.69 ****
Printing and Related Support Activities (NAICS 3231)			
African American	0.02	4.82	0.31 ****
Hispanic	0.00	1.60	0.00 ****
Asian	0.05	5.27	1.03 ****
Native American	0.00	0.98	0.00 ****
Minority	0.07	12.67	0.55 ****
Nonminority female	8.62	17.92	48.07
M/WBE total	8.69	30.59	28.39 **
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.28	0.00 ****
Hispanic	0.00	0.02	0.00
Asian	0.00	1.53	0.00 ****
Native American	0.00	0.94	0.00 ****
Minority	0.00	3.77	0.00 ****
Nonminority female	0.00	7.69	0.00 ****
M/WBE total	0.00	11.47	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	2.51	0.00 ****
Hispanic	0.00	2.67	0.00 ****
Asian	0.00	1.52	0.00 ****
Native American	2.80	0.55	
Minority	2.80	7.26	38.52
Nonminority female	0.00	4.27	0.00 ****
M/WBE total	2.80	11.52	24.26

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Health and Personal Care Stores (NAICS 4461)			
African American	0.00	13.34	0.00 ****
Hispanic	0.00	2.90	0.00 ****
Asian	0.00	4.68	0.00 ****
Native American	0.00	1.27	0.00 ****
Minority	0.00	22.20	0.00 ****
Nonminority female	0.00	10.11	0.00 ****
M/WBE total	0.00	32.31	0.00 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	10.49	0.00 ****
Hispanic	0.00	1.44	0.00 ****
Asian	0.00	1.47	0.00 ****
Native American	0.00	0.12	0.00 ****
Minority	0.00	13.52	0.00 ****
Nonminority female	0.00	25.78	0.00 ****
M/WBE total	0.00	39.30	0.00 ****
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	50.00	0.00 ****
M/WBE total	0.00	50.00	0.00 ****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.68	0.00 ****
Hispanic	0.00	0.96	0.00 ****
Asian	0.00	4.36	0.00 ****
Native American	0.00	0.39	0.00 ****
Minority	0.00	17.40	0.00 ****
Nonminority female	0.00	16.07	0.00 ****
M/WBE total	0.00	33.47	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	1.33	0.00 ****
Hispanic	0.00	0.05	0.00 ****
Asian	0.00	2.79	0.00 ****
Native American	0.00	0.08	0.00 ****
Minority	0.00	4.24	0.00 ****
Nonminority female	0.40	4.45	8.98 ****
M/WBE total	0.40	8.69	4.60 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.32	14.33	2.26 ****
Hispanic	22.54	1.59	
Asian	0.01	1.28	0.63 ***
Native American	0.00	0.31	0.00
Minority	22.87	17.51	
Nonminority female	0.04	23.00	0.18 ****
M/WBE total	22.91	40.51	56.56
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	0.85	0.00
Hispanic	0.00	0.08	0.00
Asian	0.00	4.32	0.00 ****
Native American	0.00	0.02	0.00
Minority	0.00	5.27	0.00 ****
Nonminority female	0.00	1.01	0.00
M/WBE total	0.00	6.27	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	0.16	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	11.72	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	11.94	0.00 ****
Nonminority female	0.00	0.21	0.00
M/WBE total	0.00	12.15	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.32	13.59	2.35 ****
Hispanic	0.00	3.09	0.00 ****
Asian	0.00	3.70	0.00 ****
Native American	0.00	0.38	0.00 ****
Minority	0.32	20.75	1.54 ****
Nonminority female	0.34	11.87	2.90 ****
M/WBE total	0.66	32.62	2.04 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	8.43	0.00 ****
Hispanic	0.00	1.14	0.00 ****
Asian	0.00	1.41	0.00 ****
Native American	0.00	1.59	0.00 ****
Minority	0.00	12.57	0.00 ****
Nonminority female	24.75	16.75	
M/WBE total	24.75	29.31	84.42
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	11.44	0.00 ****
Hispanic	0.00	3.75	0.00 ****
Asian	0.00	5.61	0.00 ****
Native American	0.00	0.80	0.00 ****
Minority	0.00	21.60	0.00 ****
Nonminority female	0.00	15.14	0.00 ****
M/WBE total	0.00	36.74	0.00 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	5.98	0.00 ****
Hispanic	0.00	3.35	0.00 ****
Asian	0.00	1.90	0.00 ****
Native American	0.00	0.36	0.00 ****
Minority	0.00	11.59	0.00 ****
Nonminority female	0.00	10.35	0.00 ****
M/WBE total	0.00	21.94	0.00 ****
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	8.81	0.00 ****
Hispanic	0.00	11.77	0.00 ****
Asian	0.00	0.42	0.00
Native American	0.00	0.08	0.00
Minority	0.00	21.08	0.00 ****
Nonminority female	0.00	16.23	0.00 ****
M/WBE total	0.00	37.31	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	9.50	10.35	91.87
Hispanic	0.00	6.85	0.00 ****
Asian	0.00	5.14	0.00 ****
Native American	0.00	1.33	0.00 ****
Minority	9.50	23.66	40.17 ***
Nonminority female	0.00	9.47	0.00 ****
M/WBE total	9.50	33.13	28.69 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Freight Trucking (NAICS 4842)			
African American	8.97	24.84	36.12 ****
Hispanic	5.91	7.48	79.04
Asian	0.00	1.87	0.00 ****
Native American	0.00	0.12	0.00 ****
Minority	14.89	34.32	43.37 ****
Nonminority female	13.15	11.65	
M/WBE total	28.03	45.97	60.98 ****
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	5.92	0.00 ****
Hispanic	0.00	0.94	0.00 ****
Asian	0.00	4.17	0.00 ****
Native American	0.00	0.24	0.00 ****
Minority	0.00	11.27	0.00 ****
Nonminority female	0.00	16.83	0.00 ****
M/WBE total	0.00	28.09	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	6.08	6.87	88.56
Hispanic	0.41	2.03	20.17 ****
Asian	0.38	5.02	7.59 ****
Native American	0.00	1.45	0.00 ****
Minority	6.87	15.37	44.71 ****
Nonminority female	3.32	9.88	33.62 ****
M/WBE total	10.19	25.25	40.37 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	7.68	0.00 ****
Hispanic	0.00	3.45	0.00 ****
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.82	0.00 ****
Minority	0.00	16.49	0.00 ****
Nonminority female	5.59	15.02	37.18 ****
M/WBE total	5.59	31.51	17.72 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	2.08	0.00 ****
Hispanic	0.00	5.21	0.00 ****
Asian	0.00	0.96	0.00 ****
Native American	0.00	0.15	0.00
Minority	0.00	8.39	0.00 ****
Nonminority female	0.00	9.67	0.00 ****
M/WBE total	0.00	18.06	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Seafood Product Preparation and Packaging (NAICS 3117)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	100.00	52.38	
M/WBE total	100.00	52.38	
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	3.22	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.07	0.12	60.44
Native American	0.00	5.24	0.00 ****
Minority	0.07	8.64	0.84 ****
Nonminority female	46.58	14.21	
M/WBE total	46.65	22.85	
Electronics and Appliance Stores (NAICS 4431)			
African American	0.48	10.01	4.81 ****
Hispanic	1.68	0.31	
Asian	0.00	3.00	0.00 ****
Native American	0.00	0.29	0.00 ****
Minority	2.16	13.62	15.85 ****
Nonminority female	3.29	15.37	21.40 ****
M/WBE total	5.45	28.99	18.80 ****
Cattle Ranching and Farming (NAICS 1121)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	2.06	0.00 ****
Minority	0.00	2.06	0.00 ****
Nonminority female	0.00	17.26	0.00 ****
M/WBE total	0.00	19.31	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.30	0.00 ****
Hispanic	0.00	2.06	0.00 ****
Asian	16.89	1.32	
Native American	0.00	0.88	0.00 ****
Minority	16.89	9.55	
Nonminority female	35.04	12.35	
M/WBE total	51.94	21.90	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	18.32	0.00 ****
Hispanic	0.00	1.91	0.00
Asian	0.00	2.91	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	23.27	0.00 ****
Nonminority female	0.00	2.42	0.00
M/WBE total	0.00	25.69	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	4.78	0.00 ****
Hispanic	0.00	0.89	0.00 ****
Asian	0.00	5.29	0.00 ****
Native American	0.00	2.80	0.00 ****
Minority	0.00	13.77	0.00 ****
Nonminority female	0.43	5.71	7.57 ****
M/WBE total	0.43	19.48	2.22 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	14.59	0.00 ****
Hispanic	0.00	0.20	0.00
Asian	0.00	2.02	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	16.86	0.00 ****
Nonminority female	0.00	6.34	0.00 ****
M/WBE total	0.00	23.20	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	12.67	0.00 ****
Hispanic	0.00	2.25	0.00 ****
Asian	0.00	6.50	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	21.94	0.00 ****
Nonminority female	0.00	17.26	0.00 ****
M/WBE total	0.00	39.20	0.00 ****
Direct Selling Establishments (NAICS 4543)			
African American	0.00	2.43	0.00 ****
Hispanic	0.00	0.82	0.00 ****
Asian	0.00	0.83	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	4.08	0.00 ****
Nonminority female	0.00	8.60	0.00 ****
M/WBE total	0.00	12.68	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	1.31	0.00 ****
Hispanic	0.00	0.38	0.00
Asian	0.00	0.68	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	2.48	0.00 ****
Nonminority female	27.27	9.93	
M/WBE total	27.27	12.41	
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.89	0.00 ****
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	7.70	0.04 ****
Native American	0.00	0.02	0.00
Minority	0.00	19.91	0.02 ****
Nonminority female	5.78	14.10	40.98
M/WBE total	5.78	34.00	17.00
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	13.34	0.00 ****
Hispanic	0.00	3.93	0.00 ****
Asian	78.54	7.38	
Native American	0.00	0.65	0.00
Minority	78.54	25.30	
Nonminority female	0.00	17.53	0.00 ****
M/WBE total	78.54	42.83	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.61	0.00 ****
Hispanic	0.00	0.03	0.00
Asian	0.07	0.04	
Native American	0.00	0.51	0.00 ****
Minority	0.07	3.18	2.16 ****
Nonminority female	20.10	13.01	
M/WBE total	20.16	16.19	
Ship and Boat Building (NAICS 3366)			
African American	0.00	2.12	0.00
Hispanic	0.00	0.93	0.00
Asian	0.00	1.29	0.00
Native American	0.00	0.15	0.00
Minority	0.00	4.49	0.00 ****
Nonminority female	0.00	21.21	0.00 ****
M/WBE total	0.00	25.70	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	4.02	0.00 ****
Hispanic	0.00	0.42	0.00
Asian	0.00	0.77	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	5.35	0.00 ****
Nonminority female	2.84	8.44	33.70
M/WBE total	2.84	13.79	20.62 **
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	14.85	0.00 ****
Hispanic	0.00	3.29	0.00 ****
Asian	0.00	4.41	0.00 ****
Native American	0.00	0.88	0.00 ****
Minority	0.00	23.43	0.00 ****
Nonminority female	0.00	13.13	0.00 ****
M/WBE total	0.00	36.56	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	0.00	
Hispanic	0.00	7.87	0.00 ****
Asian	0.00	0.00	
Native American	0.00	7.87	0.00 ****
Minority	0.00	15.74	0.00 ****
Nonminority female	0.00	4.86	0.00 ****
M/WBE total	0.00	20.60	0.00 ****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	13.66	0.00 ****
Hispanic	0.00	3.65	0.00 ****
Asian	0.00	5.34	0.00 ****
Native American	0.00	0.97	0.00 ****
Minority	0.00	23.62	0.00 ****
Nonminority female	1.90	18.18	10.47 ****
M/WBE total	1.90	41.80	4.55 ****
Clothing Stores (NAICS 4481)			
African American	0.00	12.44	0.00 ****
Hispanic	0.00	3.59	0.00 ****
Asian	0.00	5.89	0.00 ****
Native American	0.00	1.00	0.00
Minority	0.00	22.92	0.00 ****
Nonminority female	26.91	18.59	
M/WBE total	26.91	41.51	64.83

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	3.33	13.47	24.75 ****
Hispanic	0.00	2.45	0.00 ****
Asian	1.32	4.92	26.83 ****
Native American	0.00	0.63	0.00 ****
Minority	4.65	21.46	21.69 ****
Nonminority female	4.29	13.82	31.07 ****
M/WBE total	8.95	35.28	25.36 ****
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	4.34	0.00 ****
Hispanic	0.00	0.78	0.00 ****
Asian	0.00	3.74	0.00 ****
Native American	0.00	0.06	0.00 ****
Minority	0.00	8.92	0.00 ****
Nonminority female	0.37	8.69	4.27 ****
M/WBE total	0.37	17.62	2.11 ****
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	9.75	0.00 ****
Hispanic	0.00	2.22	0.00 ****
Asian	0.00	9.21	0.00 ****
Native American	0.00	2.28	0.00 ****
Minority	0.00	23.46	0.00 ****
Nonminority female	0.17	11.71	1.43 ****
M/WBE total	0.17	35.17	0.48 ****
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	11.03	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.00	4.24	0.00 ****
Native American	0.00	0.85	0.00 ****
Minority	0.00	19.63	0.00 ****
Nonminority female	0.00	16.37	0.00 ****
M/WBE total	0.00	36.01	0.00 ****
Beverage Manufacturing (NAICS 3121)			
African American	0.00	13.77	0.00 ****
Hispanic	0.00	1.47	0.00 ****
Asian	0.00	8.45	0.00 ****
Native American	0.00	0.27	0.00 ****
Minority	0.00	23.97	0.00 ****
Nonminority female	3.82	5.24	72.92 ****
M/WBE total	3.82	29.20	13.07 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	2.30	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	0.00	2.74	0.00 ****
Native American	0.00	3.77	0.00 ****
Minority	0.00	10.80	0.00 ****
Nonminority female	1.50	17.88	8.38 ****
M/WBE total	1.50	28.68	5.23 ****
Employment Services (NAICS 5613)			
African American	1.39	10.81	12.89 ****
Hispanic	0.00	2.42	0.00 ****
Asian	0.00	3.97	0.00 ****
Native American	0.00	0.15	0.00 ****
Minority	1.39	17.35	8.03 ****
Nonminority female	58.70	13.45	
M/WBE total	60.09	30.79	
Electronic Shopping and Mail-Order Houses (NAICS 4541)			
African American	0.00	10.50	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	1.78	0.00
Native American	0.00	1.45	0.00
Minority	0.00	13.72	0.00 ****
Nonminority female	0.00	27.24	0.00 ****
M/WBE total	0.00	40.96	0.00 ****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	13.29	0.00 ****
Hispanic	0.00	0.80	0.00 ****
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.09	0.00
Minority	0.00	21.91	0.00 ****
Nonminority female	0.00	16.07	0.00 ****
M/WBE total	0.00	37.98	0.00 ****
Hunting and Trapping (NAICS 1142)			
African American	0.00	12.54	0.00 ****
Hispanic	0.00	4.35	0.00 ****
Asian	0.00	4.88	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	22.71	0.00 ****
Nonminority female	0.00	18.73	0.00 ****
M/WBE total	0.00	41.44	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	7.28	0.00 ****
Hispanic	0.21	8.37	2.49 ****
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.50	0.00 ****
Minority	0.21	21.36	0.97 ****
Nonminority female	0.00	12.11	0.00 ****
M/WBE total	0.21	33.47	0.62 ****
Other Information Services (NAICS 5191)			
African American	0.00	17.27	0.00 ****
Hispanic	0.00	0.83	0.00 ****
Asian	0.00	3.39	0.00 ****
Native American	0.00	0.44	0.00 ****
Minority	0.00	21.93	0.00 ****
Nonminority female	0.00	12.82	0.00 ****
M/WBE total	0.00	34.75	0.00 ****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	11.81	0.00 ****
Hispanic	0.00	3.65	0.00 ****
Asian	0.00	4.95	0.00 ****
Native American	0.00	0.92	0.00 ****
Minority	0.00	21.33	0.00 ****
Nonminority female	13.12	17.50	74.95
M/WBE total	13.12	38.83	33.79 *
Cut and Sew Apparel Manufacturing (NAICS 3152)			
African American	0.00	21.76	0.00 ****
Hispanic	0.00	2.95	0.00 ****
Asian	1.30	7.28	17.87 **
Native American	0.00	1.42	0.00 ****
Minority	1.30	33.41	3.89 ****
Nonminority female	0.00	16.12	0.00 ****
M/WBE total	1.30	49.53	2.62 ****
Glass and Glass Product Manufacturing (NAICS 3272)			
African American	0.00	9.34	0.00 ****
Hispanic	0.00	7.46	0.00 ****
Asian	0.00	3.51	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.00	20.99	0.00 ****
Nonminority female	0.00	17.66	0.00 ****
M/WBE total	0.00	38.65	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	7.05	0.00 ****
Hispanic	0.00	2.50	0.00 ****
Asian	0.00	3.26	0.00 ****
Native American	0.00	0.51	0.00
Minority	0.00	13.32	0.00 ****
Nonminority female	0.00	9.47	0.00 ****
M/WBE total	0.00	22.79	0.00 ****
Business Support Services (NAICS 5614)			
African American	0.00	19.11	0.00 ****
Hispanic	0.00	4.83	0.00 ****
Asian	0.00	4.34	0.00 ****
Native American	0.00	5.33	0.00 ****
Minority	0.00	33.61	0.00 ****
Nonminority female	17.98	15.31	
M/WBE total	17.98	48.92	36.76
Investigation and Security Services (NAICS 5616)			
African American	5.96	19.28	30.92 **
Hispanic	0.00	1.10	0.00 ****
Asian	0.00	6.28	0.00 ****
Native American	0.00	0.90	0.00 ****
Minority	5.96	27.56	21.63 ****
Nonminority female	0.00	11.87	0.00 ****
M/WBE total	5.96	39.43	15.12 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	12.73	0.00 ****
Hispanic	0.00	3.58	0.00 ****
Asian	0.00	5.21	0.00 ****
Native American	0.00	0.97	0.00 ****
Minority	0.00	22.49	0.00 ****
Nonminority female	0.00	17.70	0.00 ****
M/WBE total	0.00	40.19	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	0.00	30.32	0.00 ****
Hispanic	0.00	15.93	0.00 ****
Asian	0.00	7.11	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	53.42	0.00 ****
Nonminority female	51.83	4.93	
M/WBE total	51.83	58.36	88.81

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	15.50	0.00 ****
Hispanic	0.00	3.99	0.00 ****
Asian	0.00	6.26	0.00 ****
Native American	0.00	0.93	0.00 ****
Minority	0.00	26.68	0.00 ****
Nonminority female	0.00	16.36	0.00 ****
M/WBE total	0.00	43.04	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	0.13	0.00
Hispanic	0.00	1.43	0.00 ****
Asian	0.00	10.56	0.00 ****
Native American	0.00	3.60	0.00 ****
Minority	0.00	15.72	0.00 ****
Nonminority female	0.00	9.94	0.00 ****
M/WBE total	0.00	25.65	0.00 ****
Book Stores and News Dealers (NAICS 4512)			
African American	0.00	10.76	0.00 ****
Hispanic	0.00	3.28	0.00 ****
Asian	0.00	4.61	0.00 ****
Native American	0.00	0.93	0.00
Minority	0.00	19.58	0.00 ****
Nonminority female	0.00	17.70	0.00 ****
M/WBE total	0.00	37.29	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	3.11	0.00 ****
Hispanic	0.00	1.11	0.00 ****
Asian	0.00	1.44	0.00 ****
Native American	0.00	0.22	0.00
Minority	0.00	5.89	0.00 ****
Nonminority female	0.00	19.46	0.00 ****
M/WBE total	0.00	25.35	0.00 ****
Furniture Stores (NAICS 4421)			
African American	0.00	3.83	0.00 ****
Hispanic	0.00	0.05	0.00
Asian	0.00	0.52	0.00
Native American	0.00	1.19	0.00 ****
Minority	0.00	5.59	0.00 ****
Nonminority female	0.00	14.41	0.00 ****
M/WBE total	0.00	20.00	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	0.00	26.39	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	0.00	2.52	0.00 ****
Native American	0.00	1.15	0.00 ****
Minority	0.00	33.83	0.00 ****
Nonminority female	0.00	9.10	0.00 ****
M/WBE total	0.00	42.92	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	1.48	18.62	7.95 ****
Hispanic	0.00	4.83	0.00 ****
Asian	0.00	3.45	0.00 ****
Native American	0.00	1.64	0.00 ****
Minority	1.48	28.54	5.19 ****
Nonminority female	6.10	13.17	46.30 ****
M/WBE total	7.58	41.71	18.17 ****
Restaurants and Other Eating Places (NAICS 7225)			
African American	0.00	6.70	0.00 ****
Hispanic	0.00	3.27	0.00 ****
Asian	0.00	7.33	0.00 ****
Native American	0.00	0.45	0.00 ****
Minority	0.00	17.76	0.00 ****
Nonminority female	0.00	11.99	0.00 ****
M/WBE total	0.00	29.75	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	6.00	0.00 ****
Hispanic	0.00	2.00	0.00 ****
Asian	0.00	3.78	0.00 ****
Native American	0.00	0.90	0.00 ****
Minority	0.00	12.68	0.00 ****
Nonminority female	0.00	9.00	0.00 ****
M/WBE total	0.00	21.68	0.00 ****
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	18.21	0.00 ****
Hispanic	0.00	12.34	0.00 ****
Asian	0.00	3.80	0.00 ****
Native American	0.00	2.17	0.00 ****
Minority	0.00	36.52	0.00 ****
Nonminority female	0.00	13.75	0.00 ****
M/WBE total	0.00	50.27	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)</b>			
African American	0.00	11.52	0.00 ****
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	5.11	0.00 ****
Native American	0.00	0.88	0.00
Minority	0.00	21.42	0.00 ****
Nonminority female	0.00	16.73	0.00 ****
M/WBE total	0.00	38.14	0.00 ****
<b>Building Finishing Contractors (NAICS 2383)</b>			
African American	7.92	6.15	
Hispanic	5.48	10.87	50.44 ****
Asian	0.00	3.80	0.00 ****
Native American	0.00	0.08	0.00 ****
Minority	13.41	20.89	64.16 ****
Nonminority female	5.39	11.75	45.86 ****
M/WBE total	18.79	32.64	57.57 ****
<b>Local Messengers and Local Delivery (NAICS 4922)</b>			
African American	0.00	13.55	0.00 ****
Hispanic	0.00	3.26	0.00 ****
Asian	0.00	4.98	0.00 ****
Native American	0.00	0.78	0.00
Minority	0.00	22.57	0.00 ****
Nonminority female	0.00	15.17	0.00 ****
M/WBE total	0.00	37.75	0.00 ****
<b>Poultry and Egg Production (NAICS 1123)</b>			
African American	0.00	14.75	0.00 ****
Hispanic	0.00	3.62	0.00
Asian	0.00	4.77	0.00
Native American	0.00	1.05	0.00
Minority	0.00	24.19	0.00 ****
Nonminority female	0.00	18.06	0.00 ****
M/WBE total	0.00	42.25	0.00 ****
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	9.19	0.00 ****
Hispanic	0.00	4.44	0.00 ****
Asian	0.00	2.49	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	16.64	0.00 ****
Nonminority female	4.46	25.40	17.57 ****
M/WBE total	4.46	42.04	10.61 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	7.01	0.00 ****
Hispanic	0.00	1.36	0.00 ****
Asian	0.00	0.10	0.00
Native American	0.00	0.06	0.00
Minority	0.00	8.53	0.00 ****
Nonminority female	0.00	14.42	0.00 ****
M/WBE total	0.00	22.95	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	21.33	0.00 ****
Hispanic	0.00	1.91	0.00 ****
Asian	0.00	5.77	0.00 ****
Native American	0.00	0.14	0.00
Minority	0.00	29.16	0.00 ****
Nonminority female	0.00	15.34	0.00 ****
M/WBE total	0.00	44.50	0.00 ****
Specialty Food Stores (NAICS 4452)			
African American	0.00	0.07	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	1.68	0.00
Native American	0.00	0.00	0.00
Minority	0.00	1.78	0.00
Nonminority female	0.00	21.47	0.00 ****
M/WBE total	0.00	23.25	0.00 ****
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	5.95	0.00 ****
Hispanic	0.00	2.11	0.00 ****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00 ****
Nonminority female	0.00	3.20	0.00 ****
M/WBE total	0.00	11.68	0.00 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.00	29.55	0.00 ****
Hispanic	0.00	4.35	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.80	0.00
Minority	0.00	38.55	0.00 ****
Nonminority female	0.00	14.10	0.00 ****
M/WBE total	0.00	52.65	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	3.71	0.00 ****
Hispanic	0.00	1.33	0.00 ****
Asian	0.00	1.72	0.00 ****
Native American	0.00	0.27	0.00
Minority	0.00	7.03	0.00 ****
Nonminority female	0.00	9.48	0.00 ****
M/WBE total	0.00	16.51	0.00 ****
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	11.31	0.00 ****
Hispanic	0.00	3.88	0.00 ****
Asian	0.00	4.95	0.00 ****
Native American	0.00	0.87	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	3.59	16.53	21.69 ****
M/WBE total	3.59	37.55	9.55 ****
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	6.96	0.00 ****
Hispanic	0.00	1.58	0.00 ****
Asian	0.00	2.92	0.00 ****
Native American	0.00	1.97	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	22.65	0.00 ****
M/WBE total	0.00	36.08	0.00 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	9.21	0.00 ****
Hispanic	0.00	2.65	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	17.03	0.00 ****
Nonminority female	2.04	12.44	16.37 ****
M/WBE total	2.04	29.48	6.91 ****
Steel Product Manufacturing from Purchased Steel (NAICS 3312)			
African American	0.00	8.35	0.00 ****
Hispanic	0.00	2.98	0.00 ****
Asian	0.00	3.87	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	15.80	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
M/WBE total	0.00	26.83	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.17	0.00 ****
Hispanic	13.72	6.74	
Asian	0.00	4.46	0.00 ****
Native American	0.00	2.09	0.00 ****
Minority	13.72	25.46	53.91 ****
Nonminority female	0.00	10.01	0.00 ****
M/WBE total	13.72	35.47	38.69 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	13.30	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.00	5.43	0.00 ****
Native American	0.00	1.05	0.00
Minority	0.00	23.33	0.00 ****
Nonminority female	20.97	18.60	
M/WBE total	20.97	41.94	50.00 ***
Other Food Manufacturing (NAICS 3119)			
African American	0.00	13.20	0.00 ****
Hispanic	0.00	3.14	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	21.49	0.00 ****
Nonminority female	0.00	11.60	0.00 ****
M/WBE total	0.00	33.10	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.99	4.57	21.70
Hispanic	0.15	0.75	19.47
Asian	0.00	1.25	0.00
Native American	0.00	0.24	0.00
Minority	1.14	6.80	16.70
Nonminority female	0.00	60.43	0.00 ****
M/WBE total	1.14	67.24	1.69 ****
Utility System Construction (NAICS 2371)			
African American	0.00	9.16	0.00 ****
Hispanic	0.00	1.81	0.00 ****
Asian	0.00	2.38	0.00 ****
Native American	0.00	1.15	0.00 ****
Minority	0.00	14.49	0.00 ****
Nonminority female	0.00	10.41	0.00 ****
M/WBE total	0.00	24.90	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)</b>			
African American	0.00	8.61	0.00 ****
Hispanic	0.00	3.07	0.00 ****
Asian	0.00	4.00	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	16.29	0.00 ****
Nonminority female	0.00	11.37	0.00 ****
M/WBE total	0.00	27.66	0.00 ****
<b>Nondepository Credit Intermediation (NAICS 5222)</b>			
African American	0.00	9.69	0.00 ****
Hispanic	0.00	3.17	0.00 ****
Asian	0.00	3.79	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	17.28	0.00 ****
Nonminority female	0.00	11.80	0.00 ****
M/WBE total	0.00	29.08	0.00 ****
<b>Motion Picture and Video Industries (NAICS 5121)</b>			
African American	0.00	14.52	0.00 ****
Hispanic	0.00	3.33	0.00 ****
Asian	0.00	2.18	0.00 ****
Native American	0.00	0.10	0.00
Minority	0.00	20.14	0.00 ****
Nonminority female	0.00	25.68	0.00 ****
M/WBE total	0.00	45.82	0.00 ****
<b>Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)</b>			
African American	0.00	12.67	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	6.33	0.00 ****
Native American	0.00	0.00	
Minority	0.00	25.34	0.00 ****
Nonminority female	0.00	12.67	0.00 ****
M/WBE total	0.00	38.01	0.00 ****
<b>Vending Machine Operators (NAICS 4542)</b>			
African American	0.00	21.89	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	4.46	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	27.07	0.00 ****
Nonminority female	0.00	7.43	0.00 ****
M/WBE total	0.00	34.49	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Forging and Stamping (NAICS 3321)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	28.89	0.00 ****
M/WBE total	0.00	28.89	0.00 ****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00 ****
Minority	0.00	3.34	0.00 ****
Nonminority female	0.00	21.37	0.00 ****
M/WBE total	0.00	24.70	0.00 ****
Metalworking Machinery Manufacturing (NAICS 3335)			
African American	0.00	11.37	0.00 ****
Hispanic	0.00	3.73	0.00 ****
Asian	0.00	6.33	0.00 ****
Native American	0.00	1.09	0.00
Minority	0.00	22.52	0.00 ****
Nonminority female	0.66	17.49	3.76 ****
M/WBE total	0.66	40.00	1.64 ****
Other Support Services (NAICS 5619)			
African American	0.00	18.71	0.00 ****
Hispanic	0.00	2.45	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.02	0.00
Minority	0.00	23.75	0.00 ****
Nonminority female	20.15	28.54	70.57 *
M/WBE total	20.15	52.30	38.52 ****
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	10.39	0.00 ****
Hispanic	0.00	2.67	0.00 ****
Asian	0.00	4.75	0.00 ****
Native American	0.00	0.78	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	19.87	0.00 ****
M/WBE total	0.00	38.47	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	47.57	5.99	
Hispanic	0.54	3.58	15.19 ****
Asian	0.00	0.74	0.00 ****
Native American	0.00	1.60	0.00 ****
Minority	48.11	11.91	
Nonminority female	0.00	14.39	0.00 ****
M/WBE total	48.11	26.30	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	9.17	0.00 ****
Hispanic	0.00	2.80	0.00 ****
Asian	0.00	4.67	0.00 ****
Native American	0.00	1.29	0.00 ****
Minority	0.00	17.94	0.00 ****
Nonminority female	0.00	18.70	0.00 ****
M/WBE total	0.00	36.64	0.00 ****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	10.41	0.00
Hispanic	0.00	5.04	0.00
Asian	0.00	4.64	0.00
Native American	0.00	0.81	0.00
Minority	0.00	20.89	0.00 ****
Nonminority female	0.00	16.33	0.00 ****
M/WBE total	0.00	37.22	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	5.49	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.00	4.00	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	13.10	0.00 ****
Nonminority female	0.00	3.25	0.00 ****
M/WBE total	0.00	16.35	0.00 ****
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	8.80	0.00 ****
Hispanic	0.00	2.98	0.00 ****
Asian	8.54	4.32	
Native American	0.00	0.67	0.00
Minority	8.54	16.77	50.91
Nonminority female	0.00	12.90	0.00 ****
M/WBE total	8.54	29.67	28.78 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Offices of Physicians (NAICS 6211)			
African American	0.00	6.70	0.00 ****
Hispanic	0.00	2.32	0.00 ****
Asian	0.00	7.35	0.00 ****
Native American	0.00	3.95	0.00 ****
Minority	0.00	20.32	0.00 ****
Nonminority female	0.00	18.47	0.00 ****
M/WBE total	0.00	38.79	0.00 ****
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	5.88	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	3.64	0.00
Native American	0.00	0.55	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	0.00	7.86	0.00
M/WBE total	0.00	19.97	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	8.77	0.00 ****
Hispanic	0.00	2.81	0.00 ****
Asian	0.00	0.97	0.00 ****
Native American	0.00	0.00	
Minority	0.00	12.54	0.00 ****
Nonminority female	0.00	22.25	0.00 ****
M/WBE total	0.00	34.80	0.00 ****
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	11.39	0.00 ****
Hispanic	0.00	3.11	0.00 ****
Asian	0.00	12.61	0.00 ****
Native American	0.00	1.04	0.00 ****
Minority	0.00	28.16	0.00 ****
Nonminority female	0.00	17.52	0.00 ****
M/WBE total	0.00	45.68	0.00 ****
Animal Slaughtering and Processing (NAICS 3116)			
African American	0.00	13.43	0.00
Hispanic	0.00	3.69	0.00
Asian	0.00	4.90	0.00
Native American	0.00	0.81	0.00
Minority	0.00	22.83	0.00
Nonminority female	0.00	15.52	0.00
M/WBE total	0.00	38.35	0.00

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Furniture Related Product Manufacturing (NAICS 3379)			
African American	0.00	10.33	0.00 ****
Hispanic	0.00	3.69	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	19.55	0.00 ****
Nonminority female	0.00	13.65	0.00 ****
M/WBE total	0.00	33.20	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.71	0.00 ****
Hispanic	0.00	9.01	0.00 ****
Asian	0.00	0.15	0.00
Native American	0.00	1.78	0.00 ****
Minority	0.00	17.65	0.00 ****
Nonminority female	0.00	16.46	0.00 ****
M/WBE total	0.00	34.11	0.00 ****
Converted Paper Product Manufacturing (NAICS 3222)			
African American	0.00	15.00	0.00 ****
Hispanic	0.00	2.69	0.00
Asian	0.00	3.61	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	22.36	0.00 ****
Nonminority female	0.00	17.52	0.00 ****
M/WBE total	0.00	39.88	0.00 ****
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	4.29	0.00 ****
Hispanic	0.00	1.69	0.00
Asian	0.00	1.66	0.00
Native American	0.00	0.05	0.00
Minority	0.00	7.68	0.00 ****
Nonminority female	0.00	20.64	0.00 ****
M/WBE total	0.00	28.32	0.00 ****
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	18.41	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.00	0.13	0.00
Native American	0.00	0.13	0.00
Minority	0.00	18.73	0.00 ****
Nonminority female	0.00	14.64	0.00 ****
M/WBE total	0.00	33.38	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	0.00	3.41	0.00 ****
Native American	0.00	0.45	0.00 ****
Minority	0.00	14.61	0.00 ****
Nonminority female	0.00	10.28	0.00 ****
M/WBE total	0.00	24.89	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	10.47	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.14	4.61	2.98 *
Native American	0.00	0.83	0.00
Minority	0.14	19.41	0.71 ****
Nonminority female	8.54	15.87	53.80
M/WBE total	8.68	35.28	24.59 ****
Outpatient Care Centers (NAICS 6214)			
African American	0.00	0.00	
Hispanic	0.00	0.88	0.00
Asian	0.00	0.88	0.00
Native American	0.00	0.00	
Minority	0.00	1.77	0.00
Nonminority female	0.00	0.00	
M/WBE total	0.00	1.77	0.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00 ****
Hispanic	5.80	2.37	
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00 ****
Minority	5.80	6.61	87.68
Nonminority female	0.00	6.87	0.00 ****
M/WBE total	5.80	13.48	43.01
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	4.09	0.00 ****
Asian	0.00	7.34	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	29.44	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
M/WBE total	0.00	41.11	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Aquaculture (NAICS 1125)</b>			
African American	0.00	11.58	0.00 ****
Hispanic	0.00	3.90	0.00
Asian	0.00	5.12	0.00
Native American	0.00	0.91	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
M/WBE total	0.00	38.92	0.00 ****
<b>Farm Product Raw Material Merchant Wholesalers (NAICS 4245)</b>			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	3.79	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.89	0.00
Minority	0.00	23.06	0.00 ****
Nonminority female	80.08	16.57	
M/WBE total	80.08	39.63	
<b>Rubber Product Manufacturing (NAICS 3262)</b>			
African American	0.00	13.04	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	4.41	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.40	0.00 ****
Nonminority female	0.00	12.03	0.00 ****
M/WBE total	0.00	33.43	0.00 ****
<b>Depository Credit Intermediation (NAICS 5221)</b>			
African American	0.00	0.19	0.00
Hispanic	0.00	0.00	0.00
Asian	0.00	0.42	0.00
Native American	0.00	0.00	0.00
Minority	0.00	0.61	0.00
Nonminority female	0.00	0.44	0.00
M/WBE total	0.00	1.06	0.00 ****
<b>General Freight Trucking (NAICS 4841)</b>			
African American	0.00	14.27	0.00 ****
Hispanic	0.00	4.15	0.00 ****
Asian	0.00	5.16	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	24.42	0.00 ****
Nonminority female	51.75	15.91	
M/WBE total	51.75	40.33	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	15.37	0.00 ****
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	6.87	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	26.11	0.00 ****
Nonminority female	0.00	16.75	0.00 ****
M/WBE total	0.00	42.86	0.00 ****
Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
Other Telecommunications (NAICS 5179)			
African American	0.00	13.02	0.00 ****
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	5.24	0.00 ****
Native American	0.00	0.92	0.00
Minority	0.00	23.09	0.00 ****
Nonminority female	0.00	16.58	0.00 ****
M/WBE total	0.00	39.66	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	8.56	0.00 ****
Hispanic	0.00	0.75	0.00 ****
Asian	0.00	1.35	0.00 ****
Native American	0.14	0.07	
Minority	0.14	10.73	1.26 ****
Nonminority female	0.00	14.61	0.00 ****
M/WBE total	0.14	25.34	0.53 ****
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	11.67	0.00 ****
Hispanic	0.00	3.73	0.00 ****
Asian	0.00	4.95	0.00 ****
Native American	0.00	0.98	0.00 ****
Minority	0.00	21.33	0.00 ****
Nonminority female	41.36	19.25	
M/WBE total	41.36	40.58	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Cement and Concrete Product Manufacturing (NAICS 3273)</b>			
African American	0.00	2.25	0.00 ****
Hispanic	0.00	2.66	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.91	0.00 ****
Nonminority female	0.00	13.30	0.00 ****
M/WBE total	0.00	18.20	0.00 ****
<b>Travel Arrangement and Reservation Services (NAICS 5615)</b>			
African American	0.00	12.80	0.00 ****
Hispanic	0.00	3.83	0.00 ****
Asian	0.00	5.23	0.00 ****
Native American	0.00	1.02	0.00
Minority	0.00	22.89	0.00 ****
Nonminority female	14.57	18.97	76.79
M/WBE total	14.57	41.86	34.81
<b>Lime and Gypsum Product Manufacturing (NAICS 3274)</b>			
African American	0.00	7.65	0.00
Hispanic	0.00	2.73	0.00
Asian	0.00	3.55	0.00
Native American	0.00	0.55	0.00
Minority	0.00	14.48	0.00
Nonminority female	0.00	10.11	0.00
M/WBE total	0.00	24.59	0.00
<b>Support Activities for Animal Production (NAICS 1152)</b>			
African American	0.00	11.87	0.00
Hispanic	0.00	3.48	0.00
Asian	0.00	4.86	0.00
Native American	0.00	1.10	0.00
Minority	0.00	21.31	0.00 ****
Nonminority female	0.00	21.83	0.00 ****
M/WBE total	0.00	43.14	0.00 ****
<b>Legal Services (NAICS 5411)</b>			
African American	52.37	5.16	
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	0.26	0.00
Native American	0.00	0.04	0.00
Minority	52.37	9.00	
Nonminority female	34.86	21.42	
M/WBE total	87.23	30.42	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Educational Support Services (NAICS 6117)</b>			
African American	0.00	25.75	0.00 ****
Hispanic	0.00	0.71	0.00
Asian	0.00	3.31	0.00 ****
Native American	0.00	2.37	0.00 ****
Minority	0.00	32.14	0.00 ****
Nonminority female	0.00	10.40	0.00 ****
M/WBE total	0.00	42.54	0.00 ****
<b>Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)</b>			
African American	0.00	10.28	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.00	7.17	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	17.55	0.00 ****
Nonminority female	63.51	18.00	
M/WBE total	63.51	35.55	
<b>Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)</b>			
African American	0.00	6.87	0.00 ****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.07	0.00
Minority	0.00	7.05	0.00 ****
Nonminority female	0.00	8.03	0.00 ****
M/WBE total	0.00	15.08	0.00 ****
<b>Offices of Dentists (NAICS 6212)</b>			
African American	0.00	6.41	0.00 *
Hispanic	0.00	2.30	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	1.80	0.00
Minority	0.00	20.61	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
M/WBE total	0.00	38.15	0.00 ****
<b>Other Amusement and Recreation Industries (NAICS 7139)</b>			
African American	0.00	12.46	0.00 ****
Hispanic	0.00	3.80	0.00 ****
Asian	0.00	5.05	0.00 ****
Native American	0.00	0.95	0.00
Minority	0.00	22.26	0.00 ****
Nonminority female	0.00	18.00	0.00 ****
M/WBE total	0.00	40.26	0.00 ****

Source and Notes: See Table 6.4.

## Appendix E. Detailed Utilization, Availability & Disparity Tables

**Table AE.12. Industry Group Utilization, Availability, and Disparity Results for State of Maryland CSE Contracting (Dollars Paid)**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	0.04	0.00
Hispanic	0.00	0.01	0.00
Asian	0.00	0.03	0.00
Native American	0.00	0.00	0.00
Minority	0.00	0.09	0.00
Nonminority female	0.00	0.06	0.00
M/WBE total	0.00	0.15	0.00
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	1.51	9.15	16.51 ****
Hispanic	0.00	1.40	0.00 ****
Asian	15.50	5.29	
Native American	0.00	0.41	0.00 ****
Minority	17.01	16.24	
Nonminority female	2.05	11.23	18.21 ****
M/WBE total	19.05	27.47	69.36 ***
Automobile Dealers (NAICS 4411)			
African American	0.48	4.17	11.53 ****
Hispanic	0.00	2.71	0.00 ****
Asian	0.00	2.96	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.48	9.89	4.86 ****
Nonminority female	0.52	10.16	5.11 ****
M/WBE total	1.00	20.05	4.99 ****
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	2.40	0.00 ***
Hispanic	0.02	0.28	7.46
Asian	0.00	0.03	0.00
Native American	0.00	0.07	0.00
Minority	0.02	2.79	0.74
Nonminority female	0.00	3.99	0.00 ****
M/WBE total	0.02	6.78	0.31 ****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	8.90	0.00 ****
Hispanic	13.25	5.29	
Asian	0.83	4.48	18.41 ***
Native American	0.00	1.15	0.00 ****
Minority	14.08	19.83	71.01
Nonminority female	3.43	16.37	20.94 ****
M/WBE total	17.51	36.20	48.36 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigation, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.83	0.00 ****
Hispanic	0.00	0.69	0.00 ****
Asian	0.00	1.31	0.00 ****
Native American	0.39	0.01	
Minority	0.39	3.84	10.09 ****
Nonminority female	0.02	9.70	0.24 ****
M/WBE total	0.41	13.54	3.04 ****
Special Food Services (NAICS 7223)			
African American	0.00	16.58	0.00 ****
Hispanic	0.00	0.52	0.00 ****
Asian	21.84	3.88	
Native American	0.00	0.11	0.00
Minority	21.84	21.09	
Nonminority female	0.00	2.50	0.00 ****
M/WBE total	21.84	23.59	92.58
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.49	6.23	7.86 *
Hispanic	0.00	4.13	0.00 ****
Asian	0.00	7.07	0.00 ****
Native American	0.00	1.19	0.00 ****
Minority	0.49	18.62	2.63 ****
Nonminority female	6.37	6.46	98.52
M/WBE total	6.86	25.08	27.34 **
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	5.24	0.00 ****
Hispanic	0.00	6.97	0.00 ****
Asian	0.00	2.03	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	14.24	0.00 ****
Nonminority female	0.03	14.12	0.19 ****
M/WBE total	0.03	28.37	0.09 ****
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	0.00	4.56	0.00 ****
Hispanic	0.00	1.83	0.00 ****
Asian	0.00	2.84	0.00 ****
Native American	0.00	0.72	0.00 ****
Minority	0.00	9.95	0.00 ****
Nonminority female	1.96	9.18	21.34 ****
M/WBE total	1.96	19.13	10.24 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)</b>			
African American	0.00	5.34	0.00 ****
Hispanic	0.00	1.59	0.00 ****
Asian	0.00	3.77	0.00 ****
Native American	0.00	0.70	0.00 ****
Minority	0.00	11.39	0.00 ****
Nonminority female	1.03	11.30	9.10 ****
M/WBE total	1.03	22.69	4.53 ****
<b>Natural Gas Distribution (NAICS 2212)</b>			
African American	0.00	5.63	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	4.87	0.00 ****
Native American	0.00	0.00	
Minority	0.00	10.50	0.00 ****
Nonminority female	0.00	0.00	
M/WBE total	0.00	10.50	0.00 ****
<b>Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)</b>			
African American	0.09	9.50	0.98 ****
Hispanic	0.00	3.00	0.00 ****
Asian	0.00	4.55	0.00 ****
Native American	0.00	0.68	0.00 ****
Minority	0.09	17.74	0.53 ****
Nonminority female	0.00	12.18	0.00 ****
M/WBE total	0.09	29.92	0.31 ****
<b>Office Supplies, Stationery, and Gift Stores (NAICS 4532)</b>			
African American	0.30	6.29	4.77
Hispanic	0.00	0.03	0.00
Asian	1.03	1.59	64.98
Native American	0.00	0.01	0.00
Minority	1.33	7.92	16.85
Nonminority female	27.00	11.88	
M/WBE total	28.33	19.80	
<b>Computer Systems Design and Related Services (NAICS 5415)</b>			
African American	0.17	16.22	1.04 ****
Hispanic	6.60	3.53	
Asian	4.28	14.69	29.11 ****
Native American	0.00	1.24	0.00 ****
Minority	11.05	35.68	30.97 ****
Nonminority female	1.88	12.57	14.93 ****
M/WBE total	12.93	48.26	26.79 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Building Equipment Contractors (NAICS 2382)</b>			
African American	29.77	9.11	
Hispanic	0.00	4.75	0.00 ****
Asian	0.00	1.55	0.00 ****
Native American	0.00	0.65	0.00 ****
Minority	29.77	16.06	
Nonminority female	1.21	12.42	9.73 ****
M/WBE total	30.97	28.48	
<b>Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)</b>			
African American	0.00	8.55	0.00 ****
Hispanic	0.00	0.23	0.00 **
Asian	0.00	5.55	0.00 ****
Native American	0.00	0.12	0.00
Minority	0.00	14.44	0.00 ****
Nonminority female	0.00	11.32	0.00 ****
M/WBE total	0.00	25.76	0.00 ****
<b>Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)</b>			
African American	0.00	7.90	0.00 ****
Hispanic	0.00	3.79	0.00 ****
Asian	0.00	1.63	0.00 ****
Native American	0.00	1.05	0.00 ****
Minority	0.00	14.38	0.00 ****
Nonminority female	0.00	22.56	0.00 ****
M/WBE total	0.00	36.94	0.00 ****
<b>Computer and Peripheral Equipment Manufacturing (NAICS 3341)</b>			
African American	0.00	13.60	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.03	6.09	0.49 ****
Native American	0.00	0.96	0.00 ****
Minority	0.03	24.20	0.12 ****
Nonminority female	0.00	16.39	0.00 ****
M/WBE total	0.03	40.59	0.07 ****
<b>Software Publishers (NAICS 5112)</b>			
African American	1.22	11.92	10.22 ****
Hispanic	0.00	3.54	0.00 ****
Asian	0.52	8.00	6.48 ****
Native American	0.00	0.28	0.00 ****
Minority	1.74	23.74	7.31 ****
Nonminority female	1.26	13.22	9.50 ****
M/WBE total	2.99	36.96	8.09 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	4.21	2.10	
Hispanic	0.00	3.74	0.00 ****
Asian	0.00	2.23	0.00 ****
Native American	0.00	1.25	0.00 ****
Minority	4.21	9.32	45.19
Nonminority female	0.00	7.11	0.00 ****
M/WBE total	4.21	16.43	25.63 ****
Railroad Rolling Stock Manufacturing (NAICS 3365)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.72	0.00 ****
Hispanic	0.00	1.02	0.00 ****
Asian	0.00	4.53	0.00 ****
Native American	0.00	0.41	0.00 ***
Minority	0.00	17.68	0.00 ****
Nonminority female	0.00	16.06	0.00 ****
M/WBE total	0.00	33.75	0.00 ****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.03	14.37	0.24 ****
Hispanic	23.26	1.53	
Asian	0.01	1.18	0.72
Native American	0.00	0.30	0.00
Minority	23.30	17.37	
Nonminority female	0.04	23.29	0.18 ****
M/WBE total	23.35	40.66	57.41
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	1.32	0.00 ****
Hispanic	0.00	0.04	0.00
Asian	0.00	2.79	0.00 ****
Native American	0.00	0.07	0.00 ***
Minority	0.00	4.22	0.00 ****
Nonminority female	0.42	4.41	9.62 ****
M/WBE total	0.42	8.62	4.91 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	0.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.32	0.00
Native American	0.00	0.00	
Minority	0.00	4.94	0.00
Nonminority female	0.00	0.62	0.00
M/WBE total	0.00	5.56	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	0.02	4.82	0.47 ****
Hispanic	0.00	1.60	0.00 ****
Asian	0.08	5.27	1.55 ****
Native American	0.00	0.98	0.00 ****
Minority	0.10	12.67	0.82 ****
Nonminority female	8.45	17.92	47.12
M/WBE total	8.55	30.59	27.95
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	12.59	0.00 ****
Hispanic	0.00	1.24	0.00 ****
Asian	0.00	1.55	0.00 ****
Native American	0.00	0.13	0.00 *
Minority	0.00	15.50	0.00 ****
Nonminority female	0.00	24.96	0.00 ****
M/WBE total	0.00	40.46	0.00 ****
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	1.22	0.00 ****
Hispanic	0.00	0.01	0.00
Asian	0.00	1.80	0.00 ****
Native American	0.00	1.11	0.00 ****
Minority	0.00	4.14	0.00 ****
Nonminority female	0.00	8.17	0.00 ****
M/WBE total	0.00	12.31	0.00 ****
Specialized Freight Trucking (NAICS 4842)			
African American	9.42	24.84	37.93 ****
Hispanic	5.40	7.48	72.21
Asian	0.00	1.87	0.00 ****
Native American	0.00	0.12	0.00 ****
Minority	14.83	34.32	43.20 ****
Nonminority female	9.73	11.65	83.54
M/WBE total	24.56	45.97	53.42 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	11.48	0.00 ****
Hispanic	0.00	3.71	0.00 ****
Asian	0.00	5.62	0.00 ****
Native American	0.00	0.81	0.00 **
Minority	0.00	21.61	0.00 ****
Nonminority female	0.00	15.37	0.00 ****
M/WBE total	0.00	36.98	0.00 ****
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	0.00	2.36	0.00 **
Hispanic	0.00	0.98	0.00 **
Asian	0.00	1.25	0.00 **
Native American	5.02	0.70	
Minority	5.02	5.29	95.05
Nonminority female	0.00	3.32	0.00 ****
M/WBE total	5.02	8.60	58.39
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.00	6.74	0.00 ****
Hispanic	0.00	1.03	0.00 ****
Asian	0.00	1.34	0.00 ****
Native American	0.00	1.38	0.00 ****
Minority	0.00	10.50	0.00 ****
Nonminority female	8.33	16.01	52.04
M/WBE total	8.33	26.50	31.43 ****
Bakeries and Tortilla Manufacturing (NAICS 3118)			
African American	0.00	8.73	0.00 ****
Hispanic	0.00	11.97	0.00 ****
Asian	0.00	0.31	0.00
Native American	0.00	0.06	0.00
Minority	0.00	21.07	0.00 ****
Nonminority female	0.00	16.15	0.00 ****
M/WBE total	0.00	37.22	0.00 ****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	6.59	7.03	93.83
Hispanic	0.44	2.06	21.52 ****
Asian	0.41	4.97	8.32 ****
Native American	0.00	1.40	0.00 ****
Minority	7.45	15.47	48.19 ****
Nonminority female	3.55	10.08	35.23 ****
M/WBE total	11.00	25.54	43.08 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Health and Personal Care Stores (NAICS 4461)			
African American	0.00	13.34	0.00 ****
Hispanic	0.00	2.91	0.00 ****
Asian	0.00	4.69	0.00 ****
Native American	0.00	1.27	0.00 ****
Minority	0.00	22.21	0.00 ****
Nonminority female	0.00	10.15	0.00 ****
M/WBE total	0.00	32.36	0.00 ****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	5.90	0.00 ****
Hispanic	0.00	3.13	0.00 ****
Asian	0.00	3.92	0.00 ****
Native American	0.00	1.25	0.00 ****
Minority	0.00	14.20	0.00 ****
Nonminority female	3.53	13.48	26.22 ****
M/WBE total	3.53	27.67	12.77 ****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	6.04	0.00 ****
Hispanic	0.00	3.35	0.00 ****
Asian	0.00	1.93	0.00 ****
Native American	0.00	0.37	0.00 ****
Minority	0.00	11.69	0.00 ****
Nonminority female	0.00	10.41	0.00 ****
M/WBE total	0.00	22.10	0.00 ****
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	0.16	0.00
Hispanic	0.00	0.06	0.00
Asian	0.00	11.72	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	11.94	0.00 ****
Nonminority female	0.00	0.21	0.00
M/WBE total	0.00	12.15	0.00 ****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	3.05	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.08	0.11	67.85
Native American	0.00	5.34	0.00 ****
Minority	0.08	8.56	0.90 ****
Nonminority female	49.42	14.02	
M/WBE total	49.49	22.58	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Cattle Ranching and Farming (NAICS 1121)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	2.06	0.00 *
Minority	0.00	2.06	0.00 *
Nonminority female	0.00	17.26	0.00 ****
M/WBE total	0.00	19.31	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	0.52	10.01	5.15 ****
Hispanic	1.79	0.31	
Asian	0.00	3.00	0.00 ****
Native American	0.00	0.29	0.00 **
Minority	2.31	13.62	16.95 ****
Nonminority female	3.08	15.37	20.01 ****
M/WBE total	5.38	28.99	18.58 ****
Support Activities for Air Transportation (NAICS 4881)			
African American	0.00	18.32	0.00 ****
Hispanic	0.00	1.91	0.00
Asian	0.00	2.91	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	23.27	0.00 ****
Nonminority female	0.00	2.42	0.00
M/WBE total	0.00	25.69	0.00 ****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	2.24	0.00 ****
Hispanic	0.00	6.25	0.00 ****
Asian	0.00	1.04	0.00 ****
Native American	0.00	0.16	0.00
Minority	0.00	9.68	0.00 ****
Nonminority female	0.00	10.35	0.00 ****
M/WBE total	0.00	20.04	0.00 ****
Seafood Product Preparation and Packaging (NAICS 3117)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	100.00	52.38	
M/WBE total	100.00	52.38	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	4.78	0.00 ****
Hispanic	0.00	0.89	0.00 ****
Asian	0.00	5.29	0.00 ****
Native American	0.00	2.80	0.00 ****
Minority	0.00	13.77	0.00 ****
Nonminority female	0.53	5.71	9.33 ****
M/WBE total	0.53	19.48	2.73 ****
Electrical Equipment Manufacturing (NAICS 3353)			
African American	0.00	1.31	0.00 **
Hispanic	0.00	0.38	0.00
Asian	0.00	0.68	0.00 **
Native American	0.00	0.12	0.00
Minority	0.00	2.47	0.00 ****
Nonminority female	27.66	9.95	
M/WBE total	27.66	12.42	
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	5.58	0.00 ****
Hispanic	0.00	0.49	0.00 ****
Asian	0.00	4.63	0.00 ****
Native American	0.00	0.13	0.00 ***
Minority	0.00	10.83	0.00 ****
Nonminority female	0.00	19.37	0.00 ****
M/WBE total	0.00	30.20	0.00 ****
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	50.00	0.00 ****
M/WBE total	0.00	50.00	0.00 ****
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	13.34	0.00 ****
Hispanic	0.00	3.93	0.00
Asian	84.70	7.38	
Native American	0.00	0.65	0.00
Minority	84.70	25.30	
Nonminority female	0.00	17.53	0.00 ****
M/WBE total	84.70	42.83	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	8.89	0.00 ****
Hispanic	0.00	3.31	0.00 ****
Asian	0.00	7.70	0.05 ****
Native American	0.00	0.02	0.00
Minority	0.00	19.91	0.02 ****
Nonminority female	5.27	14.10	37.42
M/WBE total	5.28	34.00	15.52 ****
Ship and Boat Building (NAICS 3366)			
African American	0.00	2.30	0.00 **
Hispanic	0.00	1.01	0.00
Asian	0.00	1.40	0.00
Native American	0.00	0.16	0.00
Minority	0.00	4.87	0.00 **
Nonminority female	0.00	20.83	0.00 ****
M/WBE total	0.00	25.70	0.00 ****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	0.11	0.00
Hispanic	0.00	7.52	0.00 ****
Asian	0.00	0.05	0.00
Native American	0.00	7.49	0.00 ****
Minority	0.00	15.18	0.00 ****
Nonminority female	0.00	4.77	0.00 ****
M/WBE total	0.00	19.95	0.00 ****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	5.40	0.00 ****
Hispanic	0.00	2.25	0.00 ****
Asian	0.56	1.44	39.17
Native American	0.00	0.59	0.00 ****
Minority	0.56	9.68	5.81 ****
Nonminority female	56.20	12.85	
M/WBE total	56.77	22.53	
Direct Selling Establishments (NAICS 4543)			
African American	0.00	2.43	0.00 ****
Hispanic	0.00	0.82	0.00
Asian	0.00	0.83	0.00
Native American	0.00	0.01	0.00
Minority	0.00	4.08	0.00 ****
Nonminority female	0.00	8.60	0.00 ****
M/WBE total	0.00	12.68	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	14.87	0.00 ****
Hispanic	0.00	3.28	0.00 ****
Asian	0.00	4.40	0.00 ****
Native American	0.00	0.88	0.00 ****
Minority	0.00	23.43	0.00 ****
Nonminority female	0.00	13.11	0.00 ****
M/WBE total	0.00	36.55	0.00 ****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	13.57	0.00 ****
Hispanic	0.00	2.09	0.00 ****
Asian	0.00	6.00	0.00 ****
Native American	0.00	0.47	0.00 ****
Minority	0.00	22.12	0.00 ****
Nonminority female	0.00	17.58	0.00 ****
M/WBE total	0.00	39.70	0.00 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	10.13	0.00 ****
Hispanic	0.00	6.33	0.00 ****
Asian	0.00	5.89	0.00 ****
Native American	0.00	1.02	0.00 ****
Minority	0.00	23.37	0.00 ****
Nonminority female	0.00	9.84	0.00 ****
M/WBE total	0.00	33.21	0.00 ****
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)			
African American	0.00	4.81	0.00 ****
Hispanic	0.00	0.76	0.00 ****
Asian	0.00	1.27	0.00 ****
Native American	0.00	0.21	0.00 ****
Minority	0.00	7.04	0.00 ****
Nonminority female	3.73	9.13	40.80
M/WBE total	3.73	16.18	23.03 **
Dairy Product Manufacturing (NAICS 3115)			
African American	0.00	11.40	0.00 ****
Hispanic	0.00	3.60	0.00 ****
Asian	0.00	4.24	0.00 ****
Native American	0.00	0.86	0.00 ****
Minority	0.00	20.11	0.00 ****
Nonminority female	0.00	16.65	0.00 ****
M/WBE total	0.00	36.76	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	13.82	0.00 ****
Hispanic	0.00	3.65	0.00 ****
Asian	0.00	5.29	0.00 ****
Native American	0.00	0.97	0.00 ****
Minority	0.00	23.74	0.00 ****
Nonminority female	2.23	18.33	12.17 ****
M/WBE total	2.23	42.07	5.30 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	14.59	0.00 ****
Hispanic	0.00	0.20	0.00
Asian	0.00	2.02	0.00 ****
Native American	0.00	0.05	0.00
Minority	0.00	16.86	0.00 ****
Nonminority female	0.00	6.34	0.00 ****
M/WBE total	0.00	23.20	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	3.05	13.46	22.68 ****
Hispanic	0.00	2.43	0.00 ****
Asian	1.50	4.98	30.10 **
Native American	0.00	0.64	0.00 ****
Minority	4.55	21.51	21.16 ****
Nonminority female	4.87	13.85	35.18 ***
M/WBE total	9.42	35.36	26.65 ****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	2.39	0.00 ****
Hispanic	0.00	0.03	0.00
Asian	0.10	0.04	
Native American	0.00	0.58	0.00 ****
Minority	0.10	3.04	3.25 ****
Nonminority female	25.97	13.46	
M/WBE total	26.07	16.50	
Employment Services (NAICS 5613)			
African American	1.09	10.85	10.06 ****
Hispanic	0.00	2.42	0.00 ****
Asian	0.00	3.99	0.00 ****
Native American	0.00	0.15	0.00 ***
Minority	1.09	17.42	6.27 ****
Nonminority female	60.44	13.48	
M/WBE total	61.53	30.90	

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	13.29	0.00 ****
Hispanic	0.00	0.80	0.00 ***
Asian	0.00	7.73	0.00 ****
Native American	0.00	0.09	0.00
Minority	0.00	21.91	0.00 ****
Nonminority female	0.00	16.07	0.00 ****
M/WBE total	0.00	37.98	0.00 ****
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	4.89	0.00 ****
Hispanic	0.00	0.99	0.00 **
Asian	0.00	4.26	0.00 ****
Native American	0.00	0.13	0.00
Minority	0.00	10.26	0.00 ****
Nonminority female	0.49	9.45	5.15 ****
M/WBE total	0.49	19.71	2.47 ****
Hunting and Trapping (NAICS 1142)			
African American	0.00	12.54	0.00 ****
Hispanic	0.00	4.35	0.00 ****
Asian	0.00	4.88	0.00 ****
Native American	0.00	0.94	0.00
Minority	0.00	22.71	0.00 ****
Nonminority female	0.00	18.73	0.00 ****
M/WBE total	0.00	41.44	0.00 ****
Other Information Services (NAICS 5191)			
African American	0.00	17.27	0.00 ****
Hispanic	0.00	0.83	0.00 ****
Asian	0.00	3.39	0.00 ****
Native American	0.00	0.44	0.00
Minority	0.00	21.93	0.00 ****
Nonminority female	0.00	12.82	0.00 ****
M/WBE total	0.00	34.75	0.00 ****
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	10.50	0.00 ****
Hispanic	0.00	2.40	0.00
Asian	0.00	9.00	0.00 ****
Native American	0.00	2.03	0.00
Minority	0.00	23.93	0.00 ****
Nonminority female	0.22	12.41	1.79 ****
M/WBE total	0.22	36.34	0.61 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	7.28	0.00 ****
Hispanic	0.22	8.35	2.66 ****
Asian	0.00	4.22	0.00 ****
Native American	0.00	1.50	0.00 ****
Minority	0.22	21.35	1.04 ****
Nonminority female	0.00	12.10	0.00 ****
M/WBE total	0.22	33.45	0.66 ****
Beverage Manufacturing (NAICS 3121)			
African American	0.00	14.62	0.00 ****
Hispanic	0.00	1.85	0.00 **
Asian	0.00	7.93	0.00 ****
Native American	0.00	0.34	0.00
Minority	0.00	24.74	0.00 ****
Nonminority female	1.89	6.58	28.66
M/WBE total	1.89	31.32	6.02 ****
Consumer Goods Rental (NAICS 5322)			
African American	0.00	12.96	0.00 ****
Hispanic	0.00	3.57	0.00 ****
Asian	0.00	5.15	0.00 ****
Native American	0.00	0.97	0.00 ****
Minority	0.00	22.65	0.00 ****
Nonminority female	0.00	17.55	0.00 ****
M/WBE total	0.00	40.19	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	6.21	19.25	32.23 *
Hispanic	0.00	1.08	0.00 ****
Asian	0.00	6.35	0.00 ****
Native American	0.00	0.88	0.00 ****
Minority	6.21	27.57	22.51 ****
Nonminority female	0.00	11.87	0.00 ****
M/WBE total	6.21	39.44	15.73 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	1.98	13.59	14.57 ****
Hispanic	0.00	3.09	0.00 ****
Asian	0.00	3.70	0.00 ****
Native American	0.00	0.38	0.00 ****
Minority	1.98	20.75	9.54 ****
Nonminority female	0.00	11.87	0.00 ****
M/WBE total	1.98	32.62	6.07 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Book Stores and News Dealers (NAICS 4512)			
African American	0.00	10.76	0.00 ****
Hispanic	0.00	3.28	0.00 **
Asian	0.00	4.61	0.00 **
Native American	0.00	0.93	0.00
Minority	0.00	19.58	0.00 ****
Nonminority female	0.00	17.70	0.00 ****
M/WBE total	0.00	37.29	0.00 ****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	15.29	0.00 ****
Hispanic	0.00	3.98	0.00 ****
Asian	0.00	6.25	0.00 ****
Native American	0.00	0.93	0.00 ****
Minority	0.00	26.44	0.00 ****
Nonminority female	0.00	16.38	0.00 ****
M/WBE total	0.00	42.82	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	0.13	0.00
Hispanic	0.00	1.43	0.00 **
Asian	0.00	10.56	0.00 ****
Native American	0.00	3.60	0.00 ****
Minority	0.00	15.72	0.00 ****
Nonminority female	0.00	9.94	0.00 ****
M/WBE total	0.00	25.65	0.00 ****
Poultry and Egg Production (NAICS 1123)			
African American	0.00	14.75	0.00 ****
Hispanic	0.00	3.62	0.00
Asian	0.00	4.77	0.00
Native American	0.00	1.05	0.00
Minority	0.00	24.19	0.00 ****
Nonminority female	0.00	18.06	0.00 ****
M/WBE total	0.00	42.25	0.00 ****
Furniture Stores (NAICS 4421)			
African American	0.00	3.83	0.00 ****
Hispanic	0.00	0.05	0.00
Asian	0.00	0.52	0.00
Native American	0.00	1.19	0.00 ****
Minority	0.00	5.59	0.00 ****
Nonminority female	0.00	14.41	0.00 ****
M/WBE total	0.00	20.00	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Support Services (NAICS 5614)			
African American	0.00	19.11	0.00 ****
Hispanic	0.00	4.83	0.00 ****
Asian	0.00	4.34	0.00 ****
Native American	0.00	5.33	0.00 ****
Minority	0.00	33.61	0.00 ****
Nonminority female	9.49	15.31	61.96
M/WBE total	9.49	48.92	19.40 ***
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	8.37	0.00 ****
Hispanic	0.00	2.97	0.00 ****
Asian	0.00	3.86	0.00 ****
Native American	0.00	0.61	0.00
Minority	0.00	15.81	0.00 ****
Nonminority female	0.00	11.27	0.00 ****
M/WBE total	0.00	27.08	0.00 ****
Facilities Support Services (NAICS 5612)			
African American	0.00	26.39	0.00 ****
Hispanic	0.00	3.77	0.00 ****
Asian	0.00	2.52	0.00 ****
Native American	0.00	1.15	0.00 ***
Minority	0.00	33.83	0.00 ****
Nonminority female	0.00	9.10	0.00 ****
M/WBE total	0.00	42.92	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	0.00	9.52	0.00 ****
Hispanic	0.00	4.40	0.00 ****
Asian	0.00	2.76	0.00 ****
Native American	0.00	0.57	0.00 ****
Minority	0.00	17.26	0.00 ****
Nonminority female	3.55	24.77	14.32 ****
M/WBE total	3.55	42.03	8.44 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	1.48	18.67	7.92 ****
Hispanic	0.00	4.94	0.00 ****
Asian	0.00	3.53	0.00 ****
Native American	0.00	1.58	0.00 ****
Minority	1.48	28.71	5.15 ****
Nonminority female	6.78	13.34	50.84 ***
M/WBE total	8.26	42.05	19.64 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	11.52	0.00 ****
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	5.11	0.00 ****
Native American	0.00	0.88	0.00
Minority	0.00	21.42	0.00 ****
Nonminority female	0.00	16.72	0.00 ****
M/WBE total	0.00	38.14	0.00 ****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	0.19	0.00
Hispanic	0.00	1.51	0.00 ****
Asian	0.00	2.42	0.00 ****
Native American	0.00	4.43	0.00 ****
Minority	0.00	8.55	0.00 ****
Nonminority female	0.10	18.69	0.51 ****
M/WBE total	0.10	27.24	0.35 ****
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	18.21	0.00 ****
Hispanic	0.00	12.34	0.00 ****
Asian	0.00	3.80	0.00 ****
Native American	0.00	2.17	0.00 ****
Minority	0.00	36.52	0.00 ****
Nonminority female	0.00	13.75	0.00 ****
M/WBE total	0.00	50.27	0.00 ****
Restaurants and Other Eating Places (NAICS 7225)			
African American	0.00	6.70	0.00 ****
Hispanic	0.00	3.27	0.00 ****
Asian	0.00	7.33	0.00 ****
Native American	0.00	0.45	0.00
Minority	0.00	17.76	0.00 ****
Nonminority female	0.00	11.99	0.00 ****
M/WBE total	0.00	29.75	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	6.00	0.00 ****
Hispanic	0.00	2.00	0.00 ****
Asian	0.00	3.78	0.00 ****
Native American	0.00	0.90	0.00 ****
Minority	0.00	12.68	0.00 ****
Nonminority female	0.00	9.00	0.00 ****
M/WBE total	0.00	21.68	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	18.21	0.00 ****
Hispanic	0.00	12.34	0.00 ****
Asian	0.00	3.80	0.00 ****
Native American	0.00	2.17	0.00 ****
Minority	0.00	36.52	0.00 ****
Nonminority female	0.00	13.75	0.00 ****
M/WBE total	0.00	50.27	0.00 ****
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	11.52	0.00 ****
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	5.11	0.00 ****
Native American	0.00	0.88	0.00 ****
Minority	0.00	21.42	0.00 ****
Nonminority female	0.00	16.73	0.00 ****
M/WBE total	0.00	38.14	0.00 ****
Building Finishing Contractors (NAICS 2383)			
African American	7.92	6.15	
Hispanic	5.48	10.87	50.44 ****
Asian	0.00	3.80	0.00 ****
Native American	0.00	0.08	0.00 ****
Minority	13.41	20.89	64.16 ****
Nonminority female	5.39	11.75	45.86 ****
M/WBE total	18.79	32.64	57.57 ****
Local Messengers and Local Delivery (NAICS 4922)			
African American	0.00	13.55	0.00 ****
Hispanic	0.00	3.26	0.00 ****
Asian	0.00	4.98	0.00 ****
Native American	0.00	0.78	0.00 ****
Minority	0.00	22.57	0.00 ****
Nonminority female	0.00	15.17	0.00 ****
M/WBE total	0.00	37.75	0.00 ****
Poultry and Egg Production (NAICS 1123)			
African American	0.00	14.75	0.00 ****
Hispanic	0.00	3.62	0.00 ****
Asian	0.00	4.77	0.00 ****
Native American	0.00	1.05	0.00 ****
Minority	0.00	24.19	0.00 ****
Nonminority female	0.00	18.06	0.00 ****
M/WBE total	0.00	42.25	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
<b>Advertising, Public Relations, and Related Services (NAICS 5418)</b>			
African American	0.00	9.19	0.00 ****
Hispanic	0.00	4.44	0.00 ****
Asian	0.00	2.49	0.00 ****
Native American	0.00	0.52	0.00 ****
Minority	0.00	16.64	0.00 ****
Nonminority female	4.46	25.40	17.57 ****
M/WBE total	4.46	42.04	10.61 ****
<b>Remediation and Other Waste Management Services (NAICS 5629)</b>			
African American	0.00	7.01	0.00 ****
Hispanic	0.00	1.36	0.00 ****
Asian	0.00	0.10	0.00
Native American	0.00	0.06	0.00
Minority	0.00	8.53	0.00 ****
Nonminority female	0.00	14.42	0.00 ****
M/WBE total	0.00	22.95	0.00 ****
<b>Data Processing, Hosting, and Related Services (NAICS 5182)</b>			
African American	0.00	21.33	0.00 ****
Hispanic	0.00	1.91	0.00 ****
Asian	0.00	5.77	0.00 ****
Native American	0.00	0.14	0.00
Minority	0.00	29.16	0.00 ****
Nonminority female	0.00	15.34	0.00 ****
M/WBE total	0.00	44.50	0.00 ****
<b>Specialty Food Stores (NAICS 4452)</b>			
African American	0.00	0.07	0.00
Hispanic	0.00	0.02	0.00
Asian	0.00	1.68	0.00
Native American	0.00	0.00	0.00
Minority	0.00	1.78	0.00
Nonminority female	0.00	21.47	0.00 ****
M/WBE total	0.00	23.25	0.00 ****
<b>Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)</b>			
African American	0.00	5.95	0.00 ****
Hispanic	0.00	2.11	0.00 ****
Asian	0.00	0.41	0.00
Native American	0.00	0.01	0.00
Minority	0.00	8.48	0.00 ****
Nonminority female	0.00	3.20	0.00 ****
M/WBE total	0.00	11.68	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.00	29.55	0.00 ****
Hispanic	0.00	4.35	0.00 ****
Asian	0.00	3.85	0.00 ****
Native American	0.00	0.80	0.00
Minority	0.00	38.55	0.00 ****
Nonminority female	0.00	14.10	0.00 ****
M/WBE total	0.00	52.65	0.00 ****
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	3.71	0.00 ****
Hispanic	0.00	1.33	0.00 ****
Asian	0.00	1.72	0.00 ****
Native American	0.00	0.27	0.00
Minority	0.00	7.03	0.00 ****
Nonminority female	0.00	9.48	0.00 ****
M/WBE total	0.00	16.51	0.00 ****
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	11.31	0.00 ****
Hispanic	0.00	3.88	0.00 ****
Asian	0.00	4.95	0.00 ****
Native American	0.00	0.87	0.00
Minority	0.00	21.02	0.00 ****
Nonminority female	3.59	16.53	21.69 ****
M/WBE total	3.59	37.55	9.55 ****
Offices of Other Health Practitioners (NAICS 6213)			
African American	0.00	6.96	0.00 ****
Hispanic	0.00	1.58	0.00 ****
Asian	0.00	2.92	0.00 ****
Native American	0.00	1.97	0.00 ****
Minority	0.00	13.43	0.00 ****
Nonminority female	0.00	22.65	0.00 ****
M/WBE total	0.00	36.08	0.00 ****
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	9.21	0.00 ****
Hispanic	0.00	2.65	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.73	0.00
Minority	0.00	17.03	0.00 ****
Nonminority female	2.04	12.44	16.37 ****
M/WBE total	2.04	29.48	6.91 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Steel Product Manufacturing from Purchased Steel (NAICS 3312)			
African American	0.00	8.35	0.00 ****
Hispanic	0.00	2.98	0.00 ****
Asian	0.00	3.87	0.00 ****
Native American	0.00	0.60	0.00
Minority	0.00	15.80	0.00 ****
Nonminority female	0.00	11.03	0.00 ****
M/WBE total	0.00	26.83	0.00 ****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	12.17	0.00 ****
Hispanic	13.72	6.74	
Asian	0.00	4.46	0.00 ****
Native American	0.00	2.09	0.00 ****
Minority	13.72	25.46	53.91 ****
Nonminority female	0.00	10.01	0.00 ****
M/WBE total	13.72	35.47	38.69 ****
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	13.30	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.00	5.43	0.00 ****
Native American	0.00	1.05	0.00
Minority	0.00	23.33	0.00 ****
Nonminority female	20.97	18.60	
M/WBE total	20.97	41.94	50.00 ***
Other Food Manufacturing (NAICS 3119)			
African American	0.00	13.20	0.00 ****
Hispanic	0.00	3.14	0.00 ****
Asian	0.00	4.44	0.00 ****
Native American	0.00	0.71	0.00
Minority	0.00	21.49	0.00 ****
Nonminority female	0.00	11.60	0.00 ****
M/WBE total	0.00	33.10	0.00 ****
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)			
African American	0.99	4.57	21.70
Hispanic	0.15	0.75	19.47
Asian	0.00	1.25	0.00
Native American	0.00	0.24	0.00
Minority	1.14	6.80	16.70
Nonminority female	0.00	60.43	0.00 ****
M/WBE total	1.14	67.24	1.69 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	9.16	0.00 *****
Hispanic	0.00	1.81	0.00 *****
Asian	0.00	2.38	0.00 *****
Native American	0.00	1.15	0.00 *****
Minority	0.00	14.49	0.00 *****
Nonminority female	0.00	10.41	0.00 *****
M/WBE total	0.00	24.90	0.00 *****
Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)			
African American	0.00	8.61	0.00 *****
Hispanic	0.00	3.07	0.00 *****
Asian	0.00	4.00	0.00 *****
Native American	0.00	0.61	0.00
Minority	0.00	16.29	0.00 *****
Nonminority female	0.00	11.37	0.00 *****
M/WBE total	0.00	27.66	0.00 *****
Nondepository Credit Intermediation (NAICS 5222)			
African American	0.00	9.69	0.00 *****
Hispanic	0.00	3.17	0.00 *****
Asian	0.00	3.79	0.00 *****
Native American	0.00	0.63	0.00
Minority	0.00	17.28	0.00 *****
Nonminority female	0.00	11.80	0.00 *****
M/WBE total	0.00	29.08	0.00 *****
Motion Picture and Video Industries (NAICS 5121)			
African American	0.00	14.52	0.00 *****
Hispanic	0.00	3.33	0.00 *****
Asian	0.00	2.18	0.00 *****
Native American	0.00	0.10	0.00
Minority	0.00	20.14	0.00 *****
Nonminority female	0.00	25.68	0.00 *****
M/WBE total	0.00	45.82	0.00 *****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	12.67	0.00 *****
Hispanic	0.00	6.33	0.00 *****
Asian	0.00	6.33	0.00 *****
Native American	0.00	0.00	
Minority	0.00	25.34	0.00 *****
Nonminority female	0.00	12.67	0.00 *****
M/WBE total	0.00	38.01	0.00 *****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Vending Machine Operators (NAICS 4542)			
African American	0.00	21.89	0.00 ****
Hispanic	0.00	0.72	0.00
Asian	0.00	4.46	0.00 ****
Native American	0.00	0.01	0.00
Minority	0.00	27.07	0.00 ****
Nonminority female	0.00	7.43	0.00 ****
M/WBE total	0.00	34.49	0.00 ****
Forging and Stamping (NAICS 3321)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	28.89	0.00 ****
M/WBE total	0.00	28.89	0.00 ****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.04	0.00
Asian	0.00	0.83	0.00
Native American	0.00	2.27	0.00 ****
Minority	0.00	3.34	0.00 ****
Nonminority female	0.00	21.37	0.00 ****
M/WBE total	0.00	24.70	0.00 ****
Metalworking Machinery Manufacturing (NAICS 3335)			
African American	0.00	11.37	0.00 ****
Hispanic	0.00	3.73	0.00 ****
Asian	0.00	6.33	0.00 ****
Native American	0.00	1.09	0.00
Minority	0.00	22.52	0.00 ****
Nonminority female	0.66	17.49	3.76 ****
M/WBE total	0.66	40.00	1.64 ****
Other Support Services (NAICS 5619)			
African American	0.00	18.71	0.00 ****
Hispanic	0.00	2.45	0.00 ****
Asian	0.00	2.57	0.00 ****
Native American	0.00	0.02	0.00
Minority	0.00	23.75	0.00 ****
Nonminority female	20.15	28.54	70.57 *
M/WBE total	20.15	52.30	38.52 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	10.39	0.00 ****
Hispanic	0.00	2.67	0.00 ****
Asian	0.00	4.75	0.00 ****
Native American	0.00	0.78	0.00
Minority	0.00	18.60	0.00 ****
Nonminority female	0.00	19.87	0.00 ****
M/WBE total	0.00	38.47	0.00 ****
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	47.57	5.99	
Hispanic	0.54	3.58	15.19 ****
Asian	0.00	0.74	0.00 ****
Native American	0.00	1.60	0.00 ****
Minority	48.11	11.91	
Nonminority female	0.00	14.39	0.00 ****
M/WBE total	48.11	26.30	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	9.17	0.00 ****
Hispanic	0.00	2.80	0.00 ****
Asian	0.00	4.67	0.00 ****
Native American	0.00	1.29	0.00 ****
Minority	0.00	17.94	0.00 ****
Nonminority female	0.00	18.70	0.00 ****
M/WBE total	0.00	36.64	0.00 ****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	10.41	0.00
Hispanic	0.00	5.04	0.00
Asian	0.00	4.64	0.00
Native American	0.00	0.81	0.00
Minority	0.00	20.89	0.00 ****
Nonminority female	0.00	16.33	0.00 ****
M/WBE total	0.00	37.22	0.00 ****
Cable and Other Subscription Programming (NAICS 5152)			
African American	0.00	5.49	0.00 ****
Hispanic	0.00	3.55	0.00 ****
Asian	0.00	4.00	0.00 ****
Native American	0.00	0.06	0.00
Minority	0.00	13.10	0.00 ****
Nonminority female	0.00	3.25	0.00 ****
M/WBE total	0.00	16.35	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	8.80	0.00 ****
Hispanic	0.00	2.98	0.00 ****
Asian	8.54	4.32	
Native American	0.00	0.67	0.00
Minority	8.54	16.77	50.91
Nonminority female	0.00	12.90	0.00 ****
M/WBE total	8.54	29.67	28.78 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	6.70	0.00 ****
Hispanic	0.00	2.32	0.00 ****
Asian	0.00	7.35	0.00 ****
Native American	0.00	3.95	0.00 ****
Minority	0.00	20.32	0.00 ****
Nonminority female	0.00	18.47	0.00 ****
M/WBE total	0.00	38.79	0.00 ****
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)			
African American	0.00	5.88	0.00
Hispanic	0.00	2.05	0.00
Asian	0.00	3.64	0.00
Native American	0.00	0.55	0.00
Minority	0.00	12.11	0.00 ****
Nonminority female	0.00	7.86	0.00
M/WBE total	0.00	19.97	0.00 ****
Waste Treatment and Disposal (NAICS 5622)			
African American	0.00	8.77	0.00 ****
Hispanic	0.00	2.81	0.00 ****
Asian	0.00	0.97	0.00 ****
Native American	0.00	0.00	
Minority	0.00	12.54	0.00 ****
Nonminority female	0.00	22.25	0.00 ****
M/WBE total	0.00	34.80	0.00 ****
Drycleaning and Laundry Services (NAICS 8123)			
African American	0.00	11.39	0.00 ****
Hispanic	0.00	3.11	0.00 ****
Asian	0.00	12.61	0.00 ****
Native American	0.00	1.04	0.00 ****
Minority	0.00	28.16	0.00 ****
Nonminority female	0.00	17.52	0.00 ****
M/WBE total	0.00	45.68	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Animal Slaughtering and Processing (NAICS 3116)			
African American	0.00	13.43	0.00
Hispanic	0.00	3.69	0.00
Asian	0.00	4.90	0.00
Native American	0.00	0.81	0.00
Minority	0.00	22.83	0.00
Nonminority female	0.00	15.52	0.00
M/WBE total	0.00	38.35	0.00
Other Furniture Related Product Manufacturing (NAICS 3379)			
African American	0.00	10.33	0.00 ****
Hispanic	0.00	3.69	0.00 ****
Asian	0.00	4.80	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	19.55	0.00 ****
Nonminority female	0.00	13.65	0.00 ****
M/WBE total	0.00	33.20	0.00 ****
Support Activities for Road Transportation (NAICS 4884)			
African American	0.00	6.71	0.00 ****
Hispanic	0.00	9.01	0.00 ****
Asian	0.00	0.15	0.00
Native American	0.00	1.78	0.00 ****
Minority	0.00	17.65	0.00 ****
Nonminority female	0.00	16.46	0.00 ****
M/WBE total	0.00	34.11	0.00 ****
Converted Paper Product Manufacturing (NAICS 3222)			
African American	0.00	15.00	0.00 ****
Hispanic	0.00	2.69	0.00
Asian	0.00	3.61	0.00 ****
Native American	0.00	1.06	0.00
Minority	0.00	22.36	0.00 ****
Nonminority female	0.00	17.52	0.00 ****
M/WBE total	0.00	39.88	0.00 ****
Activities Related to Real Estate (NAICS 5313)			
African American	0.00	4.29	0.00 ****
Hispanic	0.00	1.69	0.00
Asian	0.00	1.66	0.00
Native American	0.00	0.05	0.00
Minority	0.00	7.68	0.00 ****
Nonminority female	0.00	20.64	0.00 ****
M/WBE total	0.00	28.32	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	18.41	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.00	0.13	0.00
Native American	0.00	0.13	0.00
Minority	0.00	18.73	0.00 ****
Nonminority female	0.00	14.64	0.00 ****
M/WBE total	0.00	33.38	0.00 ****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	8.76	0.00 ****
Hispanic	0.00	1.99	0.00 ****
Asian	0.00	3.41	0.00 ****
Native American	0.00	0.45	0.00 ****
Minority	0.00	14.61	0.00 ****
Nonminority female	0.00	10.28	0.00 ****
M/WBE total	0.00	24.89	0.00 ****
Spring and Wire Product Manufacturing (NAICS 3326)			
African American	0.00	10.47	0.00 ****
Hispanic	0.00	3.51	0.00 ****
Asian	0.14	4.61	2.98 *
Native American	0.00	0.83	0.00
Minority	0.14	19.41	0.71 ****
Nonminority female	8.54	15.87	53.80
M/WBE total	8.68	35.28	24.59 ****
Outpatient Care Centers (NAICS 6214)			
African American	0.00	0.00	
Hispanic	0.00	0.88	0.00
Asian	0.00	0.88	0.00
Native American	0.00	0.00	
Minority	0.00	1.77	0.00
Nonminority female	0.00	0.00	
M/WBE total	0.00	1.77	0.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	1.09	0.00 ****
Hispanic	5.80	2.37	
Asian	0.00	0.01	0.00
Native American	0.00	3.14	0.00 ****
Minority	5.80	6.61	87.68
Nonminority female	0.00	6.87	0.00 ****
M/WBE total	5.80	13.48	43.01

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Freight Transportation Arrangement (NAICS 4885)			
African American	0.00	17.82	0.00 ****
Hispanic	0.00	4.09	0.00 ****
Asian	0.00	7.34	0.00 ****
Native American	0.00	0.18	0.00
Minority	0.00	29.44	0.00 ****
Nonminority female	0.00	11.67	0.00 ****
M/WBE total	0.00	41.11	0.00 ****
Aquaculture (NAICS 1125)			
African American	0.00	11.58	0.00 ****
Hispanic	0.00	3.90	0.00
Asian	0.00	5.12	0.00
Native American	0.00	0.91	0.00
Minority	0.00	21.51	0.00 ****
Nonminority female	0.00	17.41	0.00 ****
M/WBE total	0.00	38.92	0.00 ****
Farm Product Raw Material Merchant Wholesalers (NAICS 4245)			
African American	0.00	13.36	0.00 ****
Hispanic	0.00	3.79	0.00
Asian	0.00	5.01	0.00
Native American	0.00	0.89	0.00
Minority	0.00	23.06	0.00 ****
Nonminority female	80.08	16.57	
M/WBE total	80.08	39.63	
Rubber Product Manufacturing (NAICS 3262)			
African American	0.00	13.04	0.00 ****
Hispanic	0.00	3.32	0.00
Asian	0.00	4.41	0.00 ****
Native American	0.00	0.63	0.00
Minority	0.00	21.40	0.00 ****
Nonminority female	0.00	12.03	0.00 ****
M/WBE total	0.00	33.43	0.00 ****
Depository Credit Intermediation (NAICS 5221)			
African American	0.00	0.19	0.00
Hispanic	0.00	0.00	0.00
Asian	0.00	0.42	0.00
Native American	0.00	0.00	0.00
Minority	0.00	0.61	0.00
Nonminority female	0.00	0.44	0.00
M/WBE total	0.00	1.06	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	0.00	14.27	0.00 ****
Hispanic	0.00	4.15	0.00 ****
Asian	0.00	5.16	0.00 ****
Native American	0.00	0.85	0.00
Minority	0.00	24.42	0.00 ****
Nonminority female	51.75	15.91	
M/WBE total	51.75	40.33	
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	15.37	0.00 ****
Hispanic	0.00	3.02	0.00 ****
Asian	0.00	6.87	0.00 ****
Native American	0.00	0.86	0.00
Minority	0.00	26.11	0.00 ****
Nonminority female	0.00	16.75	0.00 ****
M/WBE total	0.00	42.86	0.00 ****
Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE total	0.00	0.00	
Other Telecommunications (NAICS 5179)			
African American	0.00	13.02	0.00 ****
Hispanic	0.00	3.91	0.00 ****
Asian	0.00	5.24	0.00 ****
Native American	0.00	0.92	0.00
Minority	0.00	23.09	0.00 ****
Nonminority female	0.00	16.58	0.00 ****
M/WBE total	0.00	39.66	0.00 ****
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	0.00	8.56	0.00 ****
Hispanic	0.00	0.75	0.00 ****
Asian	0.00	1.35	0.00 ****
Native American	0.14	0.07	
Minority	0.14	10.73	1.26 ****
Nonminority female	0.00	14.61	0.00 ****
M/WBE total	0.14	25.34	0.53 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	11.67	0.00 ****
Hispanic	0.00	3.73	0.00 ****
Asian	0.00	4.95	0.00 ****
Native American	0.00	0.98	0.00 ****
Minority	0.00	21.33	0.00 ****
Nonminority female	41.36	19.25	
M/WBE total	41.36	40.58	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	2.25	0.00 ****
Hispanic	0.00	2.66	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.91	0.00 ****
Nonminority female	0.00	13.30	0.00 ****
M/WBE total	0.00	18.20	0.00 ****
Travel Arrangement and Reservation Services (NAICS 5615)			
African American	0.00	12.80	0.00 ****
Hispanic	0.00	3.83	0.00 ****
Asian	0.00	5.23	0.00 ****
Native American	0.00	1.02	0.00
Minority	0.00	22.89	0.00 ****
Nonminority female	14.57	18.97	76.79
M/WBE total	14.57	41.86	34.81
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	7.65	0.00
Hispanic	0.00	2.73	0.00
Asian	0.00	3.55	0.00
Native American	0.00	0.55	0.00
Minority	0.00	14.48	0.00
Nonminority female	0.00	10.11	0.00
M/WBE total	0.00	24.59	0.00
Support Activities for Animal Production (NAICS 1152)			
African American	0.00	11.87	0.00
Hispanic	0.00	3.48	0.00
Asian	0.00	4.86	0.00
Native American	0.00	1.10	0.00
Minority	0.00	21.31	0.00 ****
Nonminority female	0.00	21.83	0.00 ****
M/WBE total	0.00	43.14	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Legal Services (NAICS 5411)			
African American	52.37	5.16	
Hispanic	0.00	3.53	0.00 ****
Asian	0.00	0.26	0.00
Native American	0.00	0.04	0.00
Minority	52.37	9.00	
Nonminority female	34.86	21.42	
M/WBE total	87.23	30.42	
Educational Support Services (NAICS 6117)			
African American	0.00	25.75	0.00 ****
Hispanic	0.00	0.71	0.00
Asian	0.00	3.31	0.00 ****
Native American	0.00	2.37	0.00 ****
Minority	0.00	32.14	0.00 ****
Nonminority female	0.00	10.40	0.00 ****
M/WBE total	0.00	42.54	0.00 ****
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	10.28	0.00 ****
Hispanic	0.00	0.06	0.00
Asian	0.00	7.17	0.00 ****
Native American	0.00	0.04	0.00
Minority	0.00	17.55	0.00 ****
Nonminority female	63.51	18.00	
M/WBE total	63.51	35.55	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)			
African American	0.00	6.87	0.00 ****
Hispanic	0.00	0.04	0.00
Asian	0.00	0.07	0.00
Native American	0.00	0.07	0.00
Minority	0.00	7.05	0.00 ****
Nonminority female	0.00	8.03	0.00 ****
M/WBE total	0.00	15.08	0.00 ****
Offices of Dentists (NAICS 6212)			
African American	0.00	6.41	0.00 *
Hispanic	0.00	2.30	0.00
Asian	0.00	10.10	0.00 ****
Native American	0.00	1.80	0.00
Minority	0.00	20.61	0.00 ****
Nonminority female	0.00	17.54	0.00 ****
M/WBE total	0.00	38.15	0.00 ****

## Appendix E. Detailed Utilization, Availability & Disparity Tables

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	12.46	0.00 ****
Hispanic	0.00	3.80	0.00 ****
Asian	0.00	5.05	0.00 ****
Native American	0.00	0.95	0.00
Minority	0.00	22.26	0.00 ****
Nonminority female	0.00	18.00	0.00 ****
M/WBE total	0.00	40.26	0.00 ****

Source and Notes: *See* Table 6.4.



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## **Weighted Base Figure Worksheet Instructions**

1. This worksheet automatically calculates a weighted base figure to use in DBE goal setting on the final page. This worksheet is intended to be used as a tool to help with developing the Step 1 base figure, as described in 49 CFR part 26.45(c). It is not a substitute for the regulations. Detailed instructions on the goal-setting process can be found online at [eCFR.gov](http://eCFR.gov) and the USDOT's Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program.
2. In order to fill out the tables on this worksheet, you will need the following information:
  - FTA-funded contracting opportunities for the upcoming 3 years. In the narrative description of the methodology, describe the projects, identify the prime- and sub-contracting opportunities and estimated amounts, and break them down into NAICS codes for entry into the table for Step 1 A.
  - Identify the number of DBEs available, and identify the number of all firms available to perform work. In your narrative, include a description of the data you used and how you determined it was the most relevant data available. Enter the numbers into the table for Step 1 B. You may rely on the State-wide DBE Directory and U.S. Census Bureau Business Pattern Data, use a bidder's list, or use other information available to you.
4. Don't forget - once you have calculated a base figure, you must examine all available evidence to determine if an adjustment to the base figure is needed before you arrive at your overall goal. Please refer to 49 CFR 26.45(d) and the Tips for Goal Setting for more information about making adjustments to your goal. Please include a description of all evidence considered and a description of any adjustments made in your narrative description. Any worksheets used to develop Step 2 adjustments should be included in your final goal submission to FTA.

**Pre-Decisional DRAFT**

**Step 1 A - Determine the weight of each type of work by NAICS Code:**

All reasonably anticipated FTA-assisted contracting opportunities are identified as:

	NAICS Code	Description of Work	Amount of DOT funds on project:	% of total DOT funds (weight)
1)	5413	Archethectural, Engineering, and Related Services	\$9,849,391.00	0.8009
2)	5415	Computer systems Design & Related Services	\$70,000.00	0.0057
3)	5416	Mgt, Scientific, & Technical Consulting	\$1,323,339.00	0.1076
4)	5418	Adverstising, Public Relations & Related Services	\$419,750.00	0.0341
5)	5419	Other Professional, Scientific, & Technical Services	\$635,000.00	0.0516
6)				0.0000
7)				0.0000
8)				0.0000
9)				0.0000
10)				0.0000
<b>Total FTA-Assisted Contract</b>			<b>\$12,297,480.00</b>	<b>1</b>

**Step 1 B - Determine the relative availability of DBE's by NAICS Code:**

The numbers of DBEs and of all firms available to perform work on the identified contracting opportunities are:

	NAICS Code	Description of Work	Number of DBEs available to perform this work	Number of all firms available (including DBEs)	Relative Availability
1)	5413	Archethectural, Engineering, and Related Services			0.3840
2)	5415	Computer systems Design & Related Services			0.4835

**Pre-Decisional DRAFT**

<b>3)</b>	5416	Mgt, Scientific, & Technical Consulting			0.5326
<b>4)</b>	5418	Adverstising, Public			0.4406
<b>5)</b>	5419	Other Professional, Scientific, & Technical Services			0.4885
<b>6)</b>	0	0			
<b>7)</b>	0	0			
<b>8)</b>	0	0			
<b>9)</b>	0	0			
<b>10)</b>	0	0			
<b>Combined Totals</b>			<b>0</b>	<b>0</b>	<i><b>Overall availability of DBEs</b></i>

**Step 1 C - (Weight) x (Availability) = Weighted Base Figure**

	<b>NAICS Code</b>	<b>Description of Work</b>	<b>Weight</b>	<b>x</b>	<b>Avail- ability of DBEs</b>	<b>Weighted Base Figure</b>
<b>1)</b>	5413	Archethectural, Engine	0.80093	x	0.38400	0.3076
<b>2)</b>	5415	Computer systems Desi	0.00569	x	0.48350	0.0028
<b>3)</b>	5416	Mgt, Scientific, & Tech	0.10761	x	0.53260	0.0573
<b>4)</b>	5418	Adverstising, Public Re	0.03413	x	0.44060	0.0150
<b>5)</b>	5419	Other Professional, Sci	0.05164	x	0.48850	0.0252
<b>6)</b>	0	0	0.00000	x	0.00000	
<b>7)</b>	0	0	0.00000	x	0.00000	
<b>8)</b>	0	0	0.00000	x	0.00000	
<b>9)</b>	0	0	0.00000	x	0.00000	
<b>10)</b>	0	0	0.00000	x	0.00000	
<b>Total</b>						0.4079
Expressed as a % (*100)						40.79%
<b>Rounded, Weighted Base Figure:</b>						<b>40.8%</b>



Governor

Special Secretary

Lieutenant Governor

**Public Participation Survey Regarding  
Minority Business Program Goals  
September 2015**

The following survey is voluntary and may be completed anonymously. It seeks input, pursuant to the consultation requirements under State Finance & Procurement Article 14-302 (a)(1)(iv)(2), from minority, women's and general contractor groups and community organizations that may have knowledge about the availability of minority-and women-owned businesses, the effects of discrimination on opportunities for minority-and women-owned businesses, and the operation of the State's MBE Program.

1. Type of work your firm primarily performs (check one):
  - ☐ **Construction** – e.g., general contracting for construction of residential, industrial, commercial or other buildings and alteration, repair and renovation, HVAC, painting, electrical, masonry, carpentry, roofing, excavation, hauling.
  - ☐ **Heavy Construction** – e.g., highways, streets, bridges, tunnels, sewers, railroads.
  - ☐ **Construction Related Services** – e.g., testing, surveying, construction management, inspection, estimating, environmental, interior design.
  - ☐ **Trade or Subcontractors** – e.g., HVAC, painting, electrical, masonry, carpentry, roofing, excavation, hauling.
  - ☐ **Architectural Services** – e.g., structural and civil.
  - ☐ **Engineering** – e.g. structural, civil, mechanical, electrical, other engineering services
  - ☐ **Supplies & Equipment** – e.g., materials, printing, publishing, vehicles, groceries, airport concessions retail.
  - ☐ **Information Technology Services & Supplies** – e.g., hardware/software, programming, systems design data processing, technical support and consulting, maintenance and repair.
  - ☐ **Maintenance Services** – includes any work necessary for the continued operation or upkeep of facilities, structures, buildings, building systems, and grounds, e.g., building cleaning and maintenance services, groundskeeping services.
  - ☐ **Human, Cultural, Social and Educational Services** - e.g., health and legal services, transportation and education services.

- ☐ **Other Services** – e.g., financial, insurance, real estate, professional, food service, airport concessions services. (Does not include maintenance services, A/E services, or construction related services. Please specify services not previously listed.)

2. How many years has your firm been in business? \_\_\_\_\_
3. Is your firm at least 51% owned and controlled by a racial/ethnic minority and/or female?
- a. ☐ Yes ☐ No
- b. If **YES**, what race and/or gender? \_\_\_\_\_
4. Is your firm a Maryland Department of Transportation (MDOT) certified MBE?
- ☐ Yes ☐ No
5. In the past 2 years, has your firm submitted a bid or proposal on any State contract as a prime contractor?
- a. ☐ Yes ☐ No
- b. If **YES**, how many times? \_\_\_\_\_
- c. Were you successful?
- ☐ Yes ☐ No ☐ Not Applicable
- d. If successful, how many of those contracts were awarded to you? \_\_\_\_\_
6. As a prime contractor, have you ever solicited a minority-or women-owned business to perform work or participate as a subcontractor on a State contract that did NOT have an MBE goal or subgoal(s)?
- a. ☐ Yes ☐ No
- b. If **YES**, how many times? \_\_\_\_\_
7. If your firm is an MDOT certified MBE, has your firm submitted a bid or proposal to perform as **prime contractor** on any State contract within the last 2 years?
- a. ☐ Yes ☐ No ☐ Not Applicable
- b. If **YES**, how many times? \_\_\_\_\_
- c. Were you successful?
- ☐ Yes ☐ No ☐ Not Applicable
- d. If successful, how many of those contracts were awarded to you? \_\_\_\_\_
- e. Have you ever counted your self-performance for the overall MBE contract goal or a subgoal?
- ☐ Yes ☐ No ☐ Not Applicable
- If **YES**, how many times? \_\_\_\_\_
8. In the past 2 years, has your firm submitted a bid or proposal on any State contracts as a **subcontractor to a prime contractor**?
- a. ☐ Yes ☐ No ☐ Not Applicable
- b. If **YES**, how many times? \_\_\_\_\_

- c. Were you successful?  
☐ Yes ☐ No ☐ Not Applicable
- d. If successful, how many of those contracts were awarded to you? \_\_\_\_\_

9. If your firm is an MDOT certified MBE, have you ever been asked to provide a quote for subcontracting work on a State contract that did NOT have an MBE goal?

- a. ☐ Yes ☐ No ☐ Not Applicable
- b. If YES, how many times? \_\_\_\_\_

10. If your firm is an MDOT certified MBE, have you ever been asked to provide a quote for subcontracting work on a State contract that had an MBE goal?

- a. ☐ Yes ☐ No ☐ Not Applicable
- b. If YES, how many times? \_\_\_\_\_

11. In your experience, have any of the following factors negatively impacted your firm's ability to do business in the Maryland marketplace? (Check All That Apply)

- ☐ bonding requirements
- ☐ insurance requirements
- ☐ previous experience requirements
- ☐ cost of bidding or proposing
- ☐ project size – project too large
- ☐ project size – project too small
- ☐ price of supplies or materials
- ☐ obtaining working capital
- ☐ late notices of bid or proposal deadlines
- ☐ prior dealings with a prime contractor's owners or management
- ☐ Other (*please specify*)

12. Have you ever been treated less favorably due to race, ethnicity and/or gender while participating or attempting to participate in business dealings within the Maryland marketplace?

- ☐ Yes ☐ No

13. If YES, check all of those types of business dealings in which you have felt less favorably treated.

- ☐ Applying for commercial loans
- ☐ Applying for surety bonds
- ☐ Applying for commercial or professional insurance
- ☐ Obtaining price quotes from suppliers or subs
- ☐ Working or attempting to work on public-sector prime contracts
- ☐ Working or attempting to work on public-sector subcontracts
- ☐ Working or attempting to work on private-sector prime contracts

- ☐ Working or attempting to work on private-sector subcontracts
- ☐ Receiving timely payment for work performed
- ☐ Functioning on the work site
- ☐ Joining or dealing with trade associations
- ☐ Hiring workers from union halls
- ☐ Required to perform inappropriate or extra work not required of others
- ☐ Required to meet quality or performance standards not required of others
- ☐ Other \_\_\_\_\_

14. To the extent that you feel comfortable sharing such experiences, please provide details regarding any business dealings in which you were treated less favorably due to race, ethnicity and/or gender.

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15. The current Maryland MBE Program overall goal is 29%. Do you think the current overall goal should

- ☐ Stay the Same   ☐ Increase   ☐ Decrease

(If you suggest the overall goal should change, please identify any data or evidence to support your position and attach any pertinent documentation.)

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16. The MBE Program Subgoals exist in the industry categories of Construction, Architectural/Engineering-Construction Related Services (AE-CRS), Maintenance, IT, Services, and Supplies & Equipment. Please indicate whether you think the current subgoals should stay the same, increase, or decrease, briefly explain your recommendations and attach any pertinent documentation.

**a. CONSTRUCTION**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	7 %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asian American	4 %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

**b. AE-CRS**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	6%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic American	2 %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Women	9 %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

**c. MAINTENANCE**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	8%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic American	3%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asian American	3 %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

**d. IT**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	7%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic American	2%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Women	8%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

**f. SERVICES**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	7%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asian American	4%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Women	12%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

**g. SUPPLIES & EQUIPMENT**

Subgroup	Recommended Subgoals	Stay the Same	Decrease	Increase
African American	6%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asian American	5%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Women	10%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

17. Please provide any other input you or your firm has regarding State procurement and/or the MBE Program.

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***Please return all survey responses by DATE to***  
**Governor's Office of Minority Affairs**  
**Chantal Kai-Lewis**  
**6 St. Paul St.**  
**Suite 1502**  
**Baltimore, Maryland 21202**

**OR**

***Complete the Survey at: INSERT survey monkey web address***

**NOTE: YOU MAY COMPLETE THIS SURVEY ANONYMOUSLY. PROVIDING YOUR NAME AND BUSINESS INFORMATION IS OPTIONAL. IF YOU PREFER TO REMAIN ANONYMOUS, PLEASE STOP HERE.**

CONTACT INFORMATION	
<i>Name:</i>	<i>Telephone Number:</i>

## **PUBLIC CONSULTATION USED TO DEVELOP THE OVERALL DBE GOAL FOR METROPOLITAN PLANNING ORGANIZATION**

MDOT satisfied the public consultation requirements of 49 C.F.R. § 26.45(g)(1) through a 2015 survey and public consultation meetings that gave interested parties an opportunity to provide feedback on several areas including:

- DBE/non-DBE availability in the local market;
- Effects of discrimination on opportunities for DBEs; and
- Suggestions regarding information that should be considered when setting overall goals.

The survey and public consultation meetings were initiated for the purpose of complying with the State's biennial overall and subgoal goal-setting process, but the feedback sought and received is equally applicable to both the State MBE and federal DBE Programs.

The Survey. The 2015 Overall Goal Public Participation Survey ("Survey") was developed by GOMA<sup>1</sup>, in consultation with the Maryland Department of Transportation (MDOT). The link to the Survey was distributed electronically to local organizations, groups and individuals that could be expected to have information concerning the availability of disadvantaged and non-disadvantaged businesses, the effects of discrimination on opportunities for DBEs, and the State's efforts to address discrimination against DBEs. The Survey was posted on GOMA's website October through November 2015. Hard copies were made available at the subsequent Public Stakeholder Meeting sessions held October 26, 2015.

363 completed Surveys were received. The submissions were from certified DBE and non-DBE firms who have reportedly been in business from nine months to 100 years. The firms responding were from various procurement areas and industries, and included construction and related trades, architectural and engineering, educational services and supplies, information technology, maintenance services, advertising, promotional supplies, telecommunications, trucking, and accounting. The Survey asked whether responders had ever been treated less favorably due to race, ethnicity and/or gender while participating or attempting to participate in business dealings within the Maryland marketplace and if so, in which types of business dealings. Of the 15 types of business dealings provided in the Survey, all were chosen at least once by those who believed that discrimination had prevented their full and equitable participation in the State's marketplace. In fact, of the responding firms, 48.48% believe that they have been treated less favorably in working or attempting to work on public sector contracts, subcontract and 45.45% on public sector prime contracts. Nearly 40% of those responding to this question expressed issues with receiving timely payments for work performed.

Many of the responding firms reported issues with receiving timely payment:

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<sup>1</sup> Maryland's Governor's Office Minority Affairs (GOMA) is the office responsible for operating Maryland's affirmative action procurement programs.

*“My firm is ignored when it comes to being paid within 10 days of Prime Contractor receiving their payment.”*

*“[My firm’s] project started the end of August, and we sent a total of four invoices and getting ready to send out another one, but only received one payment [in October]’.*

The survey responses also indicated issues with intimidation of minority owned- subcontractors by prime contractors.

*‘Told by a major general Contractor after signing the subcontract that he would "bury us". Then he went to throw our project foreman against the wall. [L]ater in then job, destroy[ed] our materials, run us ragged, not pay for change orders ...and cursed at...’*

There were also complaints of being required to perform inappropriate work.

*“It's been our experience that some primes, forced to meet MBE requirements, want us to provide services that have nothing to do with our approved NAICS civil engineering codes or our experience. One request was that we conduct Human Resources training for the owner's employees at various satellite offices. Another prime asked us to assemble and bind reports.”*

Some of the firms responding to the survey believe there is a need to improve programmatic enforcement and further unbundle projects. These firms also overwhelmingly indicated the belief that the implementation of contracting programs for minority- and woman-owned businesses was necessary because without them, the opportunities available to participate in State procurements would not exist.

*“We have been trying to get work in home building industry last 20 years by being a member of Maryland Builders Industry Association. Currently more than 90 percent of our income is from public sector. I cannot imagine staying in business in Maryland without MBE participation requirements for public sector projects.”*

The Public Outreach Sessions. On October 26, 2015, MDOT’s Director for the Office of Small and Minority Business Policy participated in the public outreach facilitated by GOMA. A morning and an afternoon session were held at the Maryland Judiciary Conference Center in Annapolis,

MD, a centralized State location.<sup>2</sup> A total of 8 persons participated in the sessions.<sup>3</sup> The attendees represented individual business owners as well, members of minority, women and general contractor groups and community organizations. During the sessions, attendees provided feedback about a variety of topic areas including, but not limited to, DBE/non-DBE availability in the local marketplace, effects of discrimination on opportunities for DBEs, operation of the State's minority- and women-owned business contracting programs, and suggestions regarding information that GOMA and MDOT should consider when setting the overall aspirational goals.

The feedback provided by participants during the sessions was similar to that collected from the Survey responses. While most participants believed that the minority business program goals were sufficient, a few asserted that both the goals should be increased as a way to increase available contract opportunities. In both sessions, discussions focused on programmatic improvements and efficiencies that the stakeholders would like implemented. Suggestions included an expansion in the marketing of opportunities as a way to connect prime and subcontractor communities; diversifying and expanding subcontracting opportunities in industries outside of construction; creating additional classifications of economic standards in certain industries, which could allow for more prime contracting opportunities for those minority firms on the cusp of graduating from the program. MDOT took all responses and comments into consideration when finalizing the proposed overall DBE goal for MPO activity.

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<sup>2</sup> One public outreach session was held in the morning and one in the afternoon.

<sup>3</sup> GOMA sent invitations to the public outreach sessions to more than 5000 firms. This included all firms listed in the state's official directory of minority and disadvantaged firms, local business chambers of commerce, and small and minority advocacy groups.