

# A Strategic Plan to Enhance the Howard Street Corridor

STEERING COMMITTEE  
RECOMMENDATIONS

APRIL 2010



Prepared by Zimmer Gunsul Frasca Architects  
Cambridge Systematics // Kittelson & Associates



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# EXECUTIVE SUMMARY

This document presents the findings and recommendations evolving from the Phase II work plan developed in collaboration with the Howard Street Steering Committee. The Steering Committee was established in Phase I of this process to ensure a comprehensive strategy would be addressed, and to identify roles and responsibilities for all stakeholders.

## Project Goals

This study was guided by the following goals:

- Improve the economic vitality and encourage quality redevelopment of the Howard Street Corridor;
- Strengthen support for the preservation of Baltimore's heritage resources and increase the economic benefits of heritage tourism;
- Enhance the aesthetic appeal of the corridor;
- Improve the quality and environment of transit, public space, and the pedestrian experience on Howard Street;
- Coordinate and leverage investments for greater impact and bring together a multi-sector partnership of stakeholders to enhance the Howard Street corridor;
- Improvements to Howard Street should exhibit best practices in transit-oriented development and provide a model for future coordinated land use and surface transit investment in Baltimore.

This Strategic Plan to Enhance the Howard Street Corridor links current redevelopment efforts and potential opportunities with recommendations for transportation, transit and streetscape improvements. This document includes recommendations for improvements to the corridor that could be implemented in the short term (new furniture, shelters, etc), within the context of a longer term revitalization plan.



## A STRATEGIC PLAN TO ENHANCE THE HOWARD STREET CORRIDOR

PARTNERING AGREEMENT FOR PHASE II **Development of the Strategic Plan** AUGUST 2008

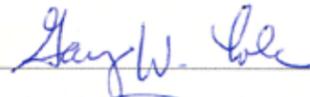
### MEMORANDUM OF UNDERSTANDING

We, the undersigned, do hereby commit our support to the creation of a public improvement strategy for the Howard Street corridor as described in the attached Exhibit "A" - Scope of Work. It is our mutual intent to create this Strategic Plan for the highest and best interests of the redevelopment of the corridor and to complement the public's investment in the corridor. In so doing, we recognize that the scope and breadth of individual strategies and potential improvements identified as part of the Strategic Plan are to reflect the recommendations of the Steering Committee with approval by City and State Agencies. We also recognize that the scope of strategies and potential improvements is subject to budgetary appropriation of funding to the undersigned governmental agencies.

To that end, we agree to support the development of the Strategic Plan to improve the overall function and quality of the Howard Street corridor. We pledge to support the development of the Plan to the extent possible and subject to budgetary appropriation, by providing in-kind resources, staff assistance and financial assistance, as mutually agreed upon. Recognizing that we as individuals may not possess sole authority to commit corporate or public resources to this end, we agree to seek such authority as is necessary upon signing of this document.

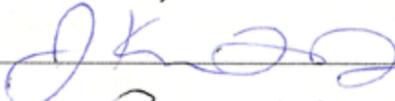
By execution of this memorandum of understanding, we pledge to one another our continuing support for the overall program, and agree to work in good faith to achieve the preliminary goals set forth in Exhibit "A". As detailed in Exhibit "A", this Steering Committee will work in coordination with the Consultant Team performing their services under contract to the Maryland Department of Transportation.

### STEERING COMMITTEE SIGNATORIES

Baltimore City Department of Planning  
GARY COLE 

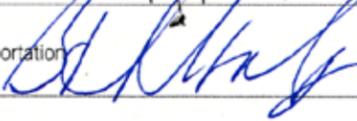
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University of Maryland Medical System  
MARK WASSERMAN 

Maryland Department of Transportation  
BEVERLEY K. SWAIM-STALEY 

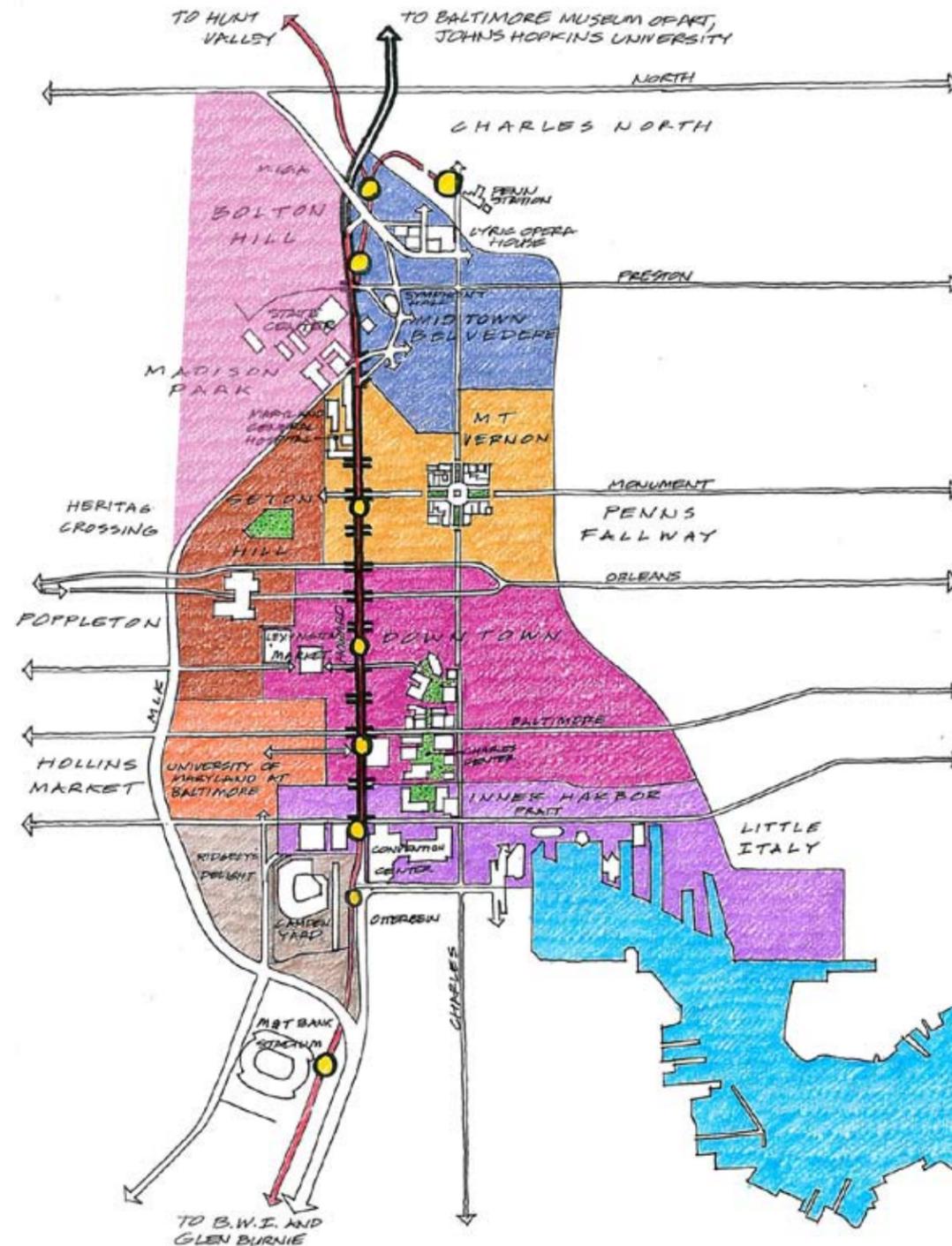
Maryland Transit Administration  
TONY BROWN 

### CONSULTANT TEAM

Zimmer Gunsul Frasca Architects LLP / Cambridge Systematics Inc. /  
Bay Area Economics / Kittelson & Associates

## HOWARD STREET A Great Street Again

Howard Street - Connecting Neighborhoods and Activities



Many great cities have one street that historically centers and synthesizes the energy and communities of the city. The Corso in Rome, Regent Street in London, Washington Street in Boston, Pennsylvania Avenue in Washington, Market Street in Philadelphia and Market Street in San Francisco have not always been the very best streets in their respective cities, but in times of promise, renaissance and success, they have manifested the aspirations and potential of the whole more than any other street. And in the process, they are the most useful, inviting civic spaces in those cities.

Baltimore is fortunate to have two streets which play significant roles in the downtown: Charles Street and Howard Street. Charles Street is the historic center of Baltimore that anchors the central business district as it reaches north and south. Howard Street has been a complement to Charles Street. Historically, it has been the destination shopping district for downtown. More recently, with its transit function, it has connected the south of Baltimore to the north, as it also centers the resurgence of the Westside.

For three centuries Howard Street has linked and served the commercial, institutional and recreational communities of the City. Like its peers in other great cities, it has had its moments of decline and its periods of triumph. But it has never been irrelevant or detached from the city's neighborhoods that it has nourished and served.

Today, Howard Street is not at its best. Certainly it is abutted by many vital activities and it transports many who need access to and through the heart of Baltimore. Yet it does not consistently provide the most fundamental role of a civic space in the city...that of providing an environment so inviting and accommodating that it is simply...the place you would rather be.

The opportunity to improve Howard Street is now. Politically, socially and economically the time is right. The solution can be derived from what is there complemented by what can be attracted. The precedents to stimulate that solution are numerous. The strategy is to assess what is good and what can be improved, to utilize with discipline relevant precedents, and to investigate, design and develop a series of implementable initiatives that strengthen the Street. The potential lies in the connections that Howard has maintained and grown with center city commerce, institutions, residential neighborhoods, recreational venues and the critical streets and spaces that link it to the region.

An examination of other landmark streets can provide the criteria for solutions. An observation of the great streets mentioned above is that, even though they have a history spanning more than 24 centuries, in their primes, all have similar qualities that define their success.

1. They are sustained and animated by the activities that abut them on a block by block basis.
2. Those who pass along the street support and complement the adjacent activities of the street thus providing it with the energy of a diverse and non resident population.
3. All modes of circulation that are present operate with compatibility and without compromise.
4. The aspirations of the city are reflected in the consistent quality, care, and craft of all physical improvements.

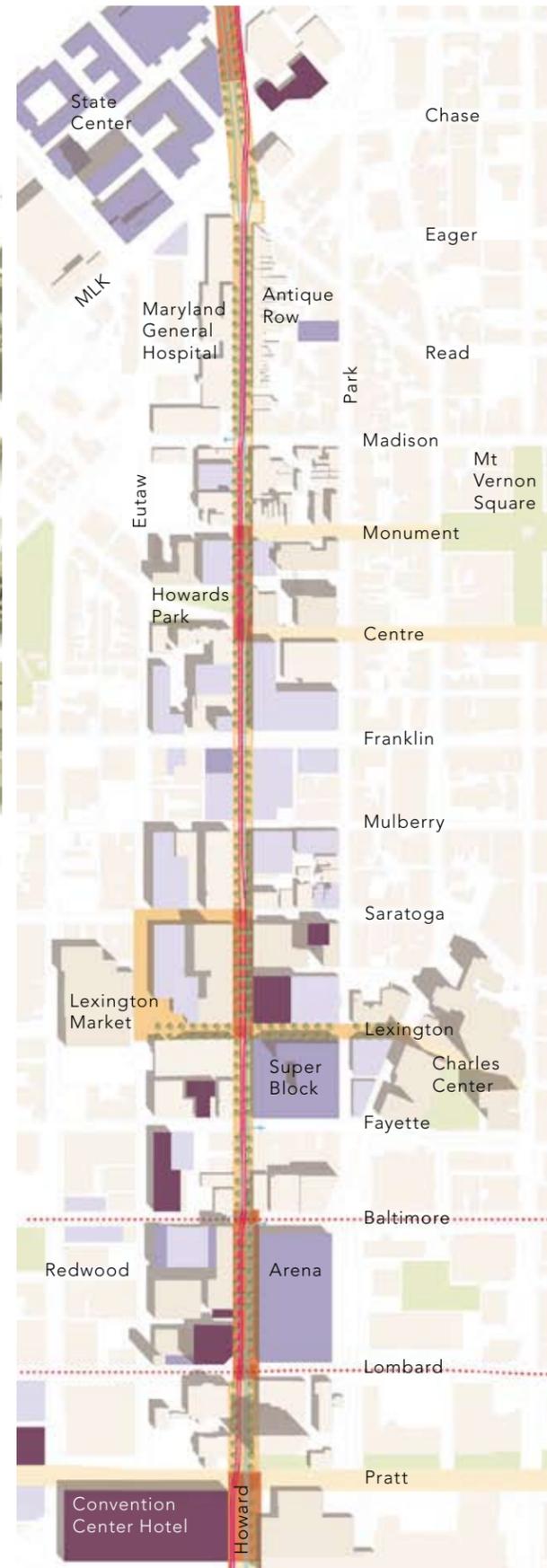
The consequence is that these are the streets you wish to visit, where you want to do business, where you prefer to reside...and where you play. These are the streets that bring the city and its visitors together. And this is the role and the promise of Howard Street.

POTENTIAL CORRIDOR DEVELOPMENT



The massing diagram above provides a conceptual rendering of how potential development and renovations (both shown in light blue) may contribute toward reinforcing the urban form of Howard Street in massing, building heights and historic context. The magnitude of development illustrated should be considered a minimum baseline for creating a vibrant mixed-use corridor. As the corridor becomes more vibrant, it is possible that additional development may be attracted to the corridor.

Each station area provides an opportunity for revitalization into a dynamic environment. The Baltimore St. - University of Maryland Station Area can be a focus for entertainment and education. The Lexington Street station provides the retail core with strong east-west connections from Lexington Market to Charles Center. The Centre Street station area provides a unique opportunity to create an in-city transit-oriented development which connects historic neighborhoods to the east and west. The areas between the stations also require investment and improvements. Storefront revitalization and streetscape improvements should be initiated along the length of the corridor.

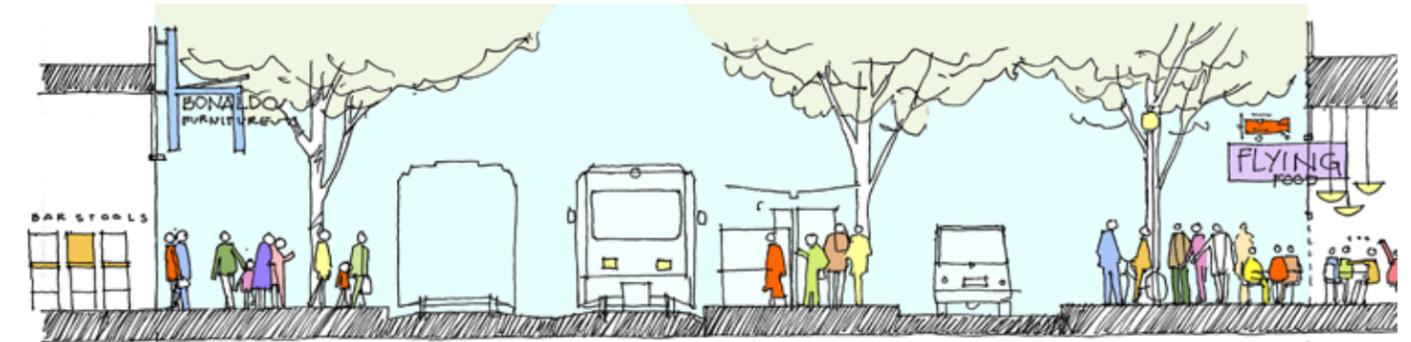


AN ANIMATED STREET

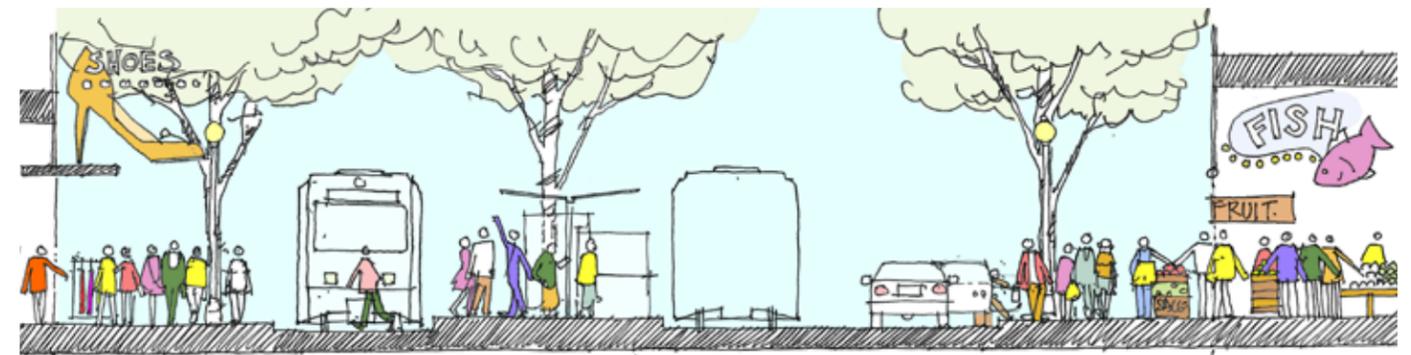
Complementary Land Uses, Transit, and Public Realm

The vision for Howard Street includes vibrant building streetfronts, an engaging pedestrian environment, sustainable infrastructure, and a street that successfully accommodates all modes of transportation..

Vision for Enhancing the Centre Street Station Area



Long Term Vision for Enhancing the Lexington Station Area



- PLAN DIAGRAM KEY
- LRT Alignment
  - LRT Alignment
  - LRT Station Block
  - Shelter
  - Potential Red Line
  - Auto
  - Auto Travel & Direction
  - Parks and Open Space
  - Enhanced Streetscape
  - Projects - Completed
  - Projects - in Planning
  - Projects - Potential

## Station Area Improvements

### A Vision of the Centre Street Station Area

The revitalization of the Centre Street Station Area provides a significant opportunity to create a vital transit-oriented neighborhood along Howard Street while also improving connections between the Seton Hill and Mt. Vernon neighborhoods.

#### Potential Station Area Improvements

- 1 Renovated buildings with enhanced storefronts
- 2 Howards Park improvements
- 3 New development (in blue) on vacant lots
- 4 Improved transit platforms and furnishings
- 5 New Streetscape along Howard Street

**Centre Street Station**  
View South from Platform



### A Vision of the Lexington St. Station Area

The Steering Committee has recommended that Long Term improvements for the Lexington Station should include modifying the track and travel lane configuration to eliminate the confusing weave and providing a new, consolidated station.

#### Short Term Improvements

- Relocate southbound platform.
- Reconstruct streetscape, OCS poles, landscaping to accommodate long term plans.

#### Long Term Improvements

- In coordination with corridor development, construct center platform and through travel lane.

**Lexington Street**

Views of Short Term and Long Term Improvements



Short Term Improvements

Relocated Southbound Platform (above)  
Aerial View from Saratoga (right)



Long Term Improvements

View of Platform from Saratoga (above)  
Aerial View from Saratoga (right)



### A Vision of the Baltimore St. Station Area

The redevelopment of the Arena provides a significant opportunity to enliven the station area and enhance transit service. The connection between the Arena and the University of Maryland via Redwood Street may also be improved as part of the Arena redevelopment.

#### Potential Station Area Improvements

- 1 New Arena with retail active street level fronting on Baltimore Street and Howard Street
- 2 Improved transit platforms and furnishings
- 3 New streetscape along Howard Street - includes relocating transit furnishings at Redwood Street.

**Baltimore Street Station**

View South from Baltimore Street



## Action Plan - Strategic Direction, Priority Catalyst Projects and Planning Efforts

Recommended Activities
<b>Strategic Direction and Oversight</b>
Steering Committee to oversee Phase III of the Howard Street Strategic Plan
Define organization to oversee Howard Street which includes maintenance and policing activities
Pursue required approvals necessary for agencies to commit funding for planned improvements
<b>Priority Catalyst Projects</b>
Centre Street Station Area - Economic Development Plan
Develop Comprehensive Design and Engineering Package for: - Centre Street Station Improvements - Priority on Low Impact Development strategies - Lexington Street Southbound Platform Transit Furnishings
Develop plans for 2-way Park Avenue conversion and roundabouts at Fayette and MLK Blvd.
Bus Stop Improvement Plan for Fayette St. and Howard St. intersection
<b>Economic Development</b>
Develop detailed Economic Implementation Plan to include: Financial Feasibility, Funding Needs, Fiscal Impacts, Benchmarking, and Technical Assistance. Economic Implementation Plan should establish benchmarks for committing public investment based on private sector development activity
Continue storefront improvement program. Initiate focused ‘block by block’ storefront program.
<b>Urban Design, Transit and Transportation</b>
Develop Comprehensive Schematic Design and Engineering Package for recommended Howard Street improvements as a follow-up to Centre Street Station redesign. Confirm priority projects and complete 100% design for key pilot projects. Consolidated Design and Engineering package shall include: - Lexington Station - Short Term Improvements with feasibility analysis for Long Term Improvements - Lexington Street - completion of re-design and renovation - Corridor Strategy for Low Impact Development best practices - Infrastructure coordination, utility upgrades, and stormwater management plan - Corridor streetscape for station and non-station blocks - Lighting, Landscape, Public Art, Furnishings - Note: Baltimore Street Station improvements will be developed in coordination with Arena project and Red Line.
Transportation Plans - Bus Stop Improvement Plan - Investigate additional improvements for Eutaw Street - Develop a Parking Management Plan to improve use of existing parking resources - Develop a Transportation Demand Management program to increase transit use for existing employees and new development which may include the creation of a Transportation Management Association
LRT Vehicle Mid-Life Upgrades - Incorporate concepts to minimize impact of vehicles including wheel shrouds and branding opportunities
Open Space Planning - evaluate and update Westside open space recommendations, implement Howards Park
Refine Special Corridor Design Guidelines in coordination with Comprehensive Plan Update, Westside Initiative Plan and Historic Resources. Integrate the City's Transit Oriented Development (TOD) objectives and principles.
<b>Coordination with Related Projects</b>
Market Center Historic District - Continued coordination and planning activities
State Center - Develop ‘Gateway’ design beneficial to State Center and Howard St Corridor
Pratt Street - Coordinate gateway and circulation improvements with Howard Street plans
Arena Site - Coordinate RFP process with Howard Street recommendations for enhanced transit facilities
Superblock - Coordinate Right-of-way improvements with potential improvements for bus stops
Red Line Transit - Coordinate Baltimore St LRT improvements with Locally Preferred Alternative
UMB & UMMS - Maryland General Hospital - Master Plan and Howard Street Improvements

Enhancing Howard Street will require a comprehensive strategy of detailed planning efforts, policy initiatives and selected catalyst improvements.

The recommendations, identified on the adjacent matrices, detail the necessary actions for successful revitalization and enhancement of the Howard Street Corridor.

### Establishment of the Howard Street Working Group

Upon completion of the Draft June 2009 Steering Committee Recommendations, a Howard Street Working Group was established to focus on short term implementation improvements. The Working Group includes representatives from the MTA, MDOT, the Baltimore Development Corporation (BDC), the Downtown Partnership of Baltimore and the City of Baltimore’s Departments of Planning and Transportation (BCDOT).

The Working Group met regularly through late 2009 and 2010 to coordinate for prioritized implementation measures. In February 2010, their efforts resulted in the signing of an ‘Intergovernmental Agreement by and among Maryland Transit Administration and the Mayor and City Council of Baltimore and Baltimore Development Corporation.’ This Intergovernmental Agreement signals the commitment of three agencies in particular, the MTA, BDC, and BCDOT, to fund and expedite specified improvements for the corridor, including transit facility upgrades at Lexington Station, as well as catenary, landscaping, and façade improvements. A full copy of this agreement is provided in Appendix A.



# 11111



## Existing Conditions Assessment



# The Howard Street Corridor

## The Need to Improve Howard Street

The Howard Street corridor was once one of the Baltimore Region's most vibrant commercial corridors. Similar to what happened in cities across the country and due to numerous social and economic factors, the increased suburbanization in the Baltimore region contributed to the decline of the center city. Howard Street's commercial corridor started its steep decline in the 1960's. In the 1980's the Maryland Mass Transit Administration began construction of the Central Light Rail Line (CLRL) within the street right-of-way and opened service in the area in 1992. Many still feel that the CLRL construction activity, changes to traffic patterns and the subsequent impact on business access, and the physical design are the primary reason for the commercial corridors' decline. Some also feel that the CLRL contributes to fragmentation of neighborhood connections for both pedestrians and vehicles between the University of Maryland and Downtown as well as Seton Hill, Mount Vernon, Midtown Belvedere, Heritage Crossing, Upton, Madison Park and Bolton Hill.

The corridor's location is important in that it provides a link between the Cultural Center and the Inner Harbor and Downtown through the emerging Westside district. With its connections to existing metro, bus and MARC service, it also provides an historic and still vital transit link from a regional perspective. This strategic location prospered in all of the previous economic eras. Changing demographics and market demand for urban living that combines quality places and with major transit options, position the Howard Street corridor to participate in and support Baltimore's economic revitalization and its urban renaissance.

## The Howard Street Corridor

Source: Baltimore Historic Society



1905



1910



1968



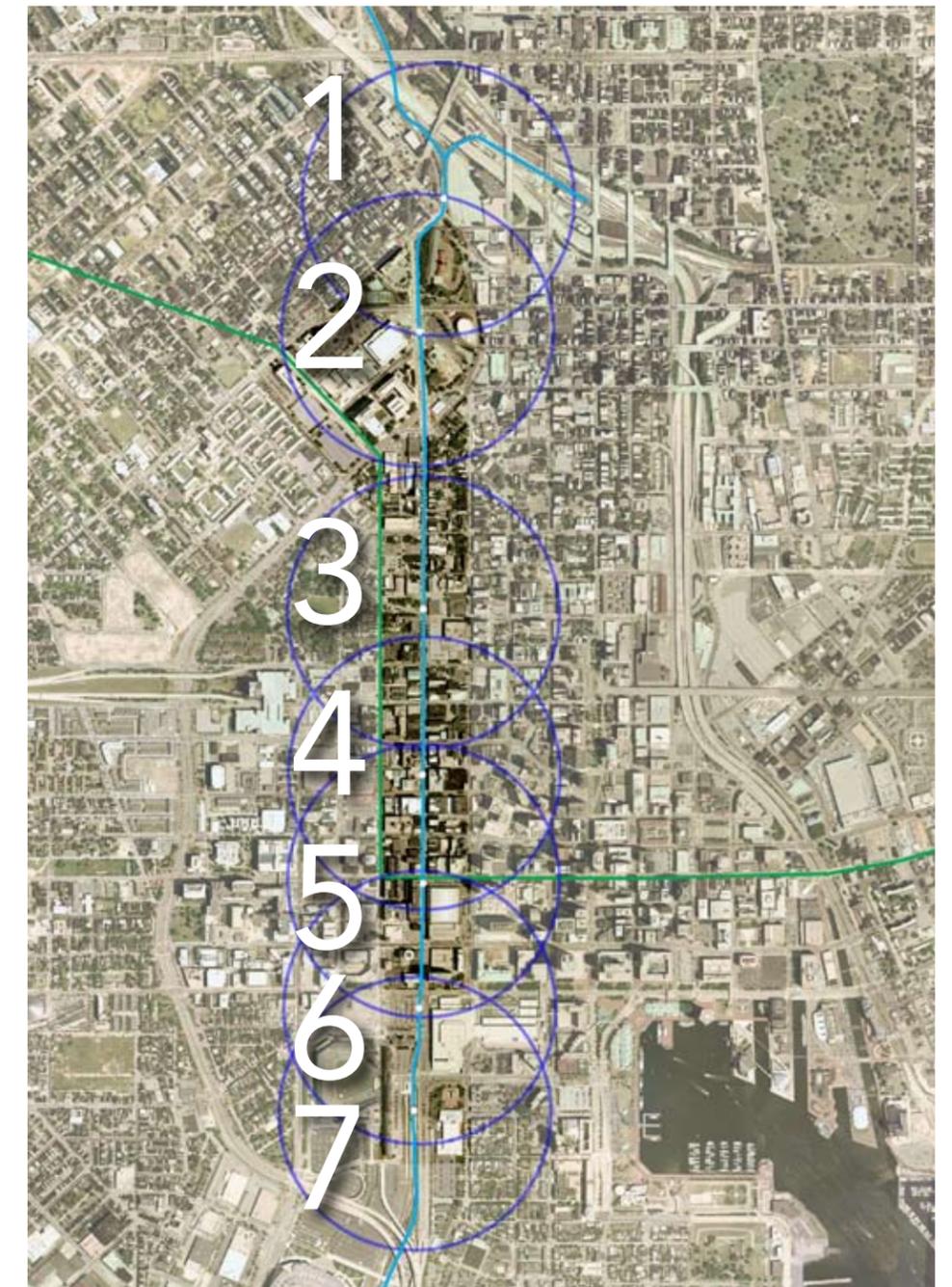
1950 (Above) and 2004 (Below)

## Study Area Boundaries

This study defines a conceptual corridor strategy for the area between, and including, the Cultural Center station to Camden Yard Station.

## Project Study Area -

The 5 Minute Walksheds of the Central Light Rail Stations cover a significant portion of Downtown



- 1 University of Baltimore - Mt Royal
- 2 Cultural Center
- 3 Centre Street
- 4 Lexington Market
- 5 University Center - Baltimore Street
- 6 Convention Center
- 7 Camden Yard

# Observations

## A Visual Summary

**Land Use** - The corridor includes a diverse range of uses, from renovated schools, institutional uses, historic storefronts, vacant lots with surface parking and civic resources.



**Transportation** - The existing transit facilities - overhead catenary poles, shelters and high block ramps - require significant enhancements.



**Public Realm** - Improvements in the pedestrian environment should address vacant storefronts, poor maintenance and streetscape clutter.



## Steering Committee Preliminary SWOT Analysis and Advice

This effort began with the Steering Committee providing advice by listing their thoughts on the Strengths, Weaknesses, Opportunities and Threats (SWOT) for the corridors:

### Strengths

1. Transit is already there, with high bus usage.
2. MTA has identified potential infrastructure improvements.
3. Complementing public transit improvements via MARC and Red Line.
4. Close proximity to area institutions: MD Medical System (MD General), MICA, UMB, Catholic Relief Services Headquarters, Antique Row.
5. Ability to connect with O's, Ravens, Inner Harbor, and BWI airport.
6. The Westside area's historic building fabric and scale are an asset.
7. The Westside Strategic Plan is in place and being actively promoted by the Baltimore Development Corporation and Westside Renaissance.

### Weaknesses

1. Transit is already there (not working collaboratively; no balance of modes).
2. Scale of light rail vehicles is overwhelming on the street and at the sidewalk.
3. Traffic pattern on the street is complicated, confusing and can result in private vehicles causing obstruction to circulation.
4. People and cars do not want to be there.
5. Sense of disorder and neglect (e.g. Howard and Fayette Streets).
6. High bus usage creates overcrowded sidewalks.
7. No identity.

8. Confusion exacerbated by afternoon rush-hour and school children taking transit.
9. Confusing signage/ Hard for drivers to maneuver.
10. Personal security is questionable.
11. Subway is not thought of as an option.
12. Lack of will to do much about Howard Street.
13. Existing perception of decline.
14. No organization for joint concerns.
15. No occasion to go onto Howard Street unless you have business on the north and south ends.
16. Business owners are split on transit and whether or not it is an incentive to business.

#### Opportunities

1. Superblock or Arena site may be a good place to host a new transit center.
2. Public private partnerships.
3. Five to six major developments occurring in the next 4 to 5 years.
4. Smaller projects – 1500 housing units and 200-300 sf of retail (net new).
5. Large key players are present that can make a difference.
6. There is the ability to capture several different markets (convention city visitors, existing residents, visitors on business, tourist market).
7. Lexington Market can really be an anchor, with a potential for more density.
8. Build on the strength of Antique Row as a source of successful small business.
9. Think about Eutaw Street for alternatives which could form a wider district with Howard.
10. Short-term improvements can make a difference – for example – investment, clean up, move and improve stations.
11. Historic structures provide adaptive reuse opportunities and contribute to the corridor's identity.
12. Attract heritage tourists with the placement of historic markers.

#### Threats

1. Disorder among modal routes.
2. New vehicular traffic from new development.
3. There is disenchantment about Howard Street's future.
4. Possibility of relocating Howard Street problems to adjacent streets.

#### Steering Committee Advice

The following section is a summary, by subject, of additional Steering Committee comments.

#### Corridor Vision

- Howard Street can be considered at three scales: the project corridor boundary, the Westside District and Downtown Baltimore.
- Howard Street needs a new vision; people have new ways of purchasing goods and services and the city needs to be more cutting edge.
- There needs to be a coherent strategy on how to develop the corridor.
- From Lexington Street to MD General is more difficult part of the corridor to revitalize; consider some portion of Howard Street turning completely residential.
- There needs to be an underlying theme that feeds into a full-service marketing campaign.
- The historic architecture of the area should play a prominent role in establishing the identity for the corridor..

#### Land Use

- Adaptive reuse project can create a significant challenge for retail; many require extensive modification.
- Howard Street's unique collection of historic structures represents an opportunity to utilize the federal, state and city historic tax credit programs and preserve the corridor's vibrant historic character.
- Though there is much vacant land, many lots are used

for ancillary uses like parking lots, which create income for properties that have been hard to develop or market.

- The residential development along Lexington Street on the Westside needs to be convinced to extend residential use to Howard Street.
- Convention Center visitors should be considered as a market segment that can patronize Howard Street.
- The sterile wall on the west side of the arena needs to be made into something more vibrant.

#### Stakeholders

- There is a need to bring in additional users - Weinberg Foundation, Catholic Relief Services, smaller stake holders.
- Public sector really needs to implement some short-term projects to indicate that Howard Street is on the radar.
- City and state must lead the effort.
- Well-thought-out contingent relationships need to exist to hold all players accountable.
- Do not forget about the small business owners.
- Police officers should also be included in this process – security is important.
- Maryland Housing Trust is a definite stakeholder to tap for this project.
- Maryland State Historic Preservation Office should also be consulted.
- The focus groups meetings may need to be by attributes instead of geography (convention business, institutional uses, residential, retailing districts, commercial users); Transit usage can be a part of those subgroup discussions or its own discussion.

#### Issues for Potential Improvements to Address:

- Intersections in which multiple modes converge are very dangerous and scary.
- Need to address air of neglect – clean up trash, etc.
- MTA needs to consider the existing utility and operations of their systems; need to focus on safety and physical element.
- MD/MTA commuter choice program may be a good source of information among transit users.

#### Overview of upcoming MTA Improvements:

- Changing bus fleet to hybrid buses.
- New shelters with advertising.
- Transit information with next bus arrival time at shelters (NextBus).
- Bike racks on all buses.
- Change of catenary TES to something simpler.
- Update and replace LRT signs.
- Re-construct Metro entrance on Lexington Street (which MTA would like completion to coincide with improvements to Howard Street).
- LRT fleet: Howard Street fleet is approaching mid-life and will have major maintenance done soon.
- Redline will be low-floor cars.
- Advertising on LRT cars is being updated.
- Negotiating to get weekend train on the Camden Line.

# Historic Development

The following section is abstracted from the “West Side-Market Center Howard Street Corridor, Preservation Recommendations and Comments”, Commission for Historical and Architectural Preservation, City of Baltimore, February 2009

Howard and Baltimore Streets are some of the oldest in Baltimore City. Both appear on A.P. Follie’s 1792 “Plan of the Town of Baltimore,” one of the earliest plans of Baltimore City. Baltimore Street, then called Market Street, was the main artery. Howard Street was created by an act of legislature in 1782 when Howard’s Addition, a large parcel of land, was annexed to Baltimore Town.

Unpaved, and sometimes treacherous, Market or Baltimore Street served all of the commercial needs of Baltimore Town and contained residential dwellings. The depth of the soil in the streets kept sections of it impassable during the spring. During the paving of Market Street in 1781, careful consideration was taken to leave room for pedestrian and business needs. Sidewalks were constructed wide enough to ensure the passage of pedestrians around the porches and cellar doors of residences and businesses. Congestion and chaos on Market Street was constant and in 1792 citizens petitioned the legislature to extend and open Fayette Street. In 1844 Robert Gilmore wrote that the paving of Market Street caused such a flurry of tearing down old buildings and reconstructing better ones happened so fast he could hardly remember the former structures. He also noted at the time, first floors of residences began being converted to retail shops, while the stories above maintained residential use and some “well decorated homes” had been converted to shops. Howard Street still had few homes or commercial structures.

The earliest structures on Howard Street were three small Federal style rowhouses; some used as homes and others as small shops. The streets north-south alignment drew travelers using the National Road, turnpikes north of the city, and developing railroads. Inns were built to accommodate the travelers, and the easy access to transportation attracted wholesalers who constructed warehouses. The many inns

and warehouses attracted wagons moving produce and dry goods on the National Road. By 1824 the Howard Street strip began to resemble its early neighbor, Baltimore Street. Interestingly, Howard Street catered to all classes in one way or another. Taverns and inns were often aimed at a specific clientele by the name of the establishment. The railroad boom continued to benefit Howard Street. The large numbers of whole sale warehouses increased and the first rail lines were laid down the middle of Howard Street in 1832.

The carriage industry also found a home on Howard Street, several factories, stables, and carriage rental shops such as the “The Great Western Carriage Repository” between Mulberry and Franklin Streets began to appear. Stables such as the “Golden Horse,” whose owner also ran a popular tavern of the same name, and the “Academy Stables” supported the carriage industry while catering to long distance travelers staying at one of the many inns along the strip. These stables also supported the railroad. Locomotives were not permitted for operation in the city till the mid-1800’s, prior all train cars were moved through the streets by a team of horses. Horses were still used well after machines were permitted to do the job. Several small production houses of clothes, and other dry goods also operated in the area. These businesses were attracted by the transportation options of now several successful railroads surrounding the West Side-Market Center area.

In 1888 Howard Street showed signs of a transition. The most significant building constructed was completed: the Hutzler’s Palace Building. As the city’s first department store, it towered several stories over the warehouses, carriage factories, and small shops in federal style rowhouses on Howard Street. The first floor was two stories tall with cast-iron columns, and a mezzanine. Extending from the ground level to ceiling, two skylights filled light courts in the



A.P. Follie’s 1792 “Plan of the Town of Baltimore” Close up (left)

Howard Street, early 1900’s (right)

Source:  
Baltimore Historic Society



structure. The culture of commercial and business districts was changing; the same transportation technology that made the area ideal for light industry was also appealing to the new large scaled retail business. Consumerism was born in Baltimore, and new forms of commerce related architecture began to fill the West Side-Market Center area.

Many other large retail stores followed the Palace Building to Howard Street. The wholesale warehouses gave way to beautifully designed, all inclusive stores. One could buy anything they imagined in one place: dry goods, clothing, shoes, and fine foods. New methods of construction made the grand scale of these structures possible. Iron and later steel, eliminated the need for thick masonry walls or large timbers. Façades of brick gave way to expansive decorative stone work, and large panes of glass. Hotels and inns along Howard Street had begun to modernize in about the same pace. A new upper class clientele was attracted to the new main street of Baltimore. Almost all of the residential properties had moved off of the strip to surrounding developing streets. Other main streets in the area remained smaller in scale, mixed use, or catered to the business and financial industries.

Howard Street and the West Side-Market Center retail district expanded over 200 years and is now a 24-block area of mixed structures. Into the mid-1900’s the rail access retained small manufacturers and merchants to the south end of the district, while the retail and entertainment industry spread east and west off of Howard Street. Theaters, schools, warehouses, and hotels from a 200-year

span all exist together. Several small federal style rowhomes still exist, alongside large retail palaces, and 20th-century Art Deco façades.

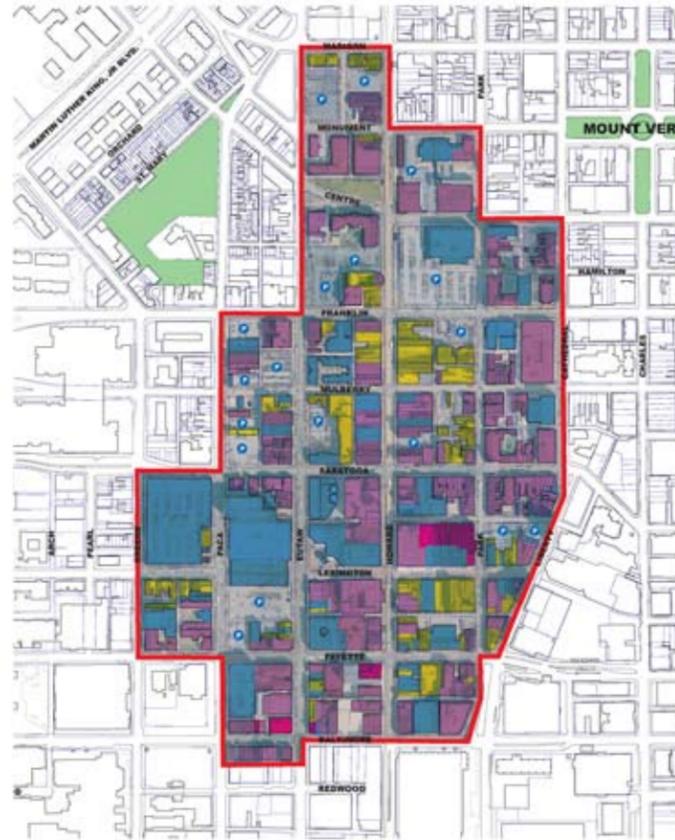
In the 1950’s American cities began another drastic change, the post-war use of the personal automobile and suburban development began to drain the residents from the city. Demolition of structures for parking had begun as early as the 1920’s, and after the 1930’s the trend quickly spread throughout the city, not sparing the West-Side-Market Center. Former residents of the city who had relocated to the suburbs still depended on the downtown retail district. In the mid-1950’s shopping centers and large department stores began appearing in areas such as Towson, a close drive with ample parking for county residents. Several years later in 1968 one more significant event caused a mass-exodus from the urban areas of Baltimore, taking the retail and services with it. The assassination of Martin Luther King Jr. caused riots across the country; Baltimore was not spared. Blocks of city streets were burned, and businesses looted. By this time the draw of suburban development was too strong and the viability of downtown streets such as Howard Street considerably deteriorated.

## Existing Historic Districts and Cultural Resources

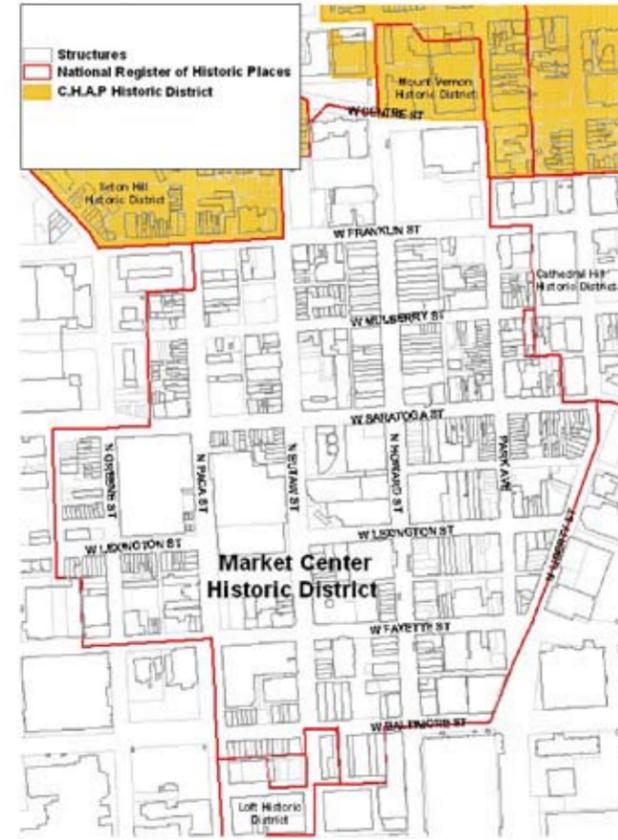
All Baltimore City Local Historic Districts require Commission for Historical and Architectural Preservation review (staff or public hearing) for any exterior changes. This includes all facades of structures and work done in public areas. This includes parks, streets, sidewalks, and alleys. National

**West Side MOA Map-**

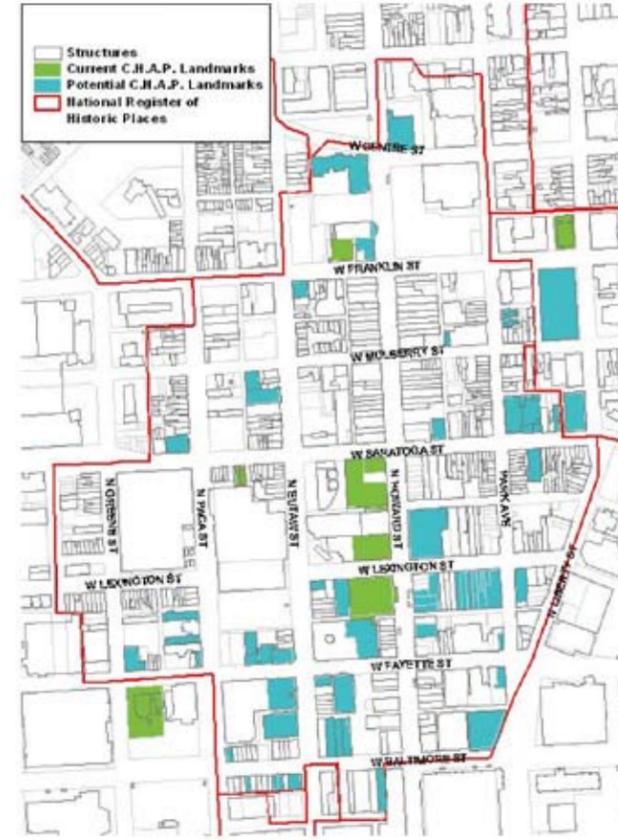
Legend: Purple - Preserve, Yellow - Redeveloped with Guidelines, Blue - Non-Contributing, Pink - to be Demolished



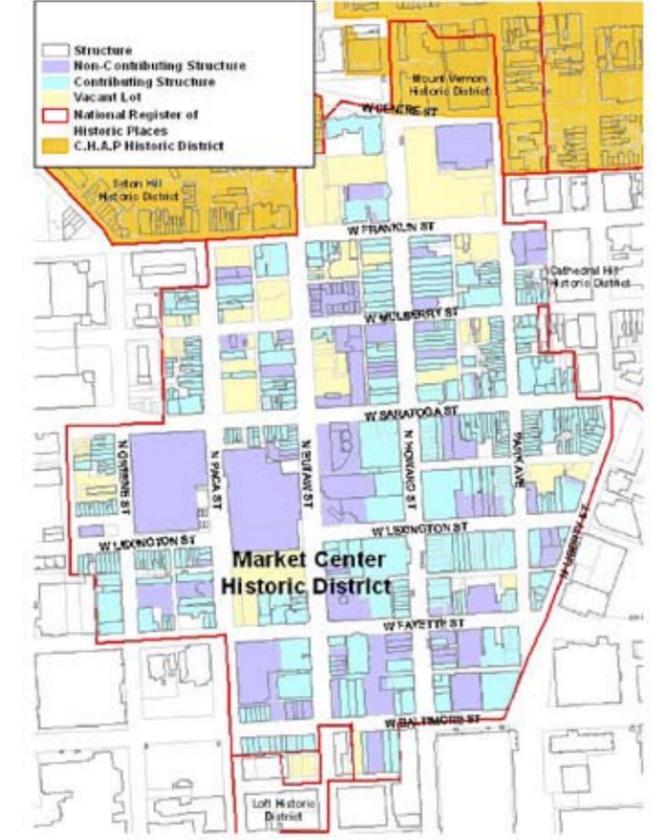
**Market Center and Surrounding Historic Districts**



**Current and Potential C.H.A.P. Landmarks**



**Market Center Contributing and Non-Contributing Structures**



Register Districts have no design review requirement but does provide the opportunity for property owners to use historic tax credits. All projects using state or federal money will be required to go through Section 106 Review.

- Market Center National Register District
- Mt. Vernon Local Historic District
- Mt. Vernon National Register Historic District
- Seton Hill Local and National Register Historic District

**Existing West Side Baltimore City Landmarks**

- Hecht Company Building, 118 North Howard Street, Ordinance 99-394 3/9/1999
- Congress Hotel, 306-12 West Franklin Street, Ordinance 99-511 6/30/1999
- Hutzler’s Tower Building, 222 North Howard Street, Ordinance 1157 12/07/1987

- Hutzler’s Palace Building, 210-18 North Howard Street, Ordinance 0851 12/12/1986
- Provident Bank, 240 North Howard Street, Ordinance 0851 12/12/1986
- G. Krug & Sons Iron Works, 415-417 West Saratoga Street, Ordinance 86-851
- Westminster Presbyterian Church, 509-13 West Franklin Street, Ordinance 75-1001

**Designations in Progress**

The following structures are in the process of designation to become Baltimore City Landmarks:

- Kresge Building, 117 West Lexington Street
- Mayfair Theater, 506 North Howard Street
- Franklin Hotel, 300 West Franklin Street

**Eligible Baltimore City Local Historic District and Landmarks**

The Market Center National Register District is eligible to become a Baltimore City Local Historic District. Over 200 buildings in this area would be considered “contributing” to the district. The ideal boundaries would approximately be south of Franklin Street, east of Greene Street, north of Redwood Street and West of Liberty Street and Cathedral Street. The boundaries could also be drawn identical to the Market Center National Register boundaries.

Twenty-five Baltimore Landmark Eligible Structures are located within one block of the Howard Street Corridor; out of approximately 40 eligible buildings in the West Side Redevelopment Area.

**Other Significant Cultural Resources**

Not all of the cultural resources of Market Center and Howard Street are historic sites. The following sites contribute to the area by providing a cultural or educational resource to the Market Center Area. Not all are directly within the Market Center area, but are within a reasonable proximity by either walking or public transit.

- Lexington Market
- Hippodrome Theater Complex
- Eubie Blake Center
- Maryland Historical Society
- Baltimore Arena
- Enoch Pratt Free Library Main Branch
- Meyerhof Symphony Hall
- Lyric Opera House

# Economic Development

## Assessment of Existing Conditions

For the Howard Street Strategy, a brief economic overview to summarize existing conditions along the corridor is presented. This economic overview includes sections reviewing existing demographic shifts (using data from multiple sources), evaluating the market for residential units, retail and office space along the Howard Street corridor from Pratt Street north to Dolphin Street/ MTA light rail stop (the Study Area). The Study Area runs along Howard Street, one block west and east respectively, from Pratt Street to the Cultural Center light rail stop just north of the intersection of Martin Luther King, Jr. Boulevard and Howard Street. This tight Study Area focuses on Howard Street and not the entire Westside. However, the economic overview considers a broader Market Area to match existing US Census tract boundaries and projects with one mile of the study area boundaries.

The Westside Strategic Plan, prepared in early 2000, suggested a 'core' area within the plan's boundaries with three subareas: North Market; Market Center; and South Market. These represent nodes based on a broader study area that encompassed several blocks west and east of Howard Street. This Economic Overview used these same broad divisions of the area within the 'core' with refinements according to the character of retail along Howard Street and potential relocation of the existing light rail stations. The map on the opposite page identifies the Study Area and a set of four subareas.

Each node of activity presents a distinct character based on the pattern of existing development and amount of new development that may occur over time. This assessment is based on the existing property configurations, building condition, historic significance, transit stops and other market conditions. These nodes of activity may reach mid-block or blend together and should not be considered firm demarcations.

In general, the first node runs from Pratt Street to West Baltimore, with a focus on the potential redevelopment of the 1st Mariner Arena site along the east side of the block from Lombard to Baltimore. The next node of activity includes the properties from West Baltimore to Saratoga. North of Saratoga to Monument Street is a third node of non-retail activity. Finally, north of Monument Street up to the final light rail stop in the study area represents a specific node of activity.

The demographics for the Market Area include those census tracts that surround the Howard Street corridor (401, 1102 and 1701) and surrounding neighborhoods beyond the standard Study Area.

- Baltimore City population slightly declining since 2000 – estimated at 663,717 in 2007 by Social Compact, Inc.
- Marginal gain for the Market Area's population since 2000 – estimated at 8,200.
- Baltimore's households decreased with a loss of 14,000 households.
- Households in the Market Area increased, with 127 new households.
- In both Baltimore and Market Area the average household size remained almost constant.
- Market Area's household size at 1.47 indicates not many families.

The U.S. Bureau of the Census provides data on the annual building permits issued for the number of units in the structure for the City of Baltimore. This information helps measure the level of construction activity for new residential development.

- In Baltimore more than 4,400 permits issued from 2000 to 2007.
- Single-family homes dominate the permits issued in Baltimore.

- From 2003 to 2006 permits issued more than doubling the pace of previous years.
- Highest number of permits issued in 2005 with 1,256 permits.
- Only 285 permits issued in 2007.

An assessment of current ownership and the availability and condition of the properties, considered only those sites with frontage along Howard Street within the Study Area.

- Approximately 145 properties, estimated 1.1 million square feet of usable, likely occupied, space.
- Estimated 57.2 percent underutilized – a total of more than nine acres.
- Underutilized properties have an improvement value that is less than one-half of the property's total value.
- Of the 83 underutilized properties four were recently purchased.
- Average sales prices reached only \$100 per building square foot.

### Residential

Baltimore City's residential development reflects the shift from the previous decades of urban flight. Today Baltimore's slight uptick in new residents interested in affordable downtown living marks a city in transition. Baltimore has become a destination for residential development, offering a variety of housing types and convenient access to business and cultural centers not found in outlying areas.

Along the Howard Street corridor, existing mid-rise structures with rental and for-sale multi-family attract young students and childless couples. The success of the Center Point and Atrium's healthy occupancy rate of 96 percent reflects the strength of these institutions.

- Projections suggest slower growth for residential development.

- The Downtown Partnership's Outlook 2012 report, prepared in 2006, anticipates more than 7,400 new residential units by 2011 in downtown Baltimore and the surrounding neighborhoods.

### Commercial - Office

Baltimore's downtown office market continues to lag behind the suburban market and struggles to absorb space. Tenants in need of new office space search for cost competitive locations and Howard Street presents that opportunity, especially between Lexington and Madison streets. Howard Street does not currently provide enough of an activity node to command a premium for this location.

- Baltimore's inventory declined from 19.8 million to 19.3 million square feet in 3rd quarter of 2008.
- Baltimore's vacancy rate increased to 14.22 % -3rd quarter of 2008.
- Major mergers and acquisitions resulted in the consolidation of office space.
- Baltimore lost several office space users to more affordable suburban locations.
- Movement within the city shows shifts from traditional CBD locations to new office centers, like Harbor East. The demand for office space relates to the number of employees that require office space.
- Baltimore's employment base continues to decline with job losses to a new low base of 344,200 jobs in 2007.
- From 2001 to 2007, Baltimore lost 22.5 percent of its jobs in office settings – Information, Financial Activities and Professional and Business Services.
- Baltimore continues to gain popularity as a location for biotech and life sciences tied directly to the hub of educational institutions.

Office space demands along the Howard Street corridor relate to its close proximity to institutions on the western boundary.

- Office space provided for institutional users,

neighborhood-serving businesses and non-profits.

- Available inventory consists of mid-rise older structures, with limited parking.
- Primarily Class C space with limited reinvestment evident from the exteriors.
- Future office development will require assembling larger parcels.

**Retail**

The retail environment along Howard Street represents a clustering of a variety of stores offering basic convenience goods, apparel, food and beverage and personal care products.

- Total of more than 190 retail establishments-  
*Estimated 42 percent selling clothing,  
Estimated 21 percent in food and beverage sales.*
- The existing retail environment consists of several distinct nodes of activity -  
*Dolphin Street to Monument  
Saratoga to Fayette  
Baltimore to Pratt Street.*

Demand for goods, services, and dining is generated by:

- local residents,
- nearby daytime employees, and
- visitors to the area who are from other nearby neighborhoods (Convention/Sports)

Each group is driven by different shopping patterns and needs. Local residents rely on the retail for their daily errands, such as dry cleaning, convenience groceries, coffee, hair styling, etc.

Nearby daytime employees need places to have lunch, relax after work or run quick errands in close proximity of their offices. Their retail needs are focused on restaurants (mostly quick-bite opportunities) and errand-oriented shopping over lunch breaks and after work.

Daytime employees cluster to the west of Howard Street with the large grouping of institutional users, including:

- University of Maryland Medical System;
- University of Maryland’s campus;
- State government offices.

Of all the demand generators, employees are the most time-restricted, due to limited lunch hours. Therefore, analysis of employee demand is limited to the ¼ mile and ½ mile radii.

Retail attraction is driven by three key factors:

- Convenience,
- Distance; and
- Comparable opportunity.

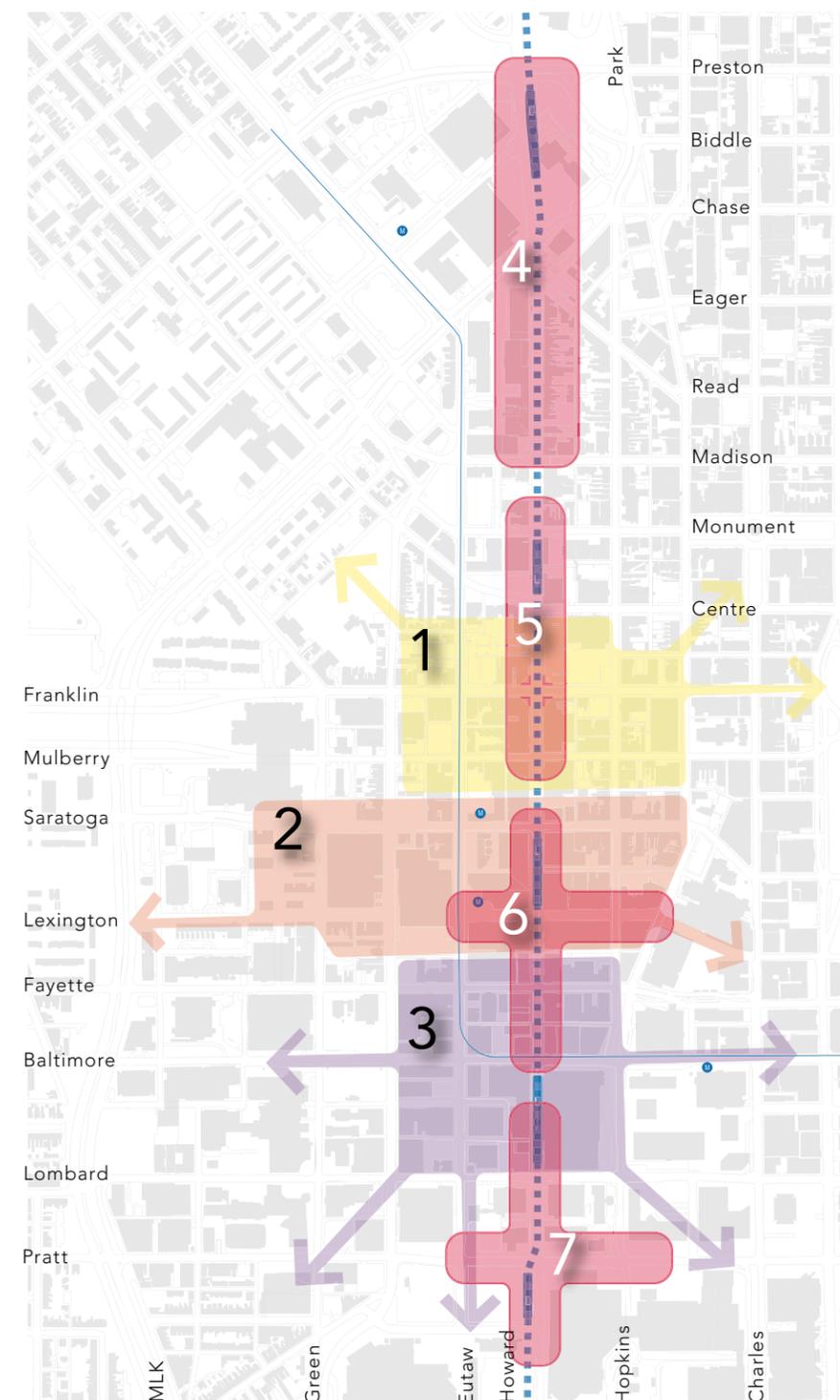
For neighborhood residents and employees, convenience and distance are critically important, because time is limited for these customers. Comparable opportunity is the most important factor when an area is trying to attract customers from other neighborhoods. Along Howard Street and surrounding neighborhoods, it is highly unlikely that a corridor like Howard Street will attract personal service or convenience goods spending from residents over a mile away.

Market Area households’ incomes and typical consumer expenditure patterns indicate a total potential spending of \$21.0 million per year, including:

- \$6.9 million for convenience goods, typically purchased close to home (groceries, other food and beverages, drugstore items);
- \$6.3 million for food away from home;
- \$7.7 million for shoppers goods (types of merchandise typically sold in department stores: general merchandise; apparel; furniture and furnishings; sporting goods, music and books; electronics and household appliances (GAFO)).

**Economic Nodes-**

The Study Area includes four nodes with distinct characteristics and opportunities



**Westside Initiative**

- 1 North Market
- 2 Market Center
- 3 South Market

**Study Area Nodes**

- 4 Cultural Center
- 5 Centre Street
- 6 Lexington Market
- 7 Convention Center/Baltimore Street

**Planned/ Future Projects**

Baltimore’s Downtown Partnership prepares an annual update to all the planned and proposed development projects in downtown Baltimore. This exhaustive list offers the best source of information for development in the Study Area and broader downtown. The table to the right captures the information provided by the Downtown Partnership’s most recent data updated from February of 2009.

The Baltimore Development Corporation helps facilitate the major development projects. In November 2008, BDC announced progress on the Request for Proposals (RFP) responses received for five properties along Lexington and Liberty Streets. Prospective developers are proposing mixed-use development of retail, office and housing. Although not immediately within the study area these types of new projects will continue the trend of transition in this community.

Additional development opportunities within the Study Area are constrained by the limited availability of large land parcels, lack of lender confidence in the area’s future and an environment of under-investment in existing properties. Once the key parcels currently planned for redevelopment begin to undergo redevelopment, these conditions will likely improve and result in new opportunities.

**New Development - Howard Street Study Area**

	Hospitality	Office	Residential	Retail
Project Status	Rooms	SqFt	Units	SqFt
Recently Completed	-	250,950	42	88,800
Under Construction	-	106,000	-	8,927
Proposed Projections	42	100,000	88	1,650

Source: Downtown Partnership, Bay Area Economics, 2008.

Current projects along the corridor, in various stages of planning, range in scale and type. Projects include:

1. Superblock Development;
2. The 300 block of Howard, Capital Venture Group, LLC;
3. Howard’s Park Concept Plan;
4. Pratt Street Redesign;
5. The Hutsler Building - Canopy improvements being done through the Downtown Partnership Facade Improvement Program.

**Current Projects**



1



2



Howard's Park Baltimore, Maryland  
EDSA Revised Concept Plan  
Mar 11, 2008  
NDC

3



4



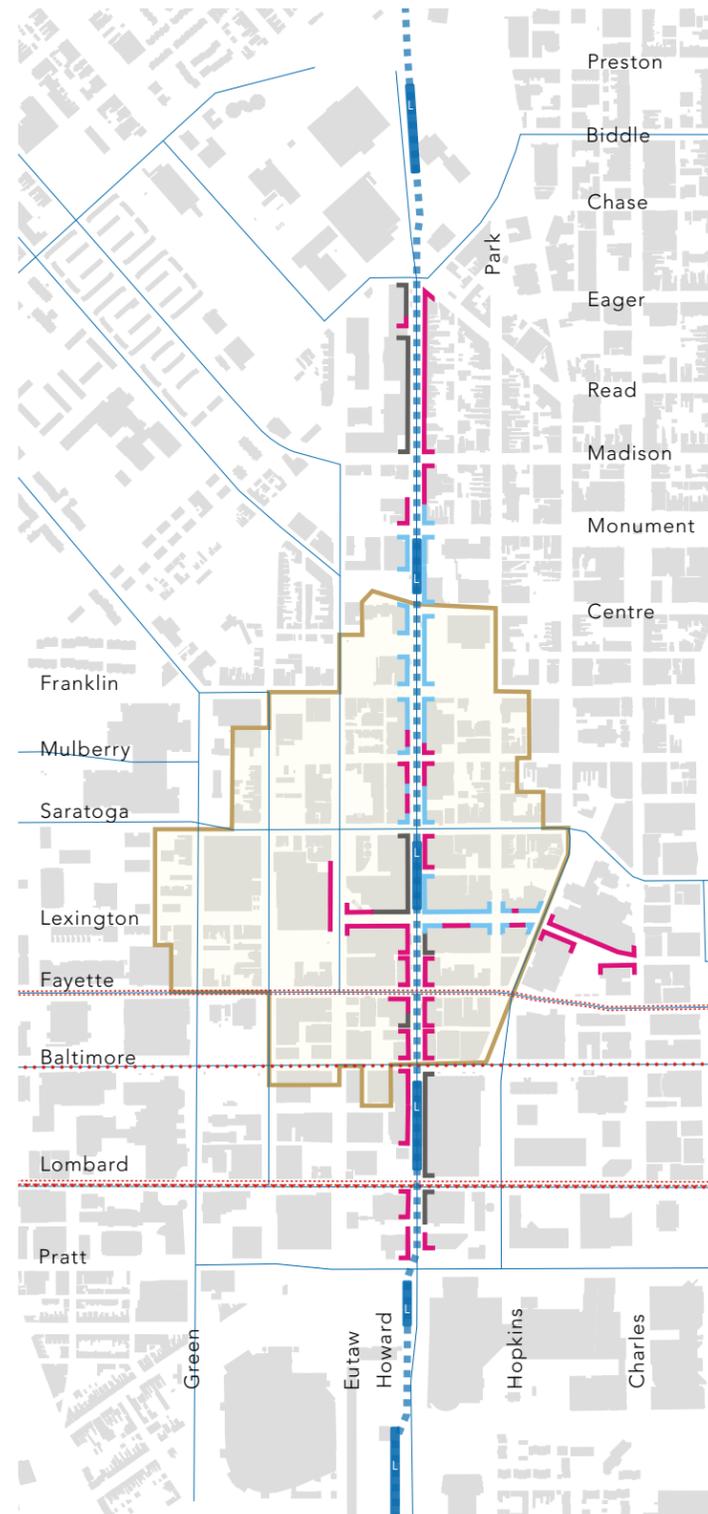
5

**Project Area Inventory**

The diagrams below provide a visual overview of the existing physical conditions and potential opportunities along the corridor.

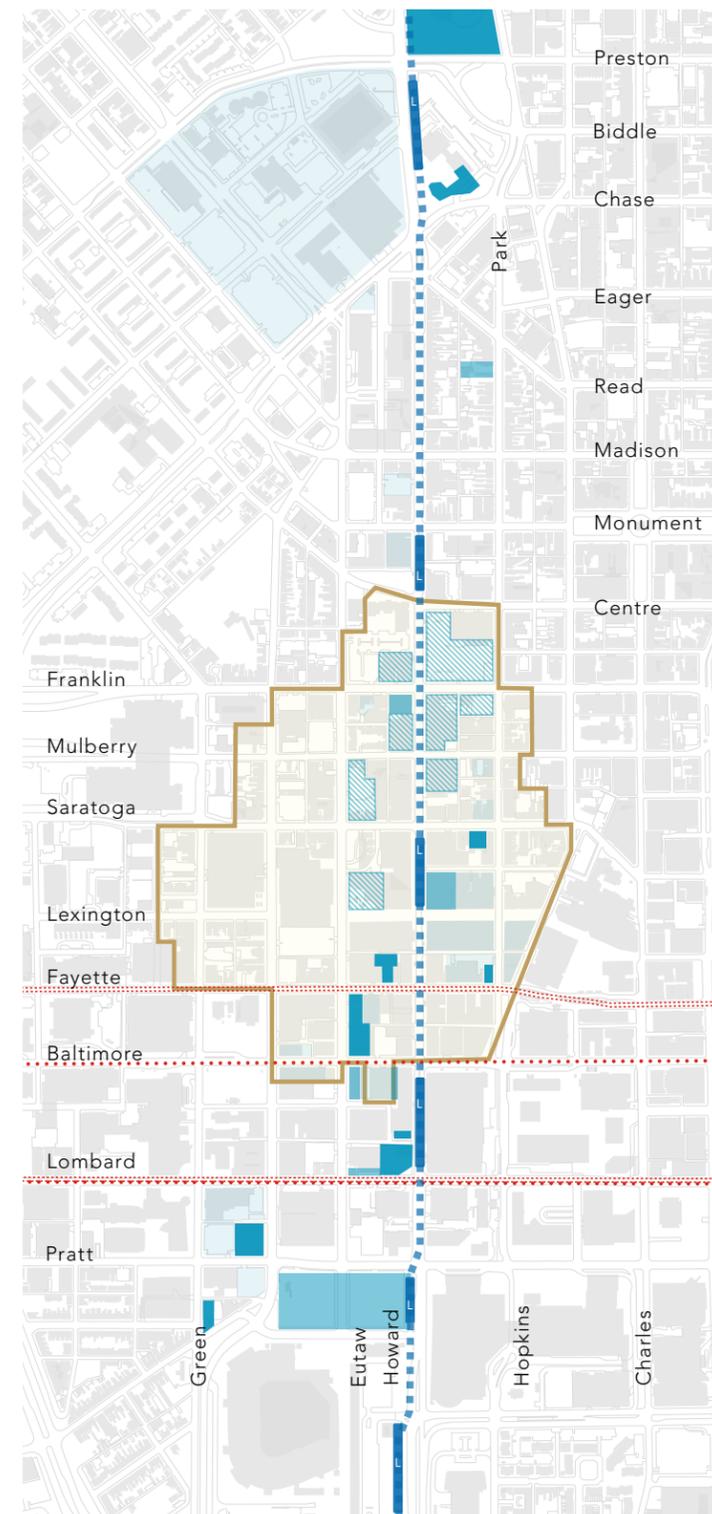
**Building Frontages**

There is a predominance of vacant storefronts along significant sections of the corridor.



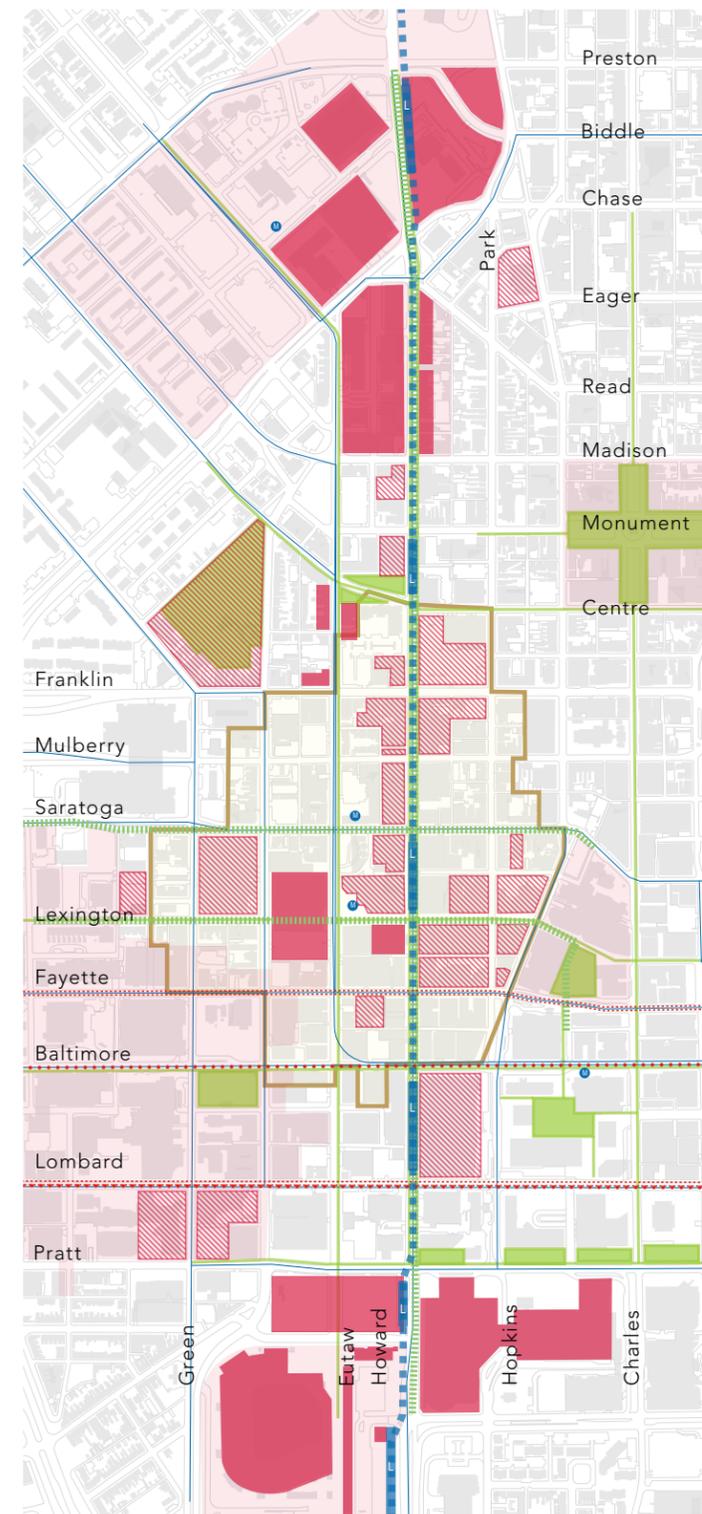
**Development Status**

There is significant development activity along the corridor.



**Assets and Opportunities**

New development may take advantage of existing assets in addition to strengthening the corridor.



**Building Frontages**

- Active Use
- Vacant
- Blank Ground Floor Walls

**Development Status**

- Completed
- In Progress
- Long Term
- Potential

**Assets and Opportunities**

- Public Parks and Open Space
- Focus Areas
- Attractions
- Opportunities
- Green Streets

**Transit**

- Proposed Red Line (Surface)
- Proposed Red Line (Tunnel)
- Howard Street LRT
- Existing Bus Routes
- L Existing LRT Stops
- M Existing Metro Stops

**Boundary**

- Market Center Historic District

# Transit and Transportation

## Transit Light Rail and Metro

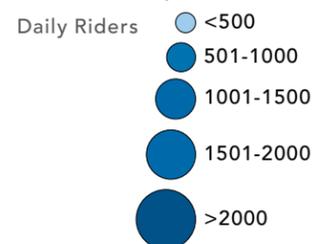
Baltimore's Central Light Rail links suburban communities and business centers to the north of the City traveling along the I-83 corridor and neighborhoods to the BWI airport and business park to the south. The route passes to the west of the central business district and directly through Baltimore's main sports and entertainment venues, hospital and academic institutions and the Convention Center. The study area along Howard Street is the route's most urban section with more closely spaced stations and intersecting streets including critical east west cross-streets serving the region through downtown. Stations that are a of focus in this study are:

- Baltimore Street/First Mariner Arena -  
*Serving Downtown, the Arena and the University of Maryland/Baltimore Campus*
- Lexington Market with a northbound stop at Saratoga St. and a southbound stop at Fayette St -  
*Serving Downtown, Lexington Market, and the Metro Green Line Lexington Market Station*
- Centre Street -  
*Serving Mt Vernon, Antique Row, Read Street to the east, Seton Hill to the west*
- Cultural Center -  
*Serving the Meyerhoff Symphony Hall, Midtown Neighborhoods of Bolton Hill and Belvedere*

The Lexington Market and Baltimore Street stations serve the most passengers in the Light Rail system. These stops are handling approximately 3800 (Lexington Street) and 3000 (Baltimore Street) weekday boardings. Centre Street has the lowest weekday boardings at just over 200 passengers. The busiest stations are the most centrally located for downtown and University of Maryland Baltimore campus access. They connect the to bus system and the Metro Green Line (Metro). Lexington Market serves as a transfer point between the CLRL and Metro. The MTA is currently in the construction phase of a plan to enhance the Metro entrance on Lexington Street with a better street level transfer to light rail to include shelter and wayfinding with a covered passageway designed to guide passengers to the most direct route. The same project also includes plans to move the Southbound station one block north so that both stops occur in the block between Saratoga and Lexington Streets.

The frequent stations and heavy boardings occurring along much of this section are an issue for service delays and schedule adherence related to travel time. Transit signal priority was introduced by the MTA in 2007 in partnership with the City of Baltimore. It has helped to reduce some of the delay from vehicles stopping at traffic signals. It is in effect for all of the minor cross-streets and with limited application at intersections of Franklin and Mulberry and Pratt and Lombard couplets.

### Light Rail Stop Activity Map



### Light Rail

Daily Boardings

Light Rail Station	Weekday Boardings (April 2008)
Mount Royal/ University of Baltimore	709
Cultural Center	683
Centre Street	223
Lexington Street	3796
Baltimore Street / 1 <sup>st</sup> Mariner Arena	2955
Convention Center	1392
Camden Yards	552 (~1300 in season)



Howard Street at Baltimore - Looking South  
2,955 Daily Weekday Light Rail Riders

Northbound platforms at Baltimore Street and Centre Street Stations are both inadequate in width for comfortable circulation and waiting and do not meet the intent of universal access



Lexington Market Light Rail Stop  
3,796 Daily Weekday Light Rail Riders

## Transit Bus

Howard Street has historically been a focus of north-south transit in Baltimore. Today, only two local northbound bus routes remain. Its major cross-streets carry 15 cross-town routes that bring thousands of bus patrons to the corridor each work day. One major route serving east-west travel is the QuickBus 40 which is was introduced in 2007. The bus activity nearby and transfers between the CLRL and Metro make Howard Street a critical link in the City's bus network and overall transit system.

The busiest intersections along the Howard-Eutaw corridor for bus travel are Fayette, Baltimore and Saratoga Streets. The Baltimore Street intersections experience an average of one bus per signal cycle or about 50 buses per hour. Detailed bus schedule information is shown in the adjacent table.

Bus stop use is heaviest on Howard and Eutaw streets at both Metro and Light Rail stations suggesting high transfer activity between individual bus routes stopping there, rail transit modes and in-town destinations. The Bus Stop Activity Map, showing combined stops by intersection along Eutaw and Howard Streets, indicates highest activity on Saratoga Street, followed by Fayette and Baltimore Streets which is consistent with the highest levels of east-west bus service in the area.

Waiting bus passengers are a major presence on cross street stops near Howard, particularly where stop size is insufficient. The Baltimore Street stop adjacent to the First Mariner Arena offers three shelters for passengers waiting to travel east along one of nine routes including the QuickBus 40. While this stop that sprawls along most of the block has sufficient waiting and boarding space, its corresponding westbound stop on Fayette Street is insufficient for the volume of bus boardings it experiences. During peak travel times, waiting bus passengers spill well beyond the shelter, overtake most

of the sidewalk space where the curb lane is also used as an outbound travel lane. Detailed bus schedule information is available in the tables below.

### Bus Route Summary

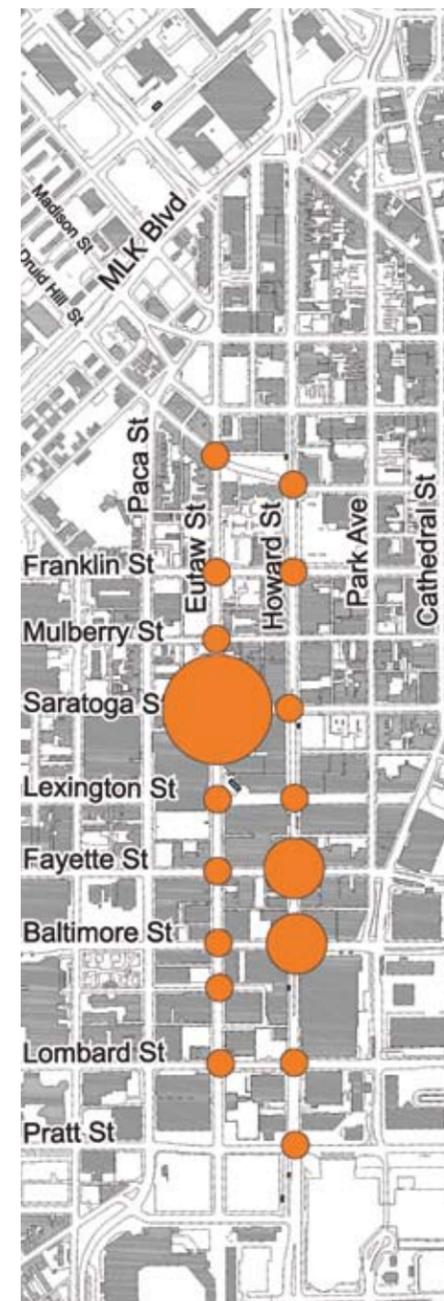
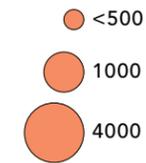
Number of Buses at Morning Peak

Bus Route	Number of Buses at Howard Street Weekday, 8-9 AM	
	EB on Baltimore St	WB on Fayette St
1	3	3
5	8	7
6	4	4
8	6	7
10	4	-
20	4	4
36	4	6
40	5	5
91	6	3
120	4	4
150	2	-
<b>Total Buses Per Hour</b>	<b>50</b>	<b>43</b>
<i>Buses/hr with LRT Red Line</i>	<b>44</b>	<b>39</b>
Frequency of Buses	1 bus / 72 sec	1 bus / 84 sec
Buses and Signal Cycles	> 1 bus per cycle	> 1 bus per cycle

Bus Route	Number of Buses at Howard Street Weekday, 8-9 AM	
	EB on Saratoga St	WB on Saratoga St
15	6	9
23	4	5
<b>Total Buses Per Hour</b>	<b>10</b>	<b>14</b>
<i>Buses/hr with LRT Red Line</i>	<b>0</b>	<b>0</b>
Frequency of Buses	1 bus / 6 min	1 bus / 5 min
Buses and Signal Cycles	1 Bus every 3-4 Cycles	1 Bus every 2-3 Cycles

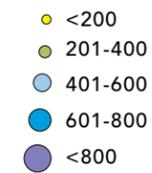
### Howard Street Bus Stop Activity Map

Boardings/Day



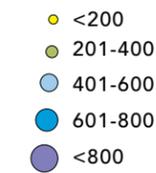
### Howard Street Northbound / Southbound Bus Stop Activity Map

Boardings/Day



### Howard Street Eastbound / Westbound Bus Stop Activity Map

Boardings/Day



First Mariner Arena - Baltimore Street  
806 Daily Weekday Bus Boardings / 1 Bus Every 72 Seconds



Howard Street at Fayette Street - WB Bust Stop  
1,082 Daily Weekday Bus Riders (pre QuickBus 40)

# Traffic

## Travel Characteristics

For most of its length, except 2 blocks at the northern end and one block in the south, Howard Street operates in a northbound direction for vehicles. The southern end of Howard Street provides one of a handful of direct connections to downtown from the major highway system I-95 and I-295. While its physical location suggests Howard Street's potential as a major distributor of traffic from I-395 into downtown and Midtown, the road is largely occupied by the Central Light Rail track operating in its own right-of-way in both directions and major bus transfer activity on its East-West cross streets. In the northbound direction, one can travel from downtown's west side through Midtown and Remington to the Homewood Campus of the Johns Hopkins University campus. Auto lanes vary from 1 lane along most of the route to 2 or 4 in the southern section. Light rail vehicles, when present, dominate the street both in height, width, and length. Each light rail car measures 95' and is run with up to 3 cars per train.

### **Access via Martin Luther King, Jr. Boulevard, W. Chase and W Read Street Intersection**

The northern section of Howard Street meets a major through-traffic regional connector at Martin Luther King Jr Blvd. intersection with Chase and Read Streets. As a regional link, this complex intersection permits traffic from Howard Street to travel north to North Avenue's Arts and Entertainment District, Howard Street's auto/industrial zone, the Remington neighborhood and the Homewood Campus at the western edge of Charles Village. Traveling north and then east onto Chase Street connects the Howard Street corridor to the Meyerhoff Symphony Hall and Lyric Opera House district, the University of Baltimore campus with its 2009 Bolton Yards/Fitzgerald development and the Maryland Institute of Art campus along Mt Royal Avenue where Mt Royal Avenue becomes an access ramp to the JFX. Access across the Light Rail tracks north of this intersection

at Preston and "Little Dolphin" is prohibited, so regional access to this district from the west relies heavily on this link. Howard Street via West Preston Street also provides a direct connection to the east side of the State Center site.

Howard Street's Antique Row can be reached by motorists from the north by crossing MLK/Chase. Traffic on Howard Street in the two northern-most blocks runs in both directions and metered parking is provided on both sides of the street. For pedestrians and bicyclists, the most direct access from State Center requires crossing a very wide and skewed leg of this busy five-legged intersection. From the south, the intersection provides for a direct through connection to Howard Street described above and provides a right turn link to the Read Street section of the commercial district. The intersection is identified as a major barrier between State Center and the Antique Row/Read Street commercial district in Baltimore City's Bicycle Master Plan. Coupled with the drop off of traffic from the south due to confusing shifts in rail and road alignment north of Lexington Street, lack of a Light Rail station along the track, and the physical barrier of the intersection, the area's potential to attract foot traffic needed for business success is not what it could be. Implementation plans for this project and State Center present a major opportunity to enhance existing connections and strengthen the public realm to bring more activity to the street and greater success in business investments.

Pedestrian zones are located between the roadway and building frontage, and at light rail stations on sidewalks and medians. In spite of the dominance of light rail tracks on the western side of the street and limited travel lane width, cyclists use Howard Street in the southbound direction to avoid traffic conflicts on Eutaw and Cathedral Streets where many more motorists (Cathedral) and pedestrians (Eutaw) are present, the only other southbound alternatives on

the west side of downtown. Parking is primarily located in garages and lots throughout the corridor, and on-street, north of Monument St.

Capacity along Howard Street is more than adequate for the traffic volumes it carries today. The street's southern end experiences the highest volumes during the AM peak hour, when an average of 3100 vehicles use Howard Street's 2 to 4 lanes to access downtown. Most of this traffic turns onto Conway, Pratt, Lombard and Baltimore Streets. Between Baltimore and Franklin Streets traffic is reduced to about 150 average daily trips.

Most northbound traffic uses Paca, Park and Charles Streets as alternatives to Howard Street, in large part to avoid light rail interactions. The reduced traffic north of Baltimore Street changes the character of Howard Street to a local street serving commercial destinations that typically do not attract peak hour trips. A minimum level of traffic on Howard Street is considered vital to the street's economic and street life.

Functionally, Howard Street is one of only three downtown streets that provide a direct connection from downtown to Charles North, Charles Village, and Johns Hopkins Homewood Campus. This connection to points north, used today by the #27 bus line, could be enhanced for greater visibility and access to businesses and new development. The Downtown Partnership has recognized this opportunity and will be enhancing signage on I-395 to encourage more use of Howard Street to access Mt. Vernon and Midtown to both increase exposure to properties on Howard Street and relieve some congestion at the Conway and Light Street intersection.

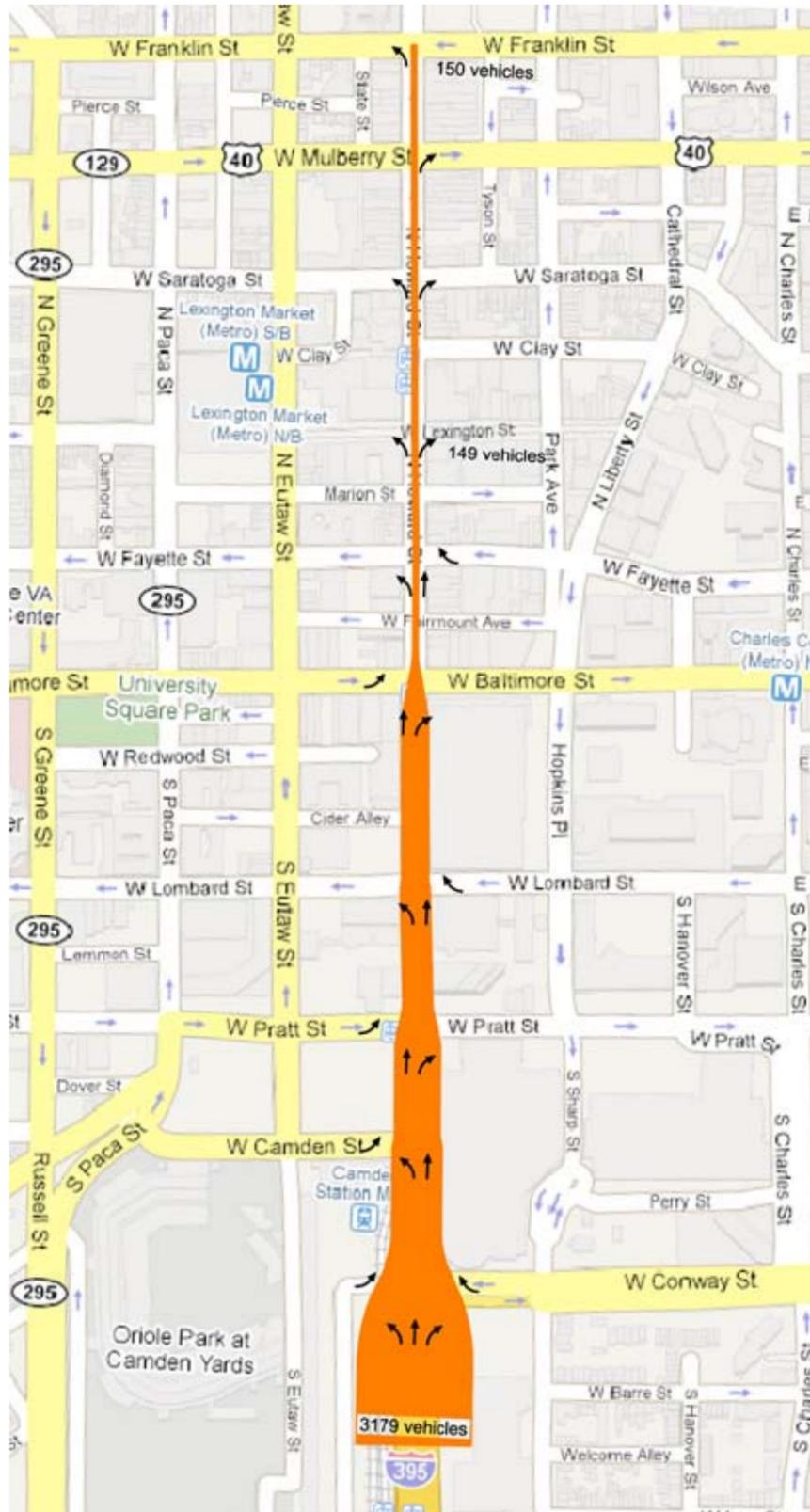
Howard Street is part of an urban grid that includes north-south streets of two-way Eutaw Street, northbound Park Avenue, southbound Cathedral/Liberty Street, and

numerous east-west cross streets and alleys. This grid creates a means of access to properties and parking options along the corridor. Easy access and network logic are important to the potential patrons of Howard Street businesses. Motorists have few opportunities to park on-street along Howard Street so facile navigation to nearby spaces and lots is vital. As a two-way street, Eutaw Street serves Howard Street's west side, allowing drivers free movement north and south along the corridor. Conversely, Park Avenue only allows northbound movements, forcing drivers to go an additional block out of direction to return south. Generally, getting to Howard Street from points north is confusing and properties on the east side of Howard Street are most affected by circuitous access.

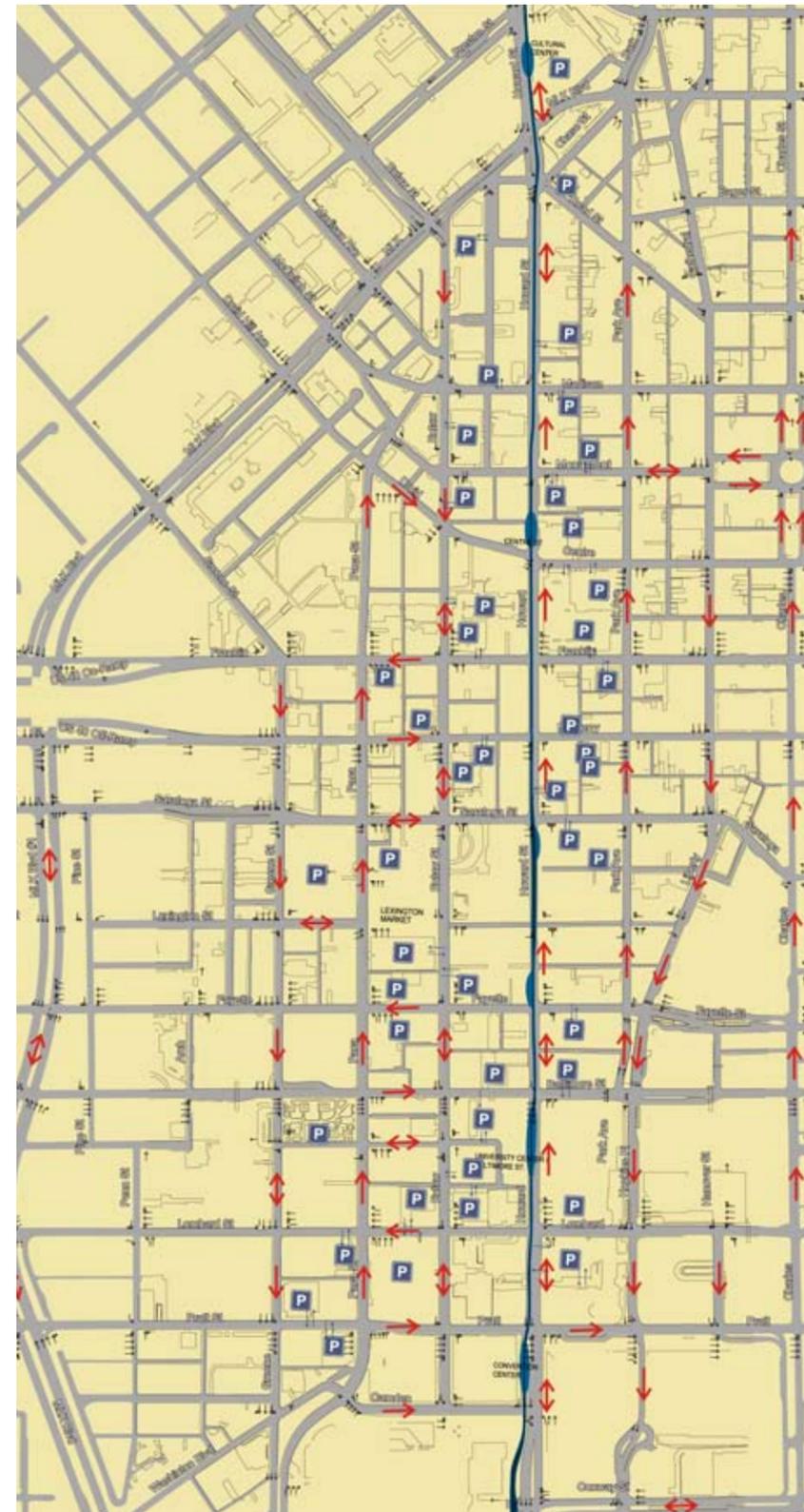
Traffic operations along the corridor reflect the value of a highly connected grid of streets where increased route options tend to reduce congestion for most intersections. On the west side most intersections operate at level of service A-C suggesting that road capacity is available for increased traffic. Only the Martin Luther King Jr Blvd intersection operates with a failing level of service for traffic. The State Center project proposes a major reconstruction and change in Howard Street access and circulation at the MLK intersection as part of its City mandated Traffic Mitigation Plan. A complete evaluation that weighs tradeoffs between congestion relief and connectivity and access, particularly for pedestrians and businesses will be critical to the success the district.

The only other intersection noted in the review of Howard Street intersections is at Saratoga Street which performs at LOS D. The delay to motorists at this intersection is due to an additional signal phase required to manage left turns crossing the light rail track.

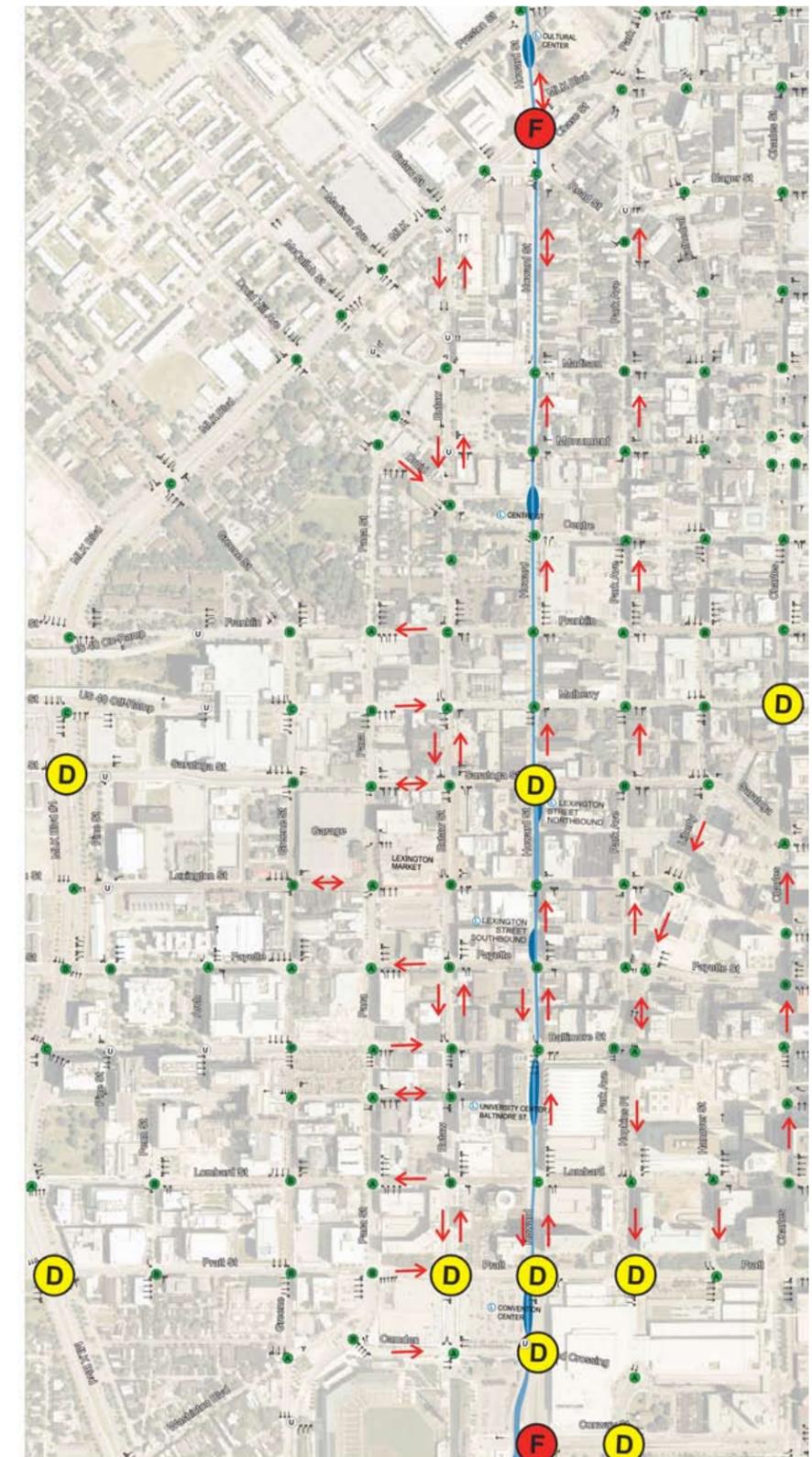
HOWARD STREET - THROUGH VOLUME



CIRCULATION AND PARKING



LEVEL OF SERVICE



Howard Street Through Volume

Traffic volume on Howard Street decreases significantly between Conway St and Franklin St

Circulation and Parking

There is a significant amount of parking located in the study area

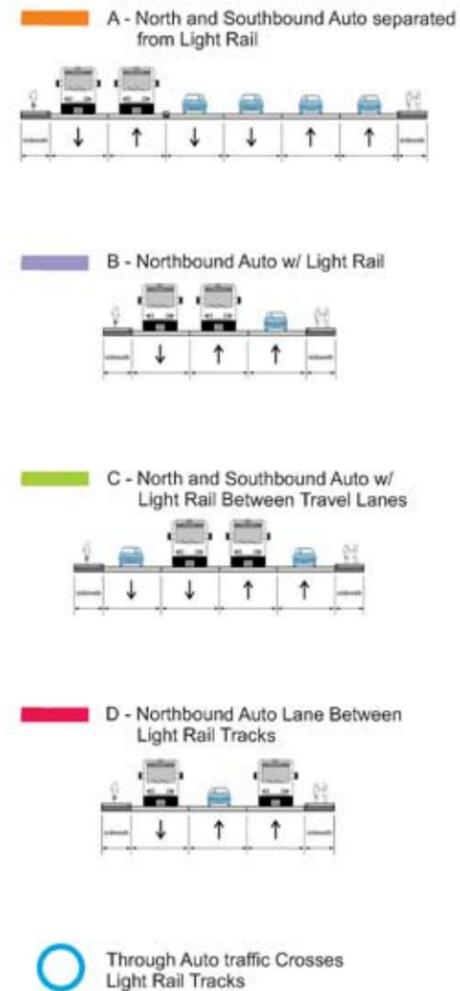
Level of Service

LOS is a concept developed to quantify the degree of comfort afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various levels of service



### Light Rail - Auto Interactions on Howard Street

The cross section of travel and light rail lanes changes 11 times over the 15 blocks in the study area.



## Light Rail - Auto Interactions

### Consistent Cross Sections

The light rail system in Baltimore was built with Howard Street carrying both north and southbound trains rather than separated track on a Howard/Eutaw couplet. While the concept of re-establishing Howard Street by moving one direction to an alternate street is not financially feasible, the current design offers several opportunities for functional improvement.

The CLRL construction in the mid-1980's came on the heels of a major streetscape improvement to Howard Street. To limit disruptions to the business district then recovering from major construction, CLRL's new stations, ADA access, and maintenance of traffic flow on Howard Street required that the track be designed with a series of weaves between track and motorway.

While space is physically available for motorists to navigate the northbound route, the interaction with the light rail vehicles and the two tracks can be a deterrent or potential hazard for those unfamiliar with the street. The figure to the right illustrates a simplified grouping of 11 different cross-sections present in the study area demonstrating the variety of rail track and motorway interactions.

The most problematic of these weaves occurs just before and after the Lexington Street Light Rail station shown in red on the graphic. To reach sidewalk platforms, the northbound track weaves from the center lane of the street to the curb-lane, requiring the northbound auto lane to cross the track and travel between the two tracks. This maneuver requires a midblock signal in the previous block, not ideal as it can be unexpected to most drivers. To return to the middle lane for the median stop at Center Street the car and the train must swap positions a second time which occurs at the Saratoga and Fayette Street intersection.

# Pedestrians and Bicycles

## Pedestrians

As previously illustrated in the visual summary, the environment for pedestrians includes several impediments to providing a quality urban environment.

Sidewalk width on Howard Street is generally adequate for the level of existing pedestrian activity with the exception of a few locations. In the areas of high bus ridership and transfers, the sidewalks on adjacent cross streets can become overcrowded at peak times thus making convenient through pedestrian movements difficult.

A significant impediment to pedestrian safety includes areas where there has been poor maintenance of existing paving which has resulted in trip hazards.

## Bicycles

The Baltimore City Bicycle Master Plan was created in 2006 as a joint effort between the City of Baltimore and the Mayor's Bicycle Advisory Committee. It includes three categories of priority routes for improved bike facilities that correspond to near, medium and long term implementation strategies. Howard Street is not designated for any bicycle use according to the Master Plan. The light rail tracks and their location on the street and the running surface are incompatible with bicycling. In spite of these conditions bicyclists can be found using Howard Street in the southbound direction.

Two-way Eutaw St, northbound Park Ave and southbound Cathedral Street, are identified as bicycle routes for second-tier implementation in the plan. The plan's goal to improve downtown for bicycling is expected to promote livability, reduce parking demand and is typically compatible with increased transit use in urban areas.

The plan identifies problem intersections for bicyclists (indicated by the red circles in the diagram). Those along the Howard Street corridor recommended for further analysis are:

- Martin Luther King Jr Blvd, Park Avenue, Preston Street (State Center/Cultural Center)
- Lexington St (Lexington Market)
- Liberty, Park and Baltimore Streets (1st Mariner Arena).

Physical improvements including pavement markings, wayfinding signage and geometric changes are recommended to enhance safety and connectivity between key parts of the city. Lexington Market, for example, interrupts direct east or west travel on Lexington Street, one of the few downtown streets comfortable for bicycling. The plan recognizes that routing cyclists using Lexington Street around the market will require more detailed study during implementation planning.



Howard Street w/ Baltimore Bicycle Master Plan

Daily Riders

- Introductory Phase
- Phase Two
- Long Term
- Intersection Problem Area



2022



Plan Recommendations



# Plan Recommendations

## Economic Development

The potential for new development within the Baltimore Metropolitan Region reflects patterns of suburban growth with the exception of a few “hip” neighborhoods and downtown Baltimore. Future growth projections suggest the trends for residential growth will mirror more of the historical gains and that Baltimore City’s new households will demand urban neighborhoods that provide access to goods and services.

## Residential Growth

The Howard Street corridor may build on the strengths of the surrounding residential community, such as Seton Hill and Mount Vernon. The Baltimore Metropolitan Council (BMC) prepares projections annually based on existing market conditions, land availability and known pipeline development projects. Based on BMC projections Baltimore’s population will increase over the next 25 years reaching 687,396 by 2030. BMC projected growth within the Howard Street Study Area<sup>1</sup> anticipates an initial spurt in population growth to approximately 7,600 residents (3,000 new from 2005) by 2010. During the same period Baltimore’s anticipated growth adds an estimated 10,800 new residents.

Growth in new households continues for Baltimore City and the Study Area. The Study Area offers several opportunities for new residential development, including both infill and new construction on existing surface parking lots. According to Zimmerman Volk’s Market-Rate Housing Potential of Downtown Baltimore, the largest market segment includes younger singles and childless couples with “more risk-tolerance”. These types of individuals are typically attracted to urban places with the historic structures, like Howard Street. Maintaining these historic elements will contribute to the “place-making”. In addition, adding a diversity of housing stock will further promote the creation of place. The city’s households increased by only

3.2 percent between 2000 and 2005, while the number of households almost doubled in the Study Area.

BMC projections are relatively conservative as they rely primarily on known development plans. To the extent that Market Area and city growth have been constrained by a limited supply of quality new development, these forecasts likely understate the potential for quality projects appropriately priced for the market. In particular, the employment projections seem to understate the potential for new office development and the associated employment.

Based on several of the proposed residential developments, the number of new households in the Study Area may increase more than BMC projections, reaching 7,200 new households by 2030. This represents an increase in the Study Area’s share of new households to 13 percent of the anticipated 18,972 new Baltimore households.

## Employment Growth

For Baltimore City, BMC’s projections estimate the growth of 30,000 new jobs to a 2030 total of 481,596. The Study Area’s employment at 20,408 in 2005 represents only 4.2 percent of the City’s employment with a gain of less than 1,000 jobs. The redevelopment vision for the Howard Street corridor includes the renovation of existing commercial buildings as well as new construction projects. Estimates based on the overall build out of the Study Area suggest sufficient new office and retail development to support approximately 1,000 new jobs, matching the estimates from BMC. This does not account for the increases in overall building occupancy likely to occur after the renovation of existing space. The renovation of existing space may result in an estimated 200 new jobs, which assumes these renovated buildings are less efficient.

## Residential Growth in the Howard Street Corridor

	Households		2000-2005 Change	
	2000	2005	Number	Percent
Howard Street Study Area <sup>(1)</sup>	2,449	4,701	2,252	91.9%
Baltimore City	257,996	266,260	8,264	3.2%
Study Area’s Share of City	0.9%	1.8%	27.3%	
	Households		2005-2030 Change	
	2005	2030	Number	Percent
Baltimore City	266,260	285,232	18,972	7.1%
<b>Alternative Study Area Projections</b>				
BMC Projections (11.7% of City growth)	4,701	6,922	2,220	47.2%
Slow Growth (increase share to 13.0%)	4,701	7,200	2,499	53.2%
Moderate Growth (increase share to 15.0%)	4,701	7,500	2,799	59.5%

Notes: (1) Study Area includes US Census Block Groups: 401.002, 1102.003 and 1701.001.  
Source: BMC Projections Round 7a; Bay Area Economics, 2008.

## Employment Growth in the Howard Street Corridor

	Households		2000-2005 Change	
	2000	2005	Number	Percent
Howard Street Study Area <sup>(1)</sup>	21,172	19,477	(1,696)	-8.0%
Baltimore City	460,606	451,390	(9,216)	-2.0%
Study Area’s Share of City	4.6%	1.8%	18.4%	
	Households		2005-2030 Change	
	2005	2030	Number	Percent
Baltimore City	451,390	481,596	30,206	6.7%
<b>Alternative Study Area Projections</b>				
BMC Projections (3.1% of City growth)	19,477	20,405	929	4.8%
Slow Growth (increase share to 3.8%)	19,477	20,600	1,123	5.8%
Moderate Growth (increase share to 4.5%)	19,477	20,800	1,323	6.8%

Notes: (1) Study Area includes US Census Block Groups: 401.002, 1102.003 and 1701.001.  
Source: BMC Projections Round 7a; Bay Area Economics, 2008.

<sup>1</sup> The Howard Street Study Area includes the following Transportation Area Zones (TAZs): 125 and 126 and portions of 124,127, 134 and 135.

## Development Build-Out

The table below details the estimated total build out potential for the Howard Street Study Area. These estimates include all existing redevelopment plans but do not include the total renovated square feet, only new construction.

### Phased Build-Out Capacity

Projected development suggests that renovated projects will total 11 percent of new residential and employment growth, this represents approximately 250,000 square feet.

	Residential	Office	Retail
	Square Feet	Square Feet	Square Feet
Short-Term (0 to 5 years)	743,000 to 769,000	55,000 to 66,000	176,000 to 185,000
Mid-Term (10 to 15 years)	374,000 to 387,000	45,100 to 54,000	21,000 to 22,000
Long-Term (15 to 20 years)	550,000 to 569,000	-	-
Total	1,667,000 to 1,725,000	100,000 to 120,000	197,000 to 207,000

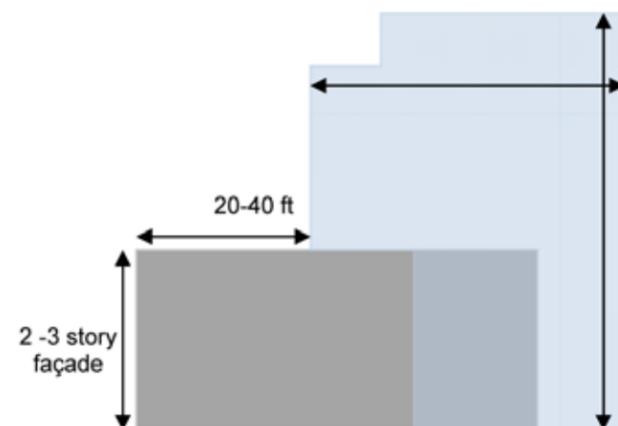
## Potential Build-Out and Physical Form

The diagrams on this page and the opposite page illustrate the potential type and scale of potential redevelopment along Howard Street.

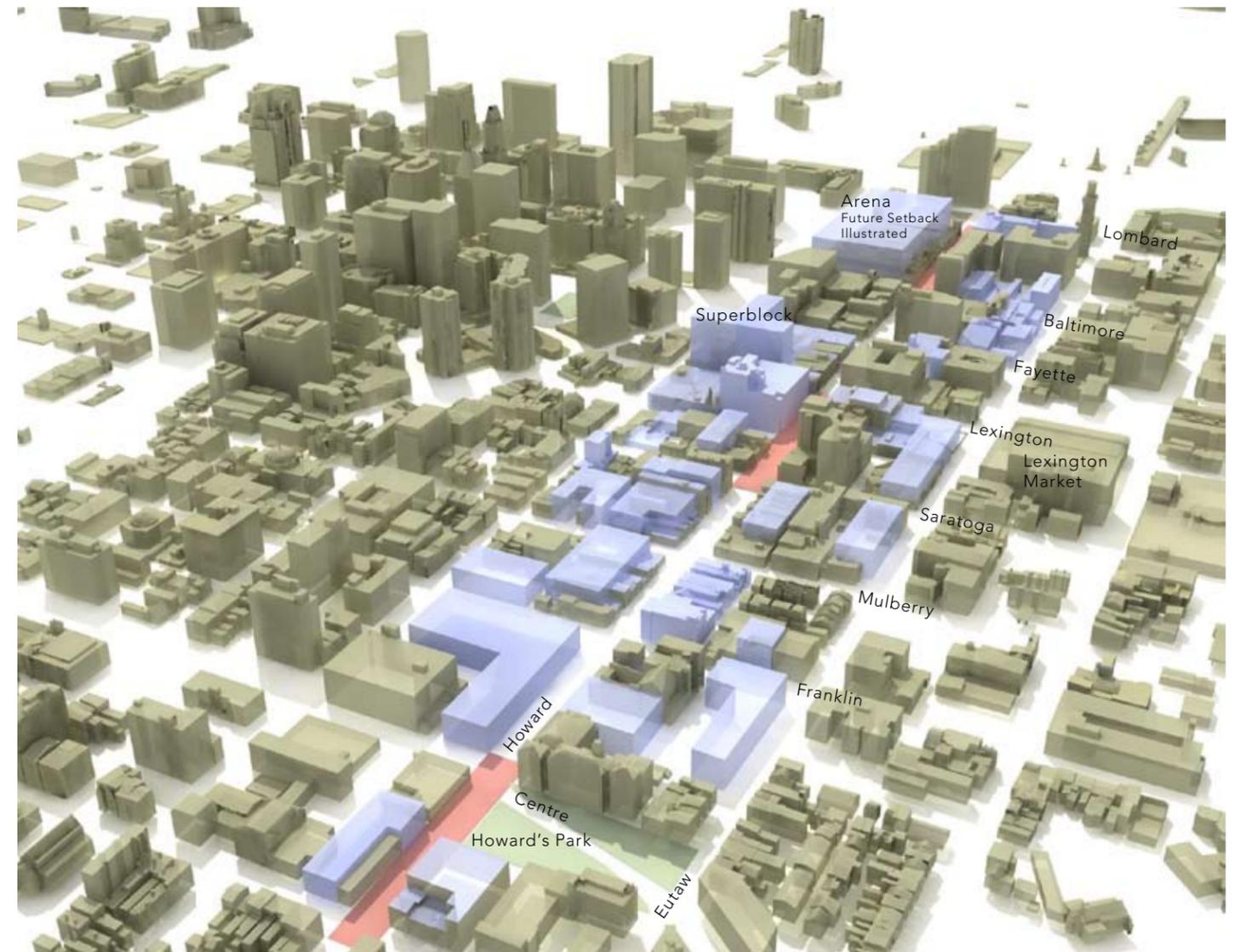
The massing diagram to the right provides a conceptual rendering of how potential development and renovations (both shown in light blue) may contribute toward reinforcing the urban form of Howard Street in massing, building heights and historic context. The magnitude of development illustrated should be considered a minimum baseline for creating a vibrant mixed-use corridor. As the corridor becomes more vibrant, it is possible that additional development may be attracted to the corridor.

The diagram below illustrates the recommended Setback Guidelines for new development. New construction should provide a step-back of 20 to 40 feet behind existing historic buildings or facades to maintain sense of historic street and pedestrian scale. Potential new development will also be required to follow the Westside Urban Design Guidelines and the City of Baltimore's Development Guidebook.

### Setback Guidelines



## Potential Development Build-out



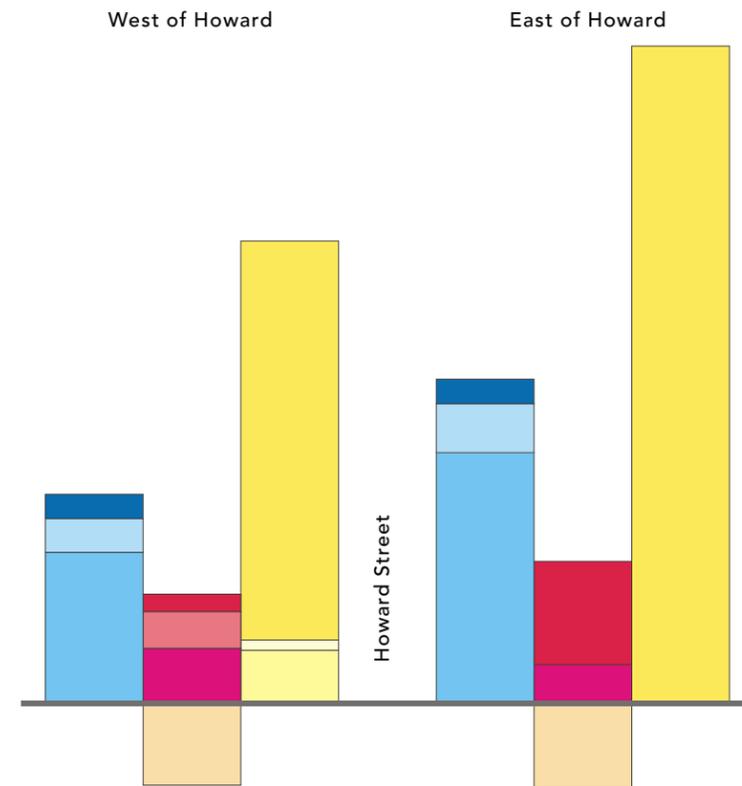
## Potential Build-Out - Uses

The diagrams on this page illustrate the potential type and scale of potential redevelopment along Howard Street.

Development Summary  
Block by Block

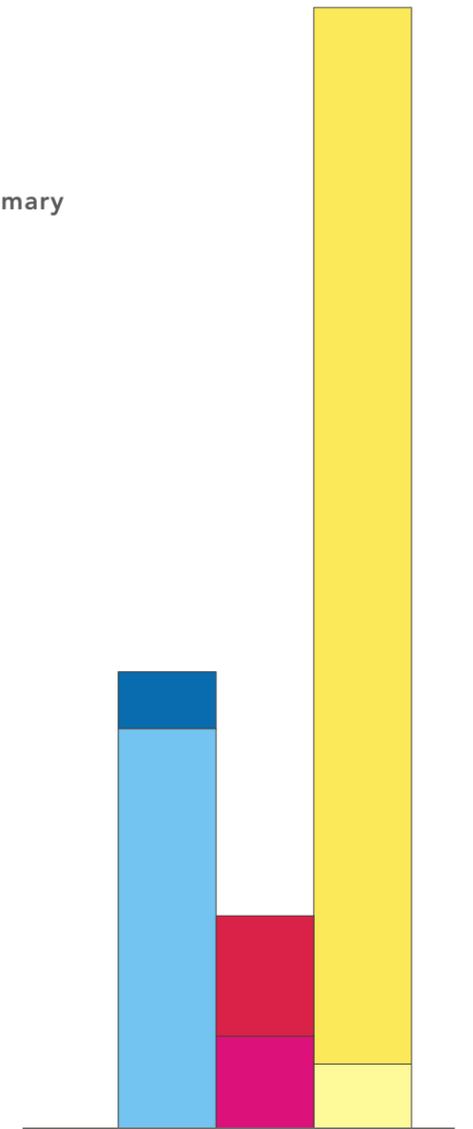


Development Summary  
East and West Sides of Howard



OFFICE	RETAIL	RESIDENTIAL	OFFICE	RETAIL	RESIDENTIAL
New	New	New	New	New	New
40,000	28,700	651,700	52,600	168,480	1,073,840
Rehab	Rehab	Rehab	Rehab	Rehab	Rehab
54,800	60,100	16,900	80,000	0	0
Exist	Exist	Exist	Exist	Exist	Exist
247,000	90,000	87,000	409,700	63,800	0
Razed	Razed	Razed	Razed	Razed	Razed
0	-133,800	0	0	-138,500	0
<b>Subtotal</b>	<b>Subtotal</b>	<b>Subtotal</b>	<b>Subtotal</b>	<b>Subtotal</b>	<b>Subtotal</b>
341,800	45,000	755,600	542,300	93,780	1,073,840

Development Summary  
Total



OFFICE	RETAIL	RESIDENTIAL
New	New	New
92,600	197,180	87,000
Exist & Rehab	Exist & Rehab	Exist & Rehab
656,700	153,800	1,725,540
<b>Total</b>	<b>Total</b>	<b>Total</b>
749,000	350,980	1,812,540 Inc. Hotel

## Corridor Improvement Strategy

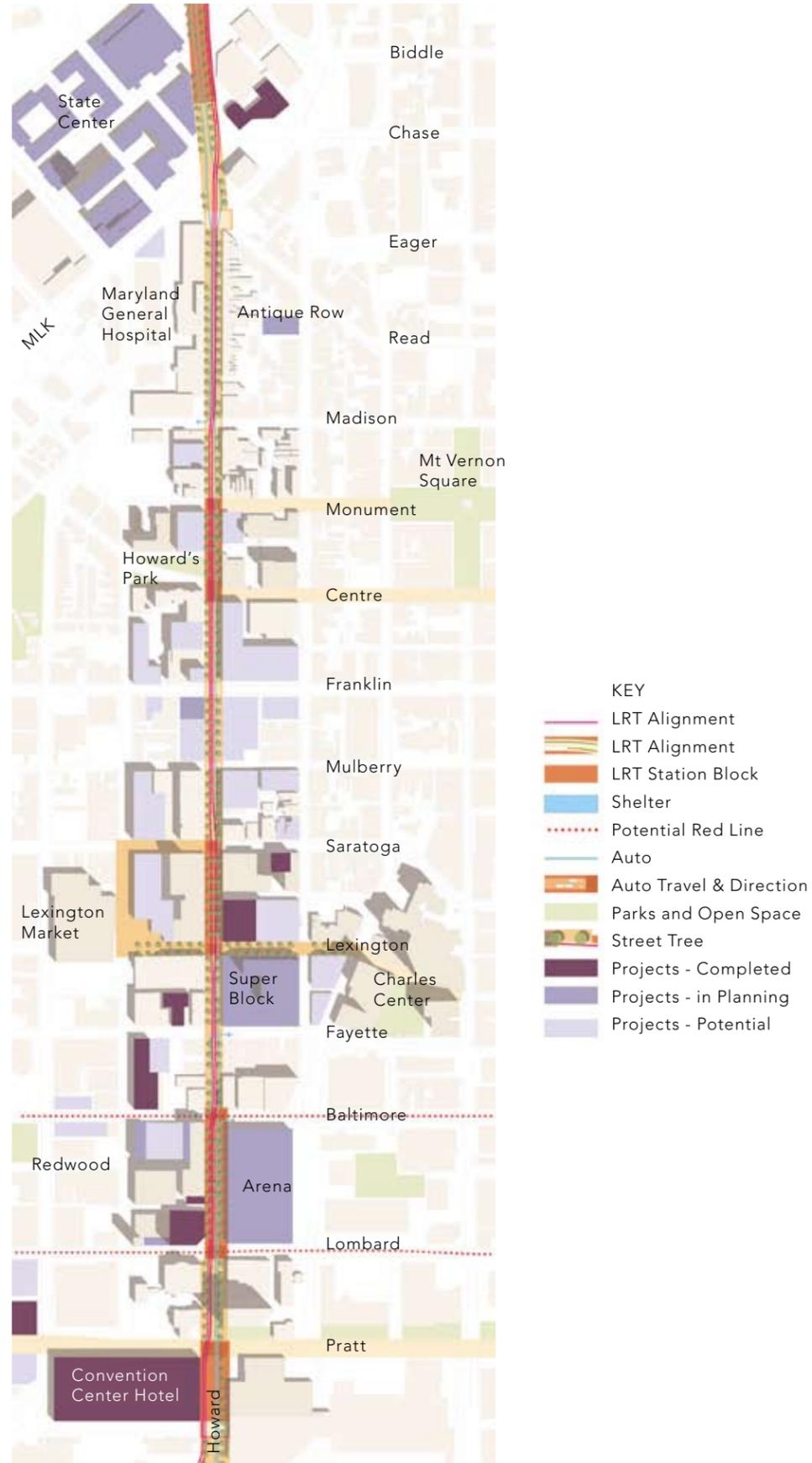
With an understanding of the potential future development that could occur along the Howard Street corridor, the following pages identify the recommended infrastructure improvements for the public right-of-way.

This section provides focused recommendations on three station areas: Baltimore St. - University of Maryland, Lexington Street, and Centre Street.

Each station area provides an opportunity for revitalization into a dynamic environment. The Baltimore St. - University of Maryland Station Area can be a focus for entertainment and education. The Lexington Street station provides the retail core with strong east-west connections from Lexington Market to Charles Center. The Centre Street station area provides a unique opportunity to create an in-city transit-oriented development which connects historic neighborhoods to the east and west.

The areas between the stations also require investment and improvements. Storefront revitalization and streetscape improvements should be initiated along the length of the corridor.

### Corridor Development



## Streetscape, Transit and Transportation Improvements

Recommended infrastructure improvements include enhanced streetscape along the corridor and focused improvements at three station areas, specifically:

### Centre St. Station Area:

- Widening of northbound light-rail platform;
- Realignment of northbound travel lane;
- New streetscape - trees, paving, lighting and furnishings.

### Lexington St. Station Area:

- Short term - relocation of south-bound transit platform one block north to create consolidated station area;
- Long term - reconfiguration of 2 blocks of light rail tracks to create a center light rail platform and a continuous northbound travel lane.
- New streetscape - trees, paving, lighting and furnishings.

### Baltimore St.-University of Maryland Station Area:

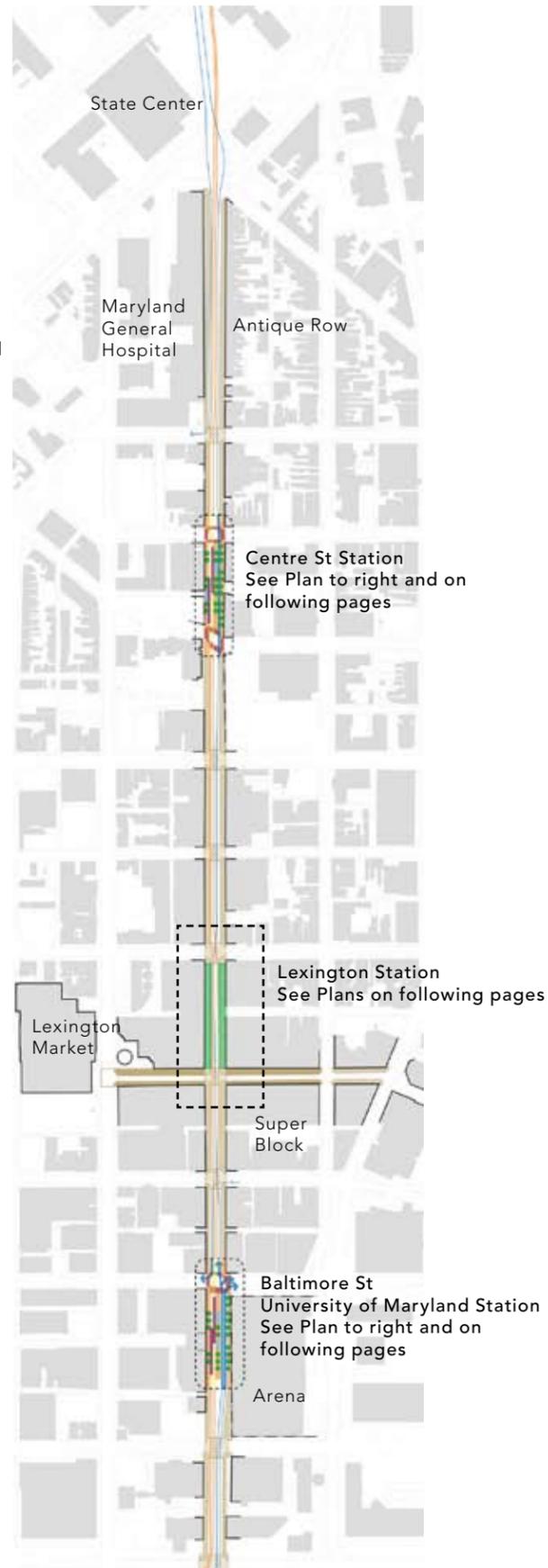
- Widening of northbound light-rail platform;
- Realignment of northbound travel lane;
- New streetscape - trees, paving, lighting and furnishings.

These recommendations are explained in greater detail on the following pages.

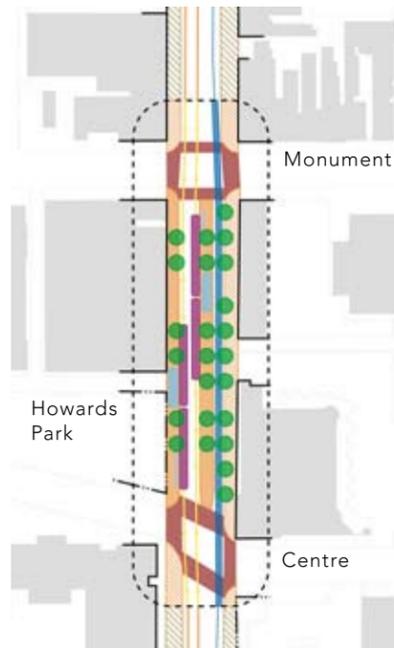
Corridor Diagram

Key

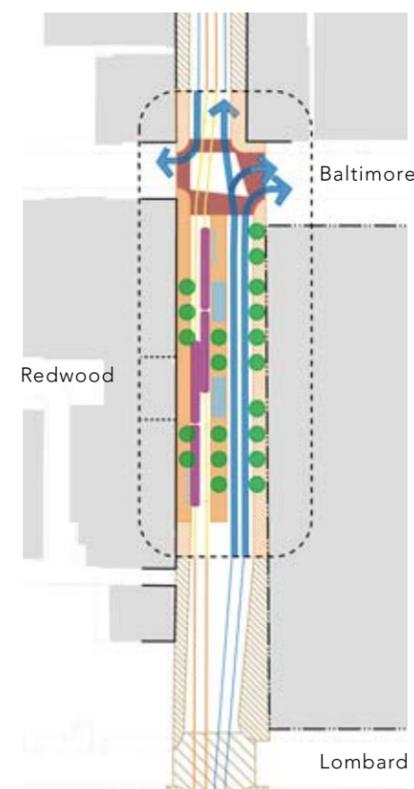
-  LRT Alignment
-  Improved/Modified Station Platform
-  Improved Streetscape
-  Vehicular Circulation
-  Existing Improved Station Platform
-  Existing Improved Streetscape



Plan at Centre Street Station



Plan at Baltimore Street - University of Maryland Station

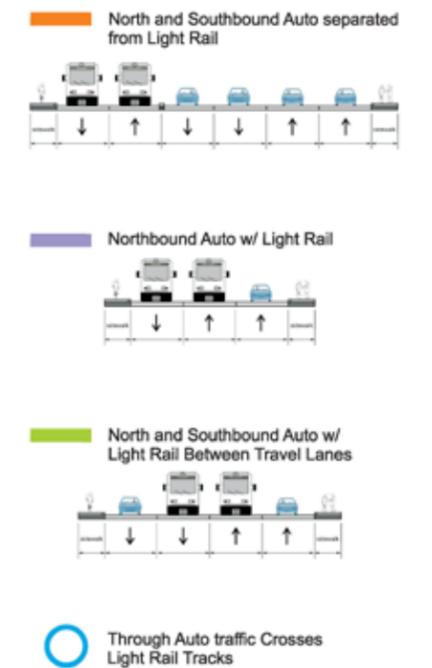


## Proposed Improvement Light Rail - Auto Interactions

As noted on page 1-14, the transit/travel lane weave on the block between Lexington and Saratoga creates the greatest confusion for automobiles traveling on Howard St. The long term recommendation to address this issue is to realign the tracks for approximately 2 blocks in the vicinity of the Lexington Station Area. This will eliminate the confusing weave, create a continuous northbound through lane for vehicles, and a better transit stop. The sections to the right illustrate the resulting cross sections along the corridor.



Typical Cross Sections Along Corridor



## Lexington Station Area

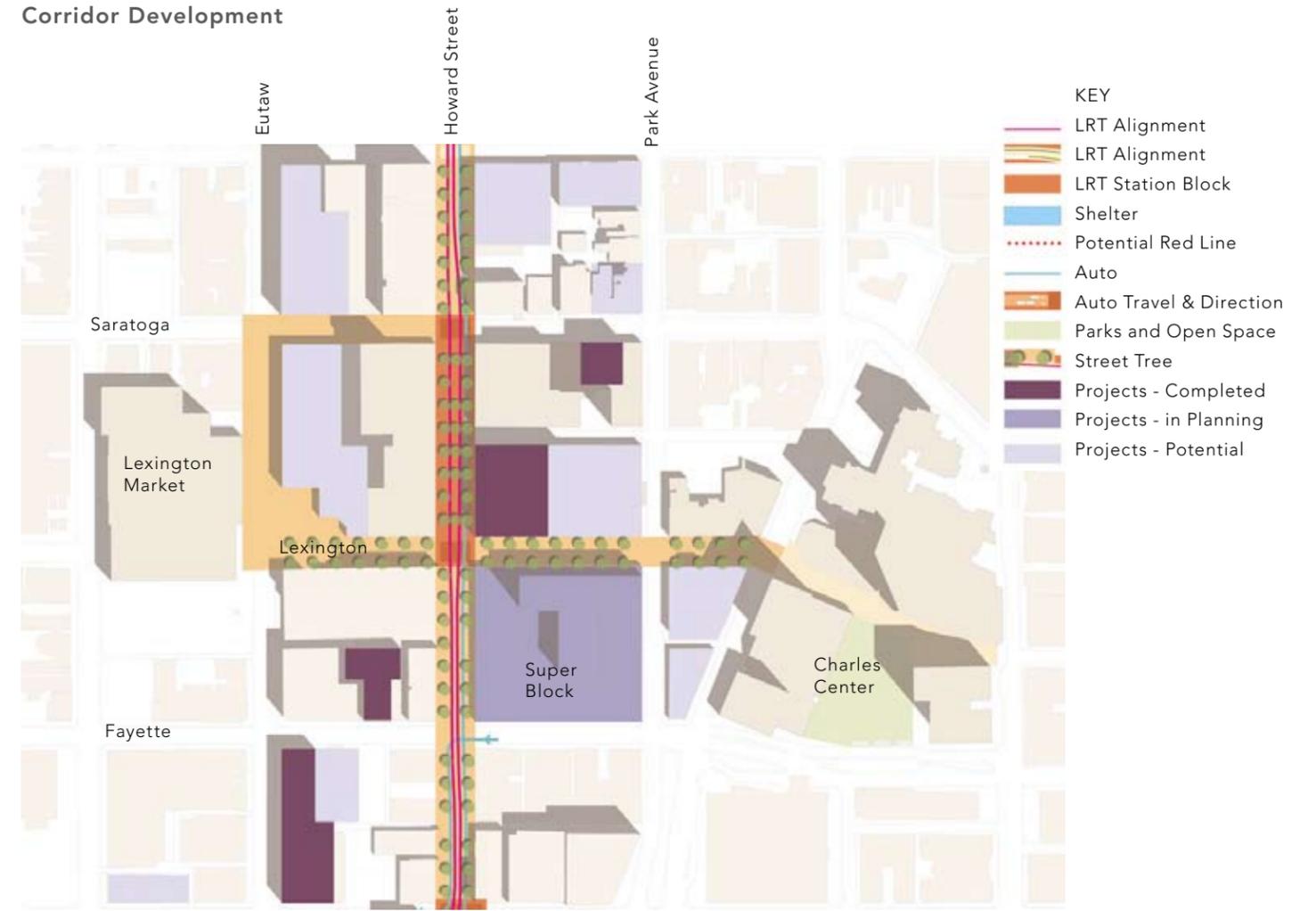
Recent improvements to Lexington Street to reintroduce vehicular traffic have occurred between Eutaw Street and Park Ave. The remaining block between Park Ave and Liberty should be renovated to include vehicular traffic. The integration of wayfinding elements will strengthen the pedestrian connections between Lexington Market, the Metro, Howard Street Light Rail, Charles Center and downtown.

The Steering Committee has recommended that Long Term improvements for the Lexington Station should include modifying the track and travel lane configuration to eliminate the confusing weave and providing a new, consolidated station.

### Lexington Street Concept Plan



### Corridor Development



## Lexington Station Transit Improvements - Short Term and Long Term

### Short Term Improvements

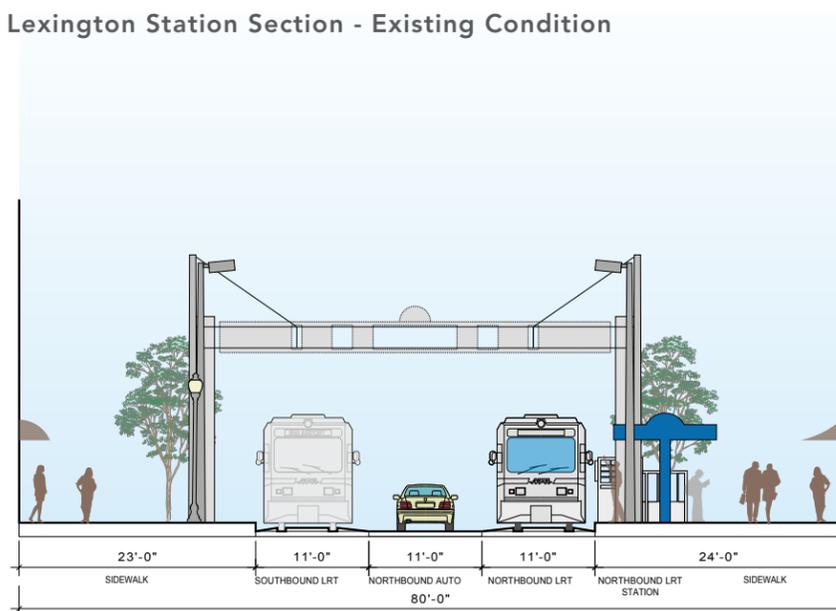
- Relocate southbound platform.
- Reconstruct streetscape, OCS poles, landscaping to accommodate long term plans.

### Long Term Improvements

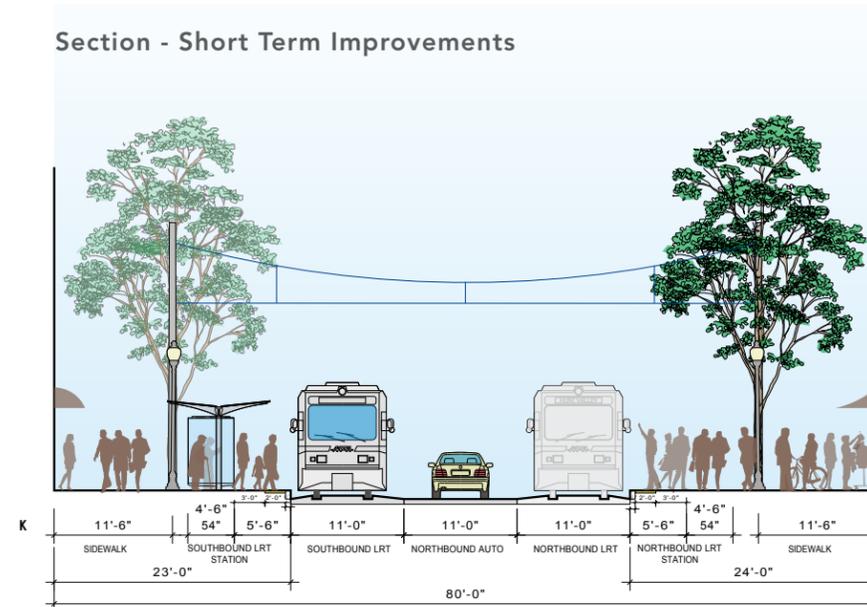
- In coordination with corridor development, began development of the center platform and through travel lane.
- Design of center platform should accommodate the transition to modern, narrow body, low floor vehicles.

More detail on potential phasing and costs are included in Appendix 1.

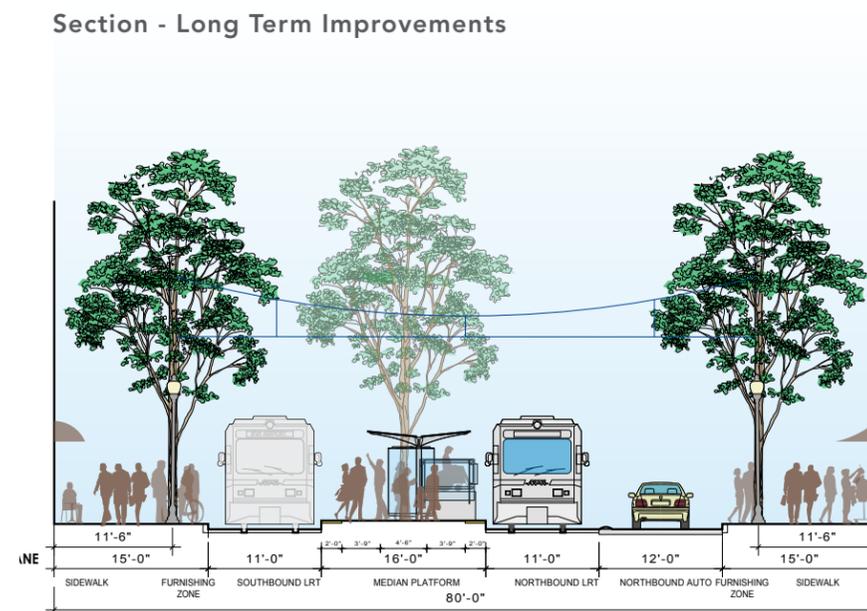
### Lexington Station Section - Existing Condition



### Section - Short Term Improvements



### Section - Long Term Improvements



### Plan - Short Term Improvements



### Plan - Long Term Improvements



## Lexington Station - Short Term - Relocated Southbound Platform and Enhanced Streetscape

View from  
Mid-Block West Side of Street  
Looking South  
Toward Relocated Platform



View from Saratoga  
Looking South



View from above  
Lexington Looking  
North



View from above  
Saratoga Looking  
South



## Lexington Station - Long Term

View from Lexington  
Looking North



View from Saratoga  
Looking South



View from  
above  
Lexington  
Looking  
North



View from above  
Saratoga  
Looking  
South



## Baltimore St. - University of Maryland Station Area

### A Vision of the Baltimore St. - University of Maryland Station Area

The redevelopment of the Arena provides a significant opportunity to enliven the station area and enhance transit service. The connection between the Arena and the University of Maryland via Redwood Street may also be improved as part of the Arena redevelopment, transit platform enhancements and potential roadway signal and intersection reconfigurations.

### Potential Station Area Improvements

- 1 New Arena with retail active street level fronting on Baltimore Street and Howard Street
- 2 Improved transit platforms and furnishings
- 3 New streetscape along Howard Street - includes relocating transit furnishings at Redwood Street.

- KEY**
- LRT Alignment
  - LRT Alignment
  - LRT Station Block
  - Shelter
  - Potential Red Line
  - Auto
  - Auto Travel & Direction
  - Parks and Open Space
  - Street Tree
  - Projects - Completed
  - Projects - in Planning
  - Projects - Potential

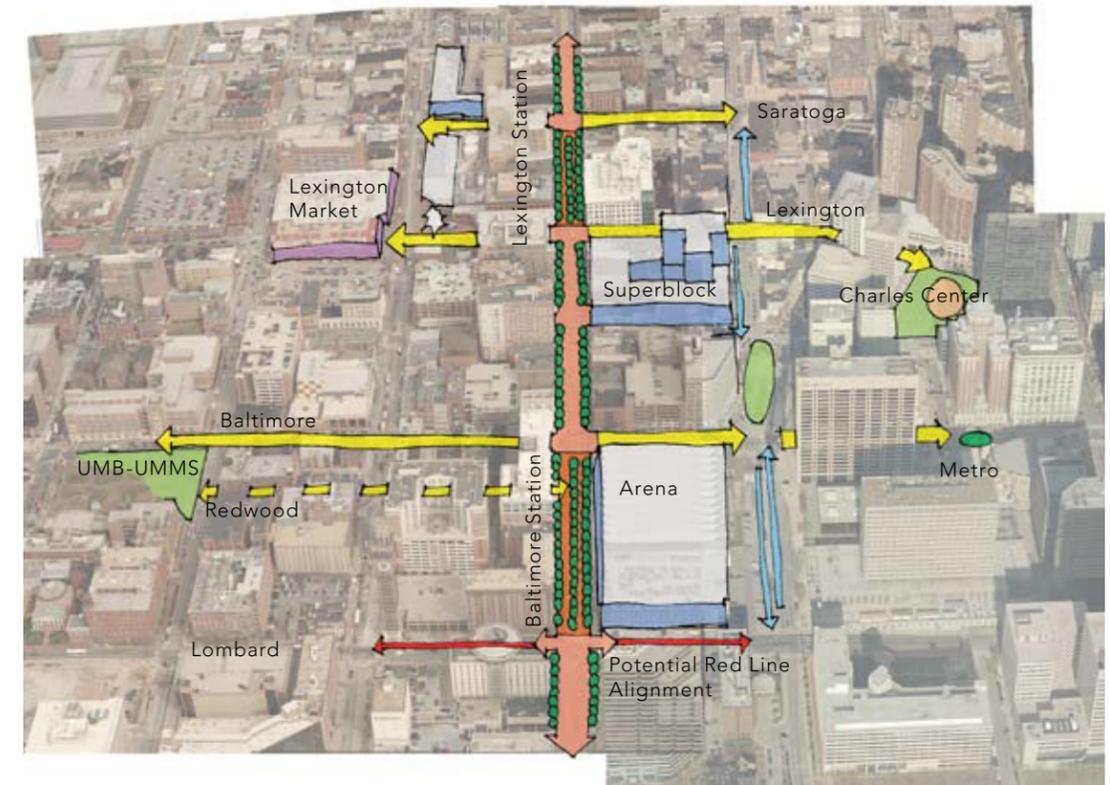
View South from Baltimore Street



Corridor Development



Catalysts and Links



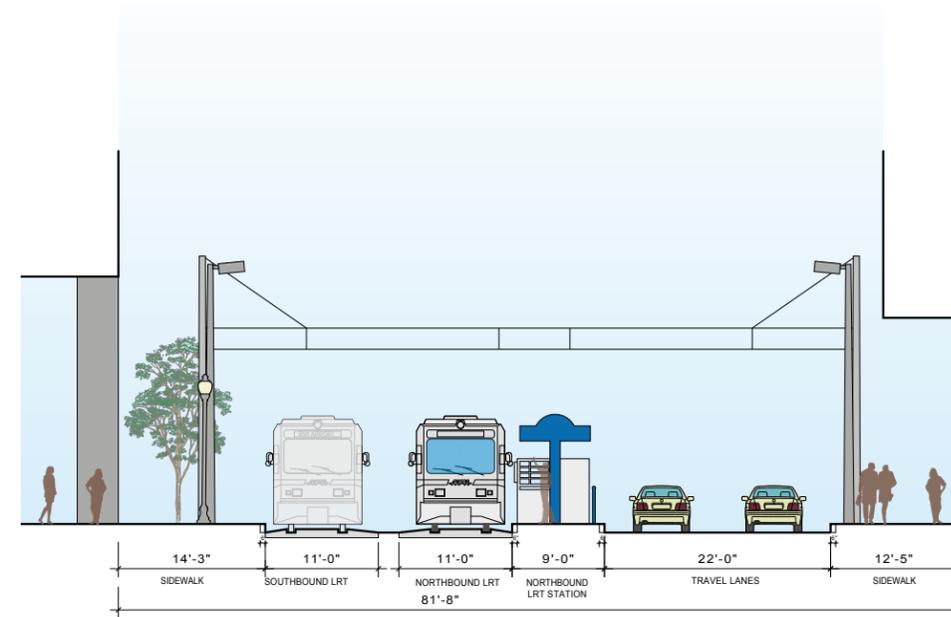
## Transit Improvements

Improvements to the Baltimore St. platform should be done in coordination with the Arena redevelopment. Expansion of the platform will require a setback, or additional right-of-way, for the new Arena development. In conjunction with the Arena redevelopment and platform improvements, enhancing the pedestrian connection along Redwood St. should be pursued. One possibility could be to shift the platform to the south to introduce a signalized pedestrian crosswalk between Redwood St. and the Arena. Recommended improvements to the stops include:

- realigning the existing travel lanes to increase the size of the northbound platforms;
- streetscape improvements to eliminate sidewalk clutter.

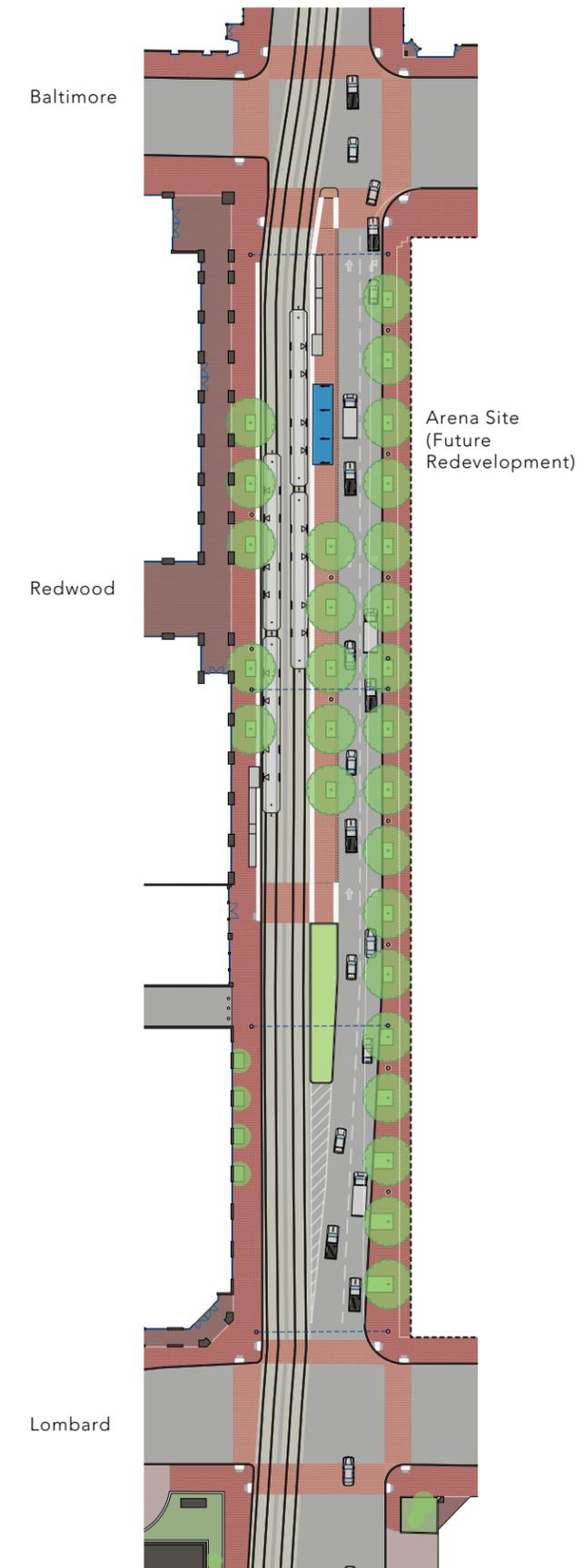
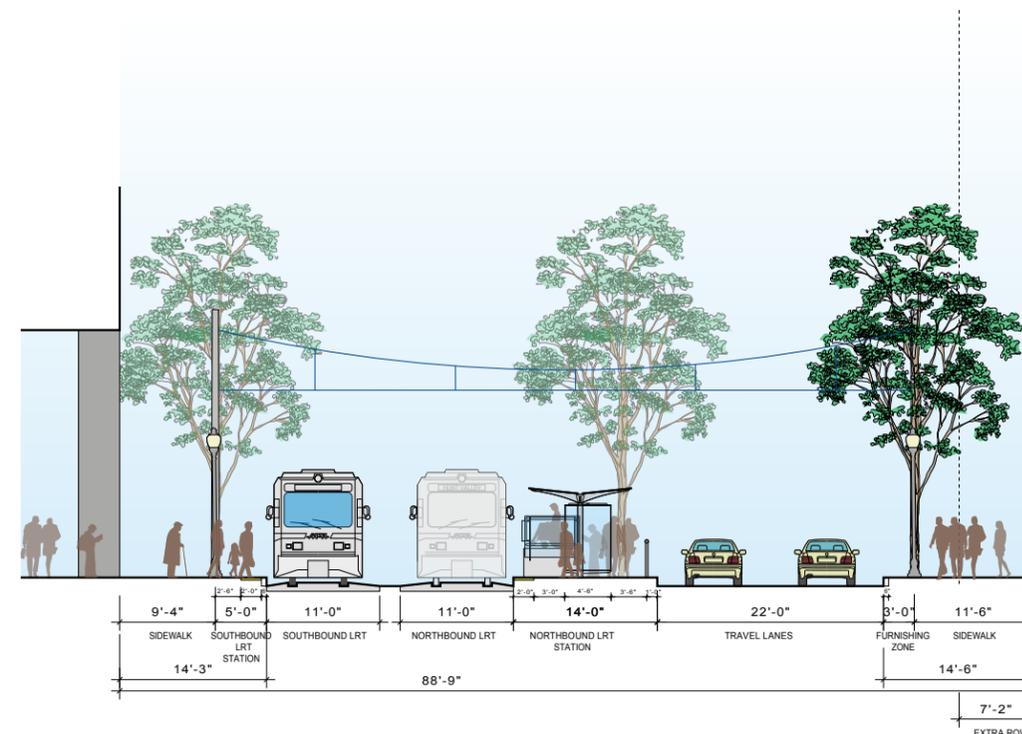
The redesign of the platforms should accommodate the future transition to a fleet of modern, narrow body, low-floor vehicles.

Existing Section



Proposed Plan

Proposed Section



## Centre Street Station Area

### A Vision of the Centre Street Station Area

The revitalization of the Centre Street Station Area provides a significant opportunity to create a vital transit-oriented neighborhood along Howard Street while also improving connections between the Seton Hill and Mt. Vernon neighborhoods.

### Potential Station Area Improvements

- 1 Renovated buildings with enhanced storefronts
- 2 Howard's Park improvements
- 3 New mixed-use development (in blue) on vacant lots
- 4 Improved transit platforms and furnishings
- 5 New Streetscape along Howard Street

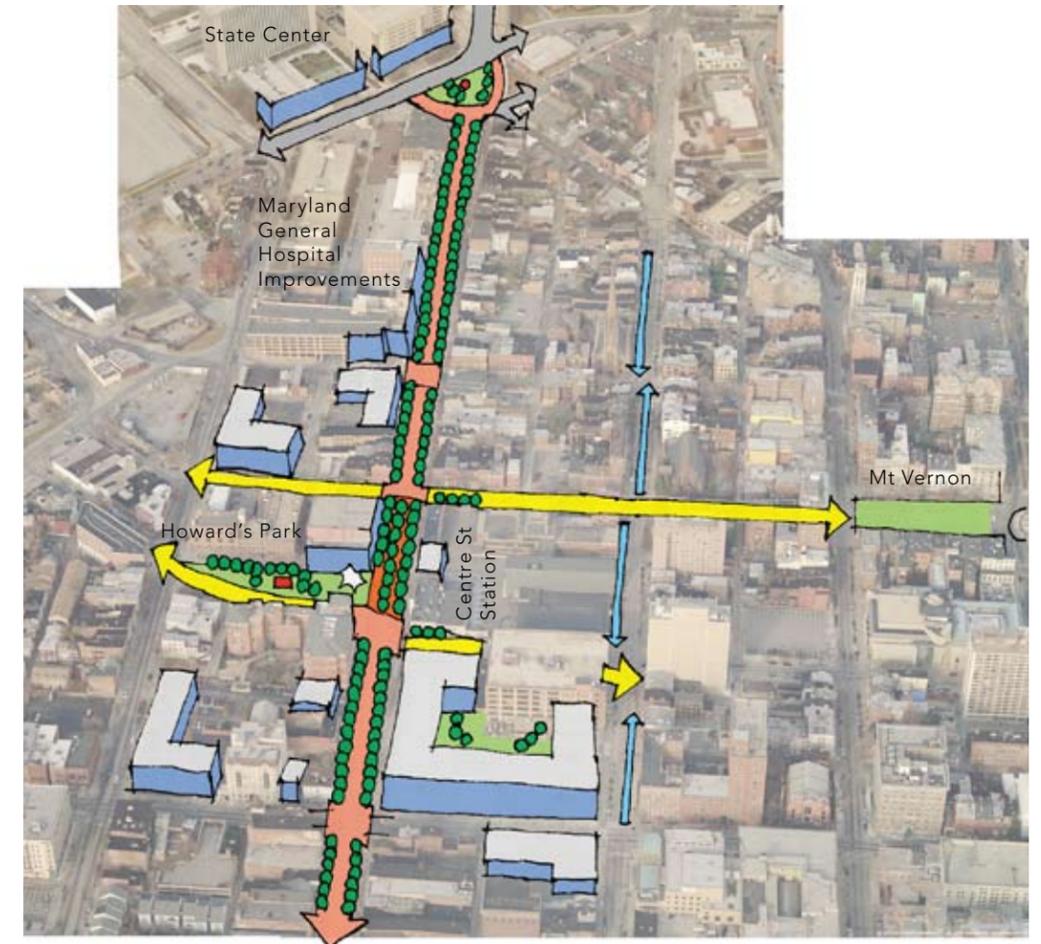
View South from Baltimore Street



Corridor Development

Catalysts and Links

- KEY
- LRT Alignment
  - LRT Alignment
  - LRT Station Block
  - Shelter
  - Potential Red Line
  - Auto
  - Auto Travel & Direction
  - Parks and Open Space
  - Street Tree
  - Projects - Completed
  - Projects - in Planning
  - Projects - Potential



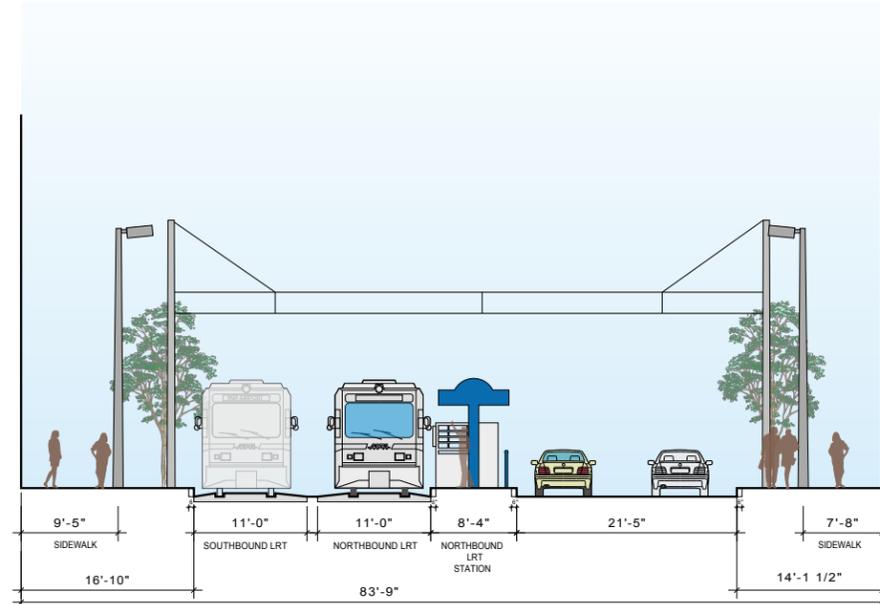
## Transit Improvements

Recommended improvements to the Centre Street stops include:

- reconfiguration of the northbound travel lane and elimination of on-street parking (only at station block) to increase the size of the northbound platform;
- streetscape improvements to eliminate sidewalk clutter.

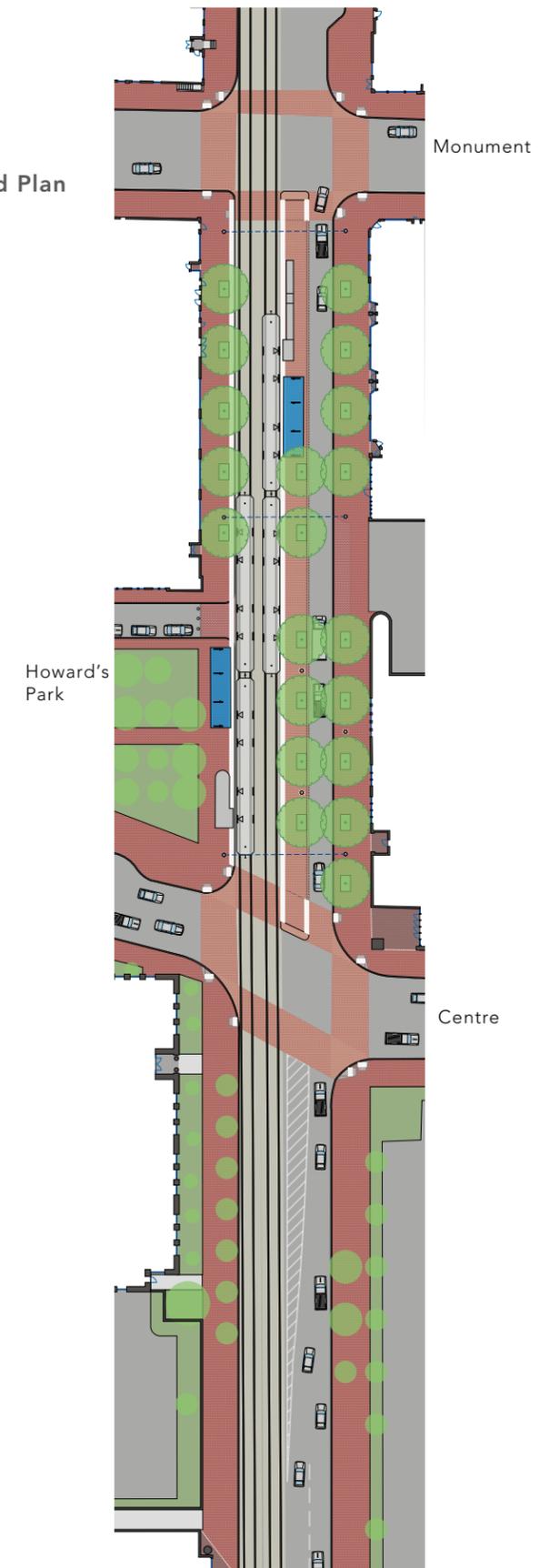
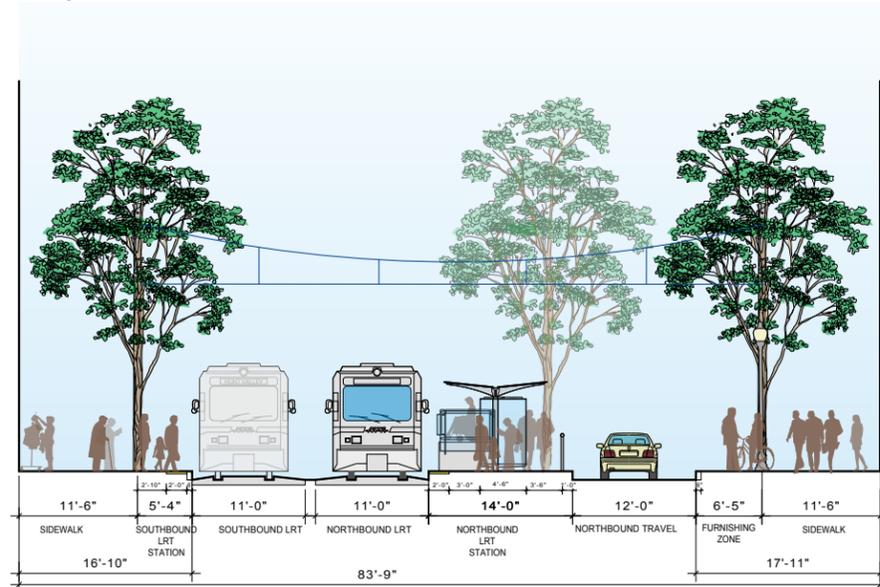
These improvements should be coordinated with the redevelopment of the adjacent properties. The redesign of the platforms should accommodate the transition to a fleet of modern, narrow body, low-floor vehicles.

Existing Section



Proposed Plan

Proposed Section



# Transit Vehicles

## Transition to Low Floor Vehicles

The Steering Committee recommends that the Central Light Rail Line transition to a modern, narrow-body, low-floor vehicle in the long term.

The current LRT vehicles are at approximately the mid-point of their useful life. The first 35 LRT vehicles entered service in 1992 and these vehicles are identified as the first fleet. The second fleet of 18 vehicles entered service in 1997. The vehicles have an expected service life of 30 years. The existing vehicles are scheduled to undergo a mid-life maintenance program. The maintenance program does not extend the original life cycle of the vehicle, though it does include upgrading of obsolete sub-systems and restores reliability. Based on a 30 year life, the first fleet will reach its replacement age in 2022 and the second fleet in 2027.

The Red Line Transit Study has identified potential alternative low floor narrow body vehicles. The City and MTA should continue their joint and cooperative effort on the Red Line to help guide decisions on future vehicle purchases which, in the long term, should prioritize a single LRT vehicle fleet. When the Central Light Rail transitions to a low floor narrow body vehicle, the existing platforms will need to be modified. (see diagrams at far right).

## Existing Vehicle Improvements

While the existing vehicles are in use and undergoing the mid-life maintenance program, the following improvements should be pursued:

- consider re-branding ideas for existing vehicles including a new color scheme;
- develop wheel covers to mitigate noise.

### Modern Low-Floor Vehicles

Modern low floor vehicles provide universal access for all riders without requiring the use of high-blocks (top right).



Low floor vehicles also can feel like an extension of the pedestrian environment while stopped at a platform connection - as illustrated in the photos to the right, views from the vehicle and from an adjacent business into the vehicle.



### Existing Vehicle



### Example Conceptual Color Scheme and Wheel Covers



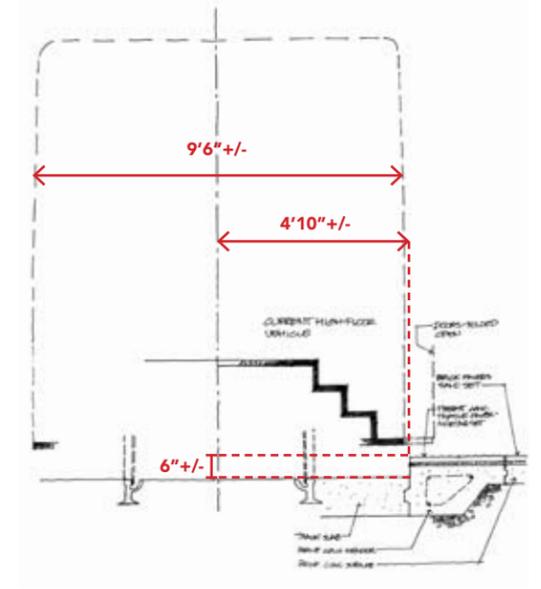
### Alternative LRT Vehicles Red Line Corridor Transit Study AA/DEIS

Bombardier (Baltimore)		
Siemens (San Diego)		
AnsaldoBreda (Boston)		
Skoda Inekon (Portland)		

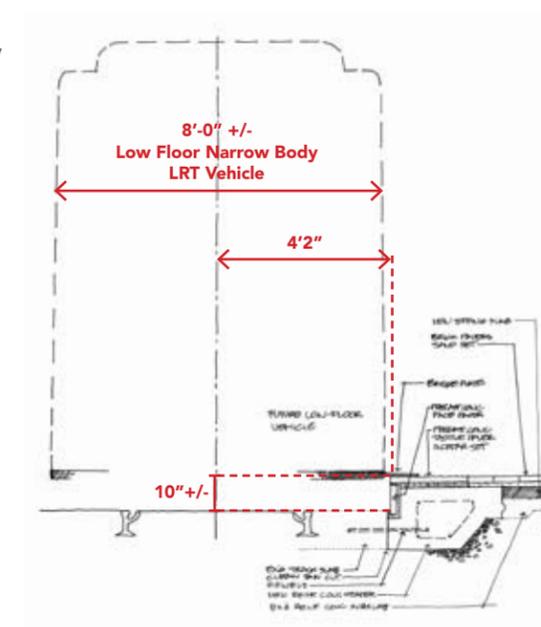
The Red Line Corridor Transit Study AA/DEIS has identified several low floor vehicles which are more narrow than the existing LRT vehicle (Volume 1 - Chapter 2: Alternatives Considered, Page 22).

### Platform Revisions for Low-Floor Vehicles

#### Existing Platform Edge



#### Low Floor Narrow Body Platform Edge



The transition to a low floor narrow body fleet for the Central Light Rail line will require modifications to the existing platforms. The platforms will need to be raised approximately 4" and widened approximately 8" to accommodate an accessible bridge plate.

# Corridor and Station Area Placemaking

## Transit Furnishings

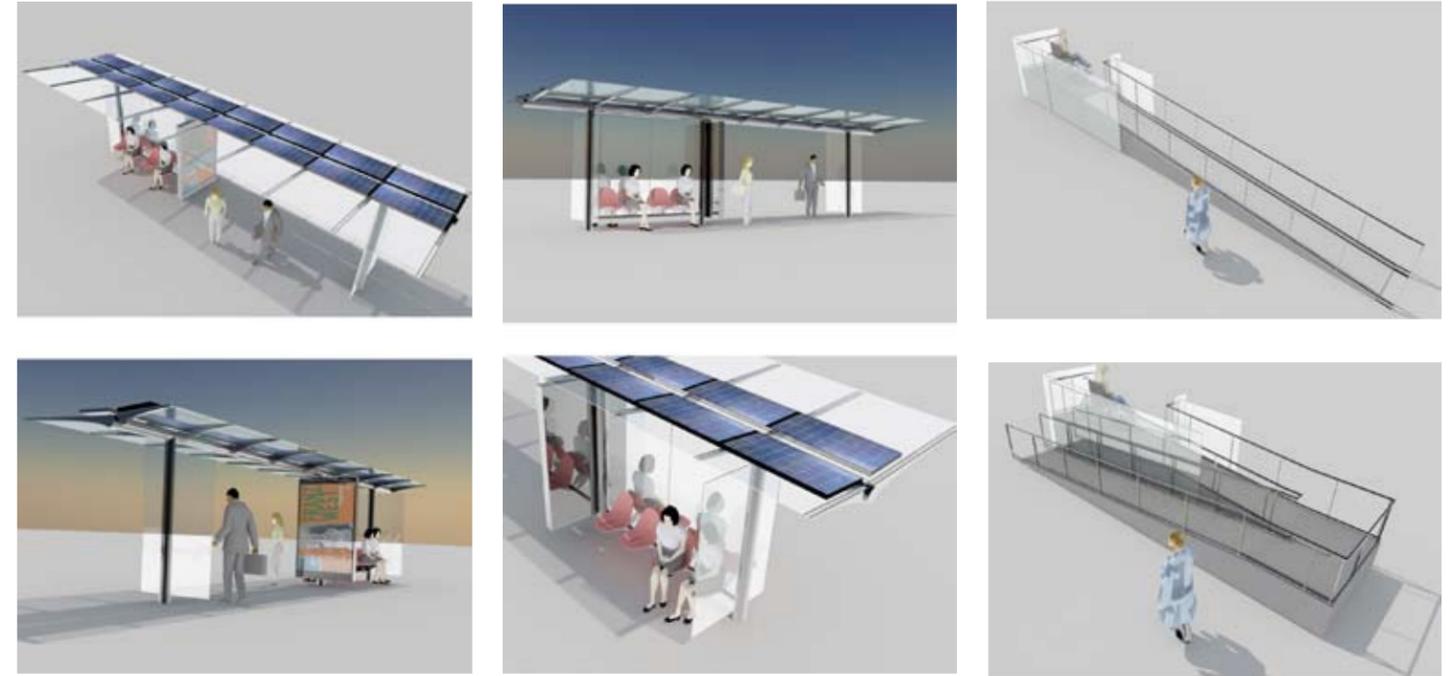
The image of transit on the Howard Street corridor can be enhanced with a new design for shelters and high blocks. The design for new shelters should be complementary to the existing bus shelters provided through an advertising contract (in the photo lower left). There should be an emphasis on transparency in the design of the transit furnishings in order to provide greater visibility of the storefronts and historic character of the buildings. With greater visibility also comes a perception of increased safety. The coordination with the bus shelter contract also may incorporate a similar maintenance agreement. The conceptual images to the right are for illustrative purposes. The development of the final design for the shelter and high blocks will need to be done in consultation with City of Baltimore agencies.

### Shelters

- Utilize Bus Shelter Contract to provide maintenance.
- Design for transparency and convenient pedestrian movement.
- Use high-capacity shelters to also provide locations for ticket vending machines.
- Consider opportunities for sustainability such as the integration of solar pv panels to provide electricity for lighting and signage, i.e.d. lighting and rainwater collection.

### High Blocks

- Design for transparency.
- Long-term - the high blocks may be removed when fleet transitions to low-floor vehicles.



## Streetscape Furnishings

The image and coherence of Howard Street may be improved with the implementation of a unified furnishing plan.

### Furnishings

- Develop a family of furnishings - existing bus shelters, lighting, seating and trash receptacles - for the entire Howard Street corridor.
- Provide a more consistent level of pedestrian lighting for the entire corridor with street light fixtures, shelter lighting, and storefront/facade lighting.



# Corridor and Station Area Placemaking

## Public Art - Develop Public Art Strategy for Howard Street Corridor

The Framework Diagram to the right illustrates a preliminary conceptual plan for introducing public art along Howard Street. The Steering Committee recommends developing a more detailed strategy which addresses the following:

### Development Strategy

- Define a process with the Public Arts Commission that includes corridor arts stakeholders such as MICA, Station North Arts and Entertainment District.
- Design projects should include artists and concepts for public art in the early stages of design.

### Potential Sites for Art

- Integrated with streetscape plans
- Transit Stops
- Use for Wayfinding - Along Lexington Street
- Civic Spaces - Parks and Plazas
- Private Development
- Transit Vehicles

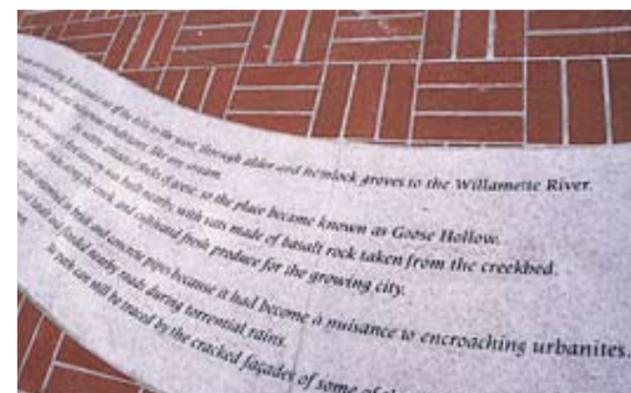
### Opportunities

- Lighting
- Seating
- Paving
- Sculptures
- Functional furnishings such as bike-racks
- Murals - Maryland General Hospital
- Historic Markers

Preliminary Public Art Framework Plan



Transit & Public Art Examples



Examples of Transit Public Art  
Portland, Oregon

## Related Transportation Improvements

### Mode Emphasis and Park Avenue

One-way streets are often not ideal for a vibrant business district. On Howard Street the situation has been made worse by the dedication of lanes for transit with only a single traffic lane for most of the route. Traveling northbound for most of its length, Howard Street lacks a corresponding southbound street. Eutaw Street to the west of Howard is two-way. And the next street to the east is Park Avenue, which, like Howard Street also runs one-way northbound. This situation is most inconvenient for travelers from the north whose destination is south of Madison Avenue. It also affects patrons of Howard Street businesses, particularly those located on the east side. If a driver traveling north on Howard Street turns right to find parking, he or she must drive an additional block out of direction before finding a route to return to Howard Street. The figure shown provides examples of access routes under the existing condition and under a proposed condition where Park Ave is converted to two-way travel.

Another user, the bicyclist is also at a disadvantage on the West Side, particularly in the southbound direction. Cathedral Street, designated for bicyclists in the plan, is dominated by auto traffic with little right-of-way for separate bicycle lanes. Eutaw Street is dominated by pedestrians, bus traffic and vehicle congestion in the vicinity of Lexington Market. As a result of this lack of southbound access, cyclists resort to using sidewalks, opposite direction through lanes, and even light rail rights of way on Howard Street, creating dangerous conditions for all modes. In addition to congestion on Cathedral Street, the planned streetcar will also operate on rails on Cathedral Street creating the same dangerous situation for cyclists.

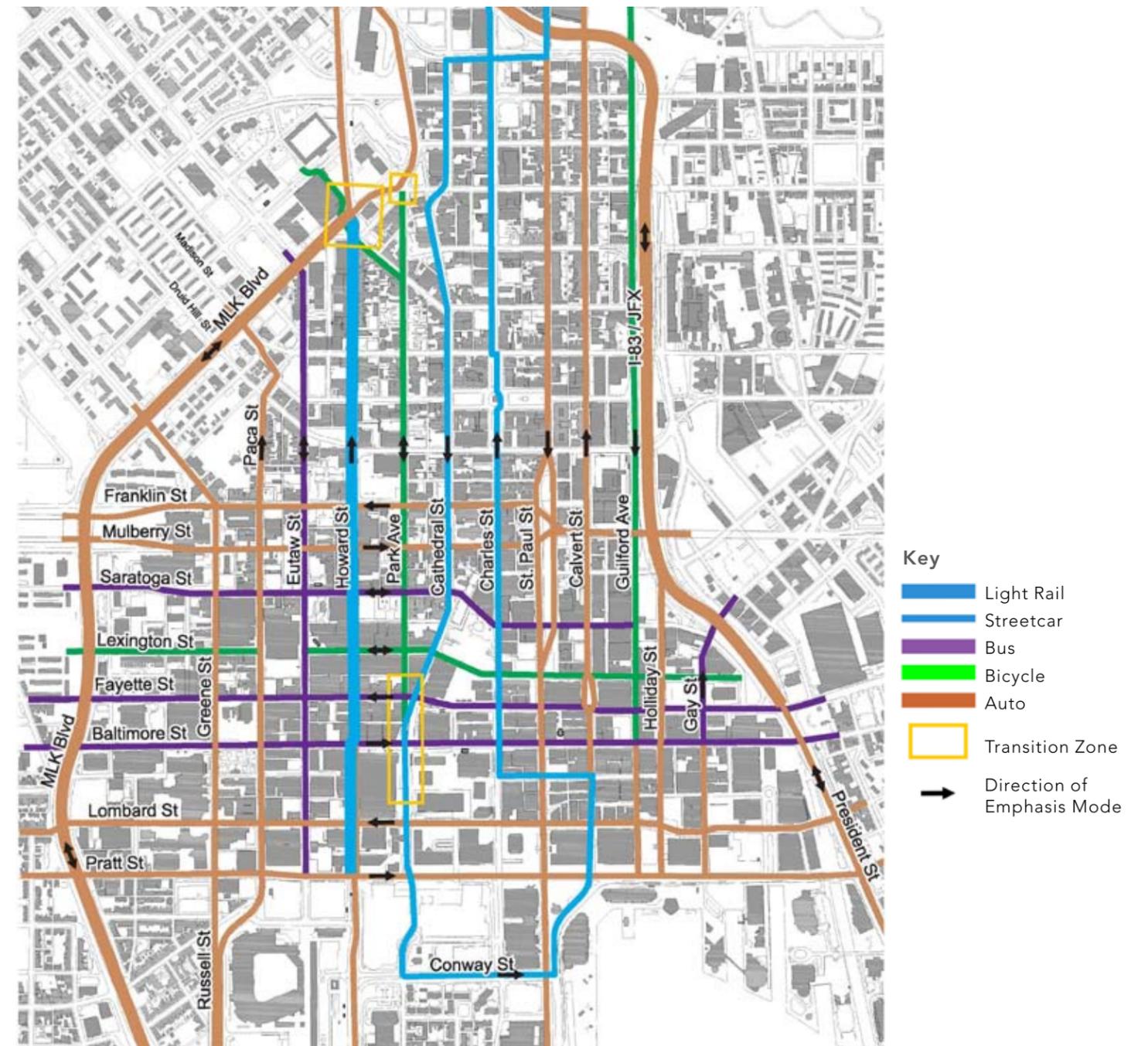
Converting Park Avenue to two-way could help to recognize an organization of downtown's north-south streets, recognizing that urban streets are essentially shared space, but each can potentially better serve and prioritize modes

and activities. The concept of mode and land use priority to characterize streets is being done in many cities to optimize travel characteristics for a range of urban modes, and improve the urban livability and economic revitalization. The Proposed Mode Emphasis map for the study area suggests that each street or couplet has priority user characteristics that can help to guide design treatments and operating conditions.

A two-way Park Avenue, as part of this system would provide an amenable low-volume alternative to the bicyclist offering travel in both directions. It would also recognize a role similar to Eutaw Street for Howard Street properties where parking access is limited due to the presence of light rail. This also recognizes the pairing of Cathedral Street with Charles Street for the trolley or other premier transit, and the pairing of St. Paul & Calvert Streets on the east side and Green and Paca Streets on the West Side for auto traffic.

Changing Park Avenue to permit two-way travel will require intersection improvements at two key intersections: to the south where Park Avenue meets Liberty Street and Fayette Street and to the north where it crosses Chase Street, one of the intersections impacted by the State Center Traffic Mitigation Plan. Roundabouts present a possible solution and are shown in the diagrams to the right. The Liberty Street intersection would require a two-lane roundabout for five legs to provide for all the current and proposed movements. This roundabout would also allow the proposed streetcar to cut through the central island and would require resolution of egress from a parking garage on Fayette Street. At the northern end, a single-lane or double-lane roundabout would be needed, depending on the timing and extent of traffic impacts from the State Center Development. Both intersections could be converted to two-way with more modest operations and signal changes, particularly if some movements can be eliminated.

Potential Westside Street Network  
Mode Emphasis



**Existing Condition  
Park Avenue -  
One Way Northbound**

Poor access to locations cause difficult circulation patterns



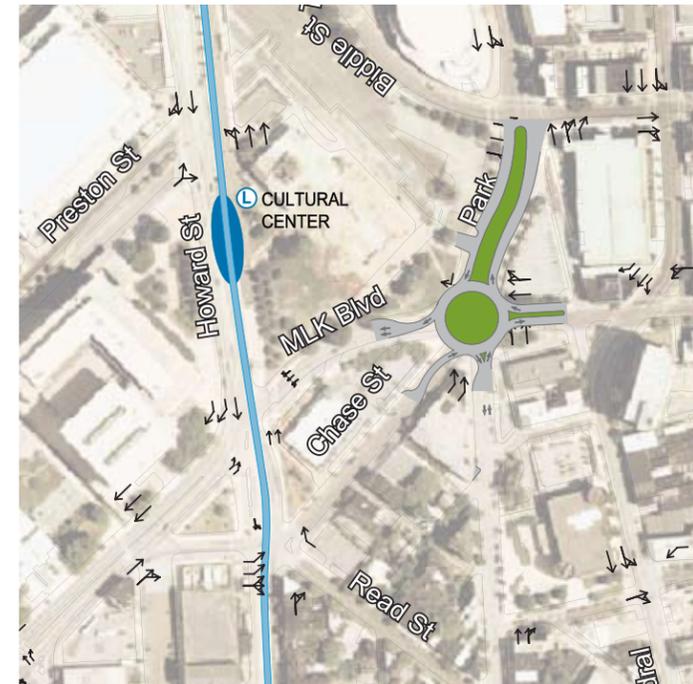
**Future Alternative  
Park Avenue -  
Two Way**

Better accessibility of grid network provides easy circulation patterns

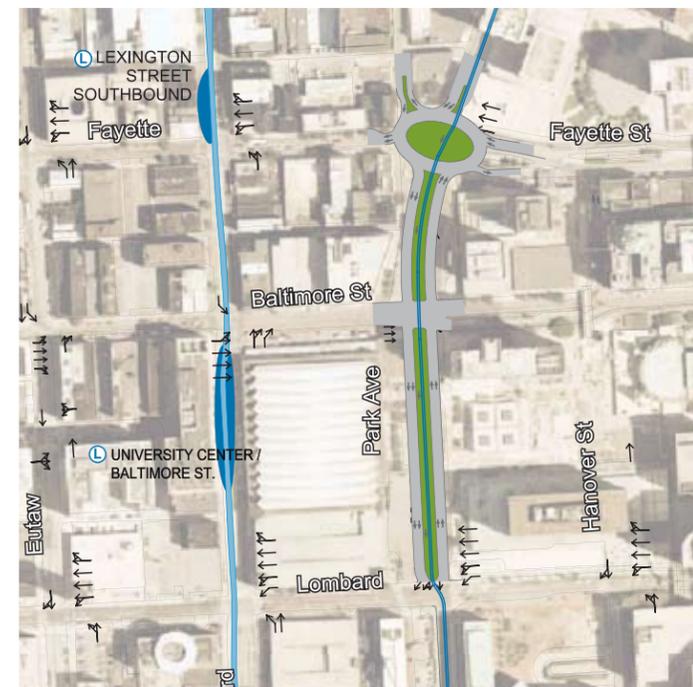


The conversion of Park Avenue to a two-way street with the proposed roundabout concepts would be an asset to the city, regardless of the implementation of any planned improvements to the Howard Street corridor. This conversion would increase mobility for bicyclists and vehicles in both the northbound and southbound direction throughout the core of city and reduce out of direction travel for access to blocks on the east side of Howard Street.

**Potential Park Ave  
North End Roundabout**



**Potential Park Ave  
South End Roundabout**



## Coordination with Related Projects

Ensuring success on efforts to enhance Howard Street will require coordination with efforts on adjacent projects and planning efforts.

### 1. Historic District

- Promote redevelopment which respects and strengthens historic assets.

### 2. State Center

- Ensure continuity of Howard Street circulation.
- Park Avenue Connectivity.

### 3. Pratt Street

- Strengthen gateway at Pratt and Howard Street.
- Consider movement of traffic to Baltimore Street and evaluate additional right turn lane.

### 4. Arena Development

- Include transit needs as part of RFP review process.
- Provide setback to accommodate LRT Station widening.

### 5. Red Line Station Planning

- Consider transfer convenience in Red Line design.

### 6. Superblock

- Coordinate Public Realm/Streetscape and Bus Stop improvements with new development.

### 7. UMB/UMMC Master Plan

- Opportunities to coordinate improvements and leverage investments.

#### Key

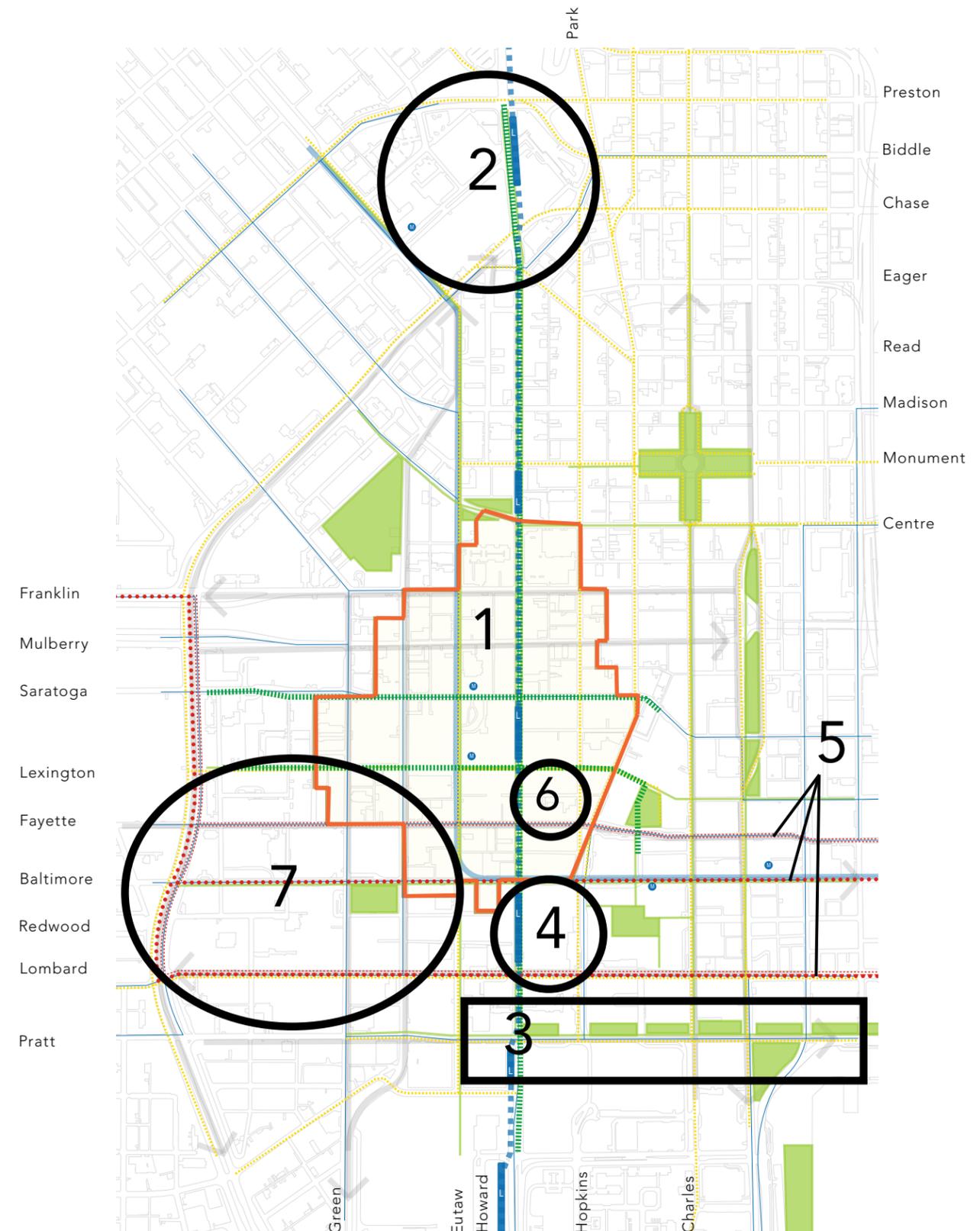
- Proposed Red Line (Surface)
- Proposed Red Line (Tunnel)
- Howard Street LRT
- Streetscape Improvements
- Proposed Bikeways

#### Boundaries

- Historic District

- Existing Bus Network
- Existing Metro Line
- Existing LRT Stops
- Existing Metro Stops
- Public Parks
- Green Streets
- Major Vehicle Connections

## Coordination Efforts



## Coordination with Related Projects

### Continuous Northbound Lane at Martin Luther King Boulevard

Howard Street is one of only two direct routes between downtown and destinations to the north: Maryland Institute, Charles North, Charles Village and the Johns Hopkins Homewood campus. This plan recommends support for concepts designed to reestablish and enhance the street's unique connectivity. One such concept in support of this approach to thinking about Howard Street is the proposed Lexington Station redesign.

A second improvement is proposed as part of the State Center redevelopment where Howard Street meets Martin Luther King Blvd. In a currently proposed alternative, the northbound movement is eliminated, forcing traffic to make a circuitous loop around the Meyerhof Symphony Center to return to Howard Street. Disruption to the northbound flow at this location may have the unintended consequence of reducing use of Howard Street by motorists, further reducing its attractiveness to business investment and a reasonable level of auto activity found to be important to bring life to the street. Alternative plans for maintaining the northbound lane should be developed to ensure connectivity for the corridor.

### First Mariner Arena

The First Mariner Arena today is a hub of transit activity with 17 bus routes, near-by Metro connections and the Baltimore Street Light Rail Station. The future Red Line proposes a stop at this location to connect riders to both the CLRL and Metro. The Charles Street Trolley also proposes a stop at the Arena. The location is critical to transit and potentially an even greater opportunity with its proposed City-sponsored redevelopment just getting underway. This graphic presents a conceptual drawing of the interconnectivity of existing and proposed rail modes.

The high levels of pedestrians on a daily basis and particularly during Arena events will be important as the City manages traffic through its intersection operations and scale of pedestrian space.

Access alternatives for the Arena should include a parking location, access and management plan. Further, incentives and marketing of transit options as part of a Travel Demand Management Plan for the Arena and downtown can increase available funds for street and transit improvements rather than additional parking spaces.

As a major stakeholder in the outcome of any redevelopment of this site, the MTA should pursue ways to represent transit interests in the ongoing process. As the City prepares to select a designer, the MTA should encourage emphasis on the site's future role in Baltimore's growing transportation network. A critical component to the improvement of the Baltimore Street light rail station, is the widening of the northbound platform and subsequent shift of travel lanes, sidewalk and new arena facade.

### First Mariner Arena





# 3



Implementation



# Implementation

## Economic Development

Plans for the Howard Street corridor include a mixture of public investments in existing infrastructure, regulatory strategies and financial incentives to encourage private development. As institutional and private stakeholders plan for the future, the ability to leverage these already committed public resources to access more private investment will be vital.

As a transit corridor, Howard Street's future redevelopment needs to include several overarching strategies to enhance its economic activity:

- Cluster retail and service activities strategically to serve needs and encourage use and interaction without the need for access by private automobiles
- Enhance existing streetscapes and amenities to generate and support pedestrian activity, attracting cross-street retail customers and office users to travel north and south along the Howard Street corridor
- Increase overall office users and add infill residential to increase daytime and evening population, resulting in 18 hours of daily street-level activity
- Foster the perception of a clean and safe environment, with frequent publicity, new lighting, signage and consistent maintenance regime
- Build on the corridor's historic structures to create a vibrant, walkable community.

## Regulatory / Programmatic Strategies

The following section details the action items highlighted in the Economic Development Matrix and where possible, quantify the potential amount of funding available.

### Development Incentives

Expedite and /or fast-track permitting for projects that meet the Economic Development strategies by reusing historic structures; encouraging the use of transit; and generating new employment and/or housing opportunities. Create new processes to expedite priority projects which may necessitate designating several city staff.

The corridor's limited market potential will constrain development sufficiently, so mixed-use or form based zoning should focus on scale, transition and orientation to surrounding uses and neighborhoods. As catalytic projects shift the market dynamics and improve land values, implement transit oriented development strategies (e.g., maximum parking regulations).

### Clearinghouse for Government Funding Programs

Baltimore's one-stop-shop centers offer a variety of information on different Federal, State and local funding packages together from disparate sources. Currently, business owners, residents and interested parties must search the database to find specific programs of use based on their needs and eligibility. This resource could be more effective with the creation of a cohesive website, or focused information packages that target a distinct user group. These user groups might include retail and business operators, property owners, housing managers and residents.

### Enhancing Business Security - Community Policing Program

Security issues along the Howard Street corridor continue to plague the retail operations and other businesses. Increasing pedestrian activity will be the most effective tool for enhancing personal safety. In addition, improved lighting could increase shoppers' sense of security. Businesses within the Study Area suffer from loitering near transit stops, random vandalism (specifically for patrons' cars along Antique Row) and petty crime. In particular, Lexington Market is a hub of loitering, which combined with its close proximity to the methadone clinic and rehab center tends to make a less welcoming environment. While the Baltimore City Police patrol regularly, business owners concerned about crime expressed interest in security cameras and private security patrols. These types of initiatives supplement police efforts to deter certain types of criminal activity.

Fortunately, the Downtown Partnership already provides a valuable security program to enhance police efforts. Downtown Partnership's visible security staff coordinates with the local police. The program offers free escort service for those that do not want to walk alone to their cars or the light-rail stop at night. In general, there needs to be greater police officer visibility.

### Way Finding and Promotion

Along the corridor, pedestrians and vehicular traffic need better direction from simple signage for parking and transit amenities. It would also be helpful to add a stationary map of the clusters and types of retailers along Howard Street to distinguish identifiable clusters of food establishments, antique dealers and service operations. This type of mapping system could be combined with a tour of the historic structures along the corridor as a way to promote the heritage and enhance the economic stability of area businesses. This way finding system needs to incorporate the Heritage Area but not clutter the pedestrian way.

## Funding Sources

Baltimore’s current capital financing and private investment alone will not meet the redevelopment funding needs of the Howard Street corridor. As access to these and other traditional funding sources becomes more and more competitive, the need to identify innovative financing resources becomes critical. These resources include Tax Increment Financing (TIF), Special Assessment Districts, Payment in Lieu of Taxes (PILOTs), Certificates of Participation (COP), Green Financing and various historic tax credits and affordable housing programs.

### Tax Increment Financing

Tax Increment Financing (TIF) captures the value associated with new development and uses the increases in property taxes generated by a new private investment to pay for the infrastructure. This method can use all or only part of the taxes generated by the new incremental land value. Implementation includes creating a tax increment financing district and often a public-private partnership to develop the land adjacent to the new public infrastructure. It is most effective in helping to fund infrastructure that directly supports a specific new development with major committed investment that will begin generating new taxes in the short term.

A review of the potential to use the development and resulting taxes to leverage funds for the infrastructure improvements, resulted in an estimate of the total TIF capacity. A detailed Tax Increment Finance (TIF) calculation estimates the current tax base, reviewing 2008 assessed values from the Maryland State Department of Assessment and Taxation as shown in the City’s Geographic Information System (GIS). This tax estimate includes a broad-based TIF district (bounded by Eutaw Street to the west, Park to the east, Dolphin at Cultural Center transit stop to the north and Pratt Street to the south) that includes an estimated \$408

million worth of taxable property and \$5.9 million of tax-exempt property. These tax revenues could support up to \$40.4 million in TIF bonds, available in the long-term.

### Tax Increment Finance (TIF) Estimate

Incremental Annual Property Taxes	\$11,844,000
Incremental Annual Sales Taxes	-
<b>Total Incremental Taxes</b>	<b>\$11,844,000</b>
Supportable TIF Bond Proceeds	\$40,391,000
<b>Notes</b>	
a) Includes the following assumptions:	
Debt Coverage Ratio	1.30
Interest Rate	7.75%
20 year term with semi-annual payments	
Underwriting & Issuance Fees	7.5%
Share of Tax Payment Available	70.0%

Note: Discount from full tax increment allows for continued funding of direct city expenses.

The availability and timing of TIF financing may not meet the immediate infrastructure needs within the study area. There are other options to forward fund infrastructure needs, including an initial bridge loan from Baltimore’s general fund; or direct allocation from the State of Maryland’s Department of Transportation capital improvement budget to cover infrastructure improvements in the near term.

Unfortunately, the creation of a TIF district and use of TIF financing is not recommended as a good source of near-term funds for this area. TIF financing depends on new development and appreciation of existing real estate; those conditions may not exist for some time.

### Special Assessment Districts

Special assessment districts, also called “development districts”, depend on identifying the properties that will benefit directly from a specific infrastructure improvement. Those properties are then taxed for the cost of the improvement according to a formula that reflects the benefit received. Most communities require that at least 51 percent of the property owners consent to or request the assessment. The details vary from community to community where the property owners’ benefit is measured by share of front feet, share of total square feet and/or share of total assessed value.

For example, construction of a new parking garage would benefit local businesses that need parking for their customers and employees. Public funding of that garage could be repaid by a special assessment where the fees charged to businesses would reflect the amount of office space they occupy and their distance from the parking garage. This technique is used routinely in funding sewer and water extensions by assessing property owners based on front feet along the new sewer line and/or acres serviced.

In Baltimore, the Downtown Partnership already has a Downtown Management District for which property owners pay 14.39 cents per \$100 of assessed value annually. Over the last several years, the Downtown Partnership has increased the rate once with unanimous support.

### Payment in Lieu of Taxes (PILOT)

A PILOT agreement allows developers or property owners to make a negotiated payment instead of the annual real estate taxes due for the property over a set period of time. Projects that cannot generate adequate returns to attract private investment often use PILOTs to fill their gap needs. Baltimore City enters into PILOT agreements under several

different scenarios including the residential conversion of commercial buildings and development of market rate residential units. Projects must be located in a designated Urban Renewal Area, continue to pay existing taxes as a base line and pay a minimum of five percent of the incremental taxes above the current level. Residential project investment must equal or exceed \$5 million.

### **Certificates of Participation**

Certificates of Participation are used to extend the jurisdiction's tax-exempt borrowing capability to a private investor building facilities on behalf of the government, such as building government office or school facilities. A certificate of participation does not require voter approval for multi-year capital financing and provides tax-exempt interest to the investor. COPs are secured by a lease agreement for the facility between the developer and the local governmental entity, typically with an option to purchase prior to the end of the lease term. The local government pays rent for a period of 20 to 30 years, which amortizes the development costs, and then takes ownership of the facility.

There are significant costs of issuance including the underwriter's discount, obtaining advice from bond counsel, trustee services and preparing an official statement. COP payments can be a general fund obligation or secured with another revenue stream.

There are several advantages to using COPs for infrastructure financing. While they tend to be more costly and a higher risk than other mechanisms, they spread the impact on the city budget over several years through annual payments as opposed to an outlay of the full capital cost in the first year. As these vehicles (long-term leases) are not considered debt, they face less stringent state caps and, typically, voter approval is not required.

COPs enable public/private ventures for construction of new facilities, such as schools. Partnerships with private developers often reduce overall infrastructure costs associated with building new schools. The public/private partnership can open doors for additional creativity and cost-sharing. Many communities are combining schools with community facilities, including YMCAs, helping the school to serve as a focal point for the neighborhood and getting better use of expensive investments.

### **Green Financing**

Under the federal Energy Policy Act of 2005, the federal government provided provisions for energy bond financing. The American Recovery and Reinvestment Act of 2009 expanded this bond financing by providing Qualified Energy Conservation Bond (QECCB) tax credits for the implementation of green community programs for qualified conservation purposes including loans, grants and or other mechanisms to implement these types of programs. Baltimore City may issue QECCB tax credits for the development of a green community program targeted along Howard Street in combination with other tax-exempt general obligation or revenue bonds to pay for the qualified capital expenditure. Finally, thirty percent of an allocation of QECCBs may be used for private activity bonds benefiting non-government or private development costs incurred for the same qualified conservation purposes.

### **Historic Tax Credits**

The federal government, State of Maryland and Baltimore City all offer historic tax credits for projects that rehabilitate existing historic structures in accordance with the standards of the US Department of the Interior. These credits may be taken together. Federal credits are limited to commercial projects and rental housing (only income-producing projects). In Maryland, owner-occupied housing is also eligible for credits. Baltimore City's tax credit program

includes commercial, investment and owner-occupied residential properties.

### **Affordable Housing Financing**

There are a variety of affordable housing financing tools that may provide the gap financing for projects in the mid-term.

#### **Low-Income Housing Tax Credits**

The competitive Low-Income Housing Tax Credit program offers federal tax credits for the private development of housing that allocates at least 20 percent of total units for low- and moderate-income households.

#### **Community Development Block Grant (CDBG)**

The City of Baltimore is an entitlement community and as such eligible for Community Development Block Grant funding from the federal government. These monies are allocated on a competitive basis and may be used for infrastructure, housing and economic development projects that benefit low- and moderate-income households.

#### **Section 108 Loan Guarantee Program (CDBG Advance)**

This program provides construction and start-up period loan guarantees for economic development and housing projects eligible for CDBG funds. This program requires that the City pledge its future CDBG funds to repay the loan should the project developer be unable to meet the loan obligation.

#### **HOME Investment Partnerships Program (HOME)**

The federal HOME Investment Partnerships Program can be used with other federal and state housing programs when other programs do not meet the gap financing needs.

#### **Rental Housing Production Program**

This competitive fund allocates grant funding more than once a year in conjunction with Federal Low-Income Housing Tax Credits and HOME funds. Eligible projects include both

new construction and rehab developed by both non- and for-profit entities that are located in priority funding areas.

#### **Federal Home Loan Bank Funds**

The Federal Home Loan Bank helps provide gap funding through its Affordable Housing Program. This competitive grant program creates new units of housing for low- to moderate-income households in new and rehabbed properties.

### **Existing Financing Programs**

Baltimore city has several different financial tools that help to spur reinvestment in sections of downtown. The Downtown Partnership helps applicants use these tools. The **Façade Improvement Program**, which started in 2002 and has assisted with more than \$9 million in renovations through 2007. It provides property owners and tenants with a reimbursement grant of up to \$20,000 to improve their building façade. The façade committee reviews over 30 applications per year and funds about half of these projects. The annual program budget is roughly \$150,000, not including administrative fees. The Downtown Partnership also has a **Design First Architectural Assistance Grant**, which provides up to \$2,000 in reimbursable grants to improve the pedestrian environment of Downtown Baltimore by upgrading storefronts, preserving historic properties, and encouraging economic development. This program may be used in conjunction with the Façade Improvement Program.

# Action Plan

## “Phase III” Implementation - Planning, Policy and Development Efforts

Enhancing Howard Street will require a comprehensive strategy of detailed planning efforts, policy initiatives and selected catalyst improvements.

The recommendations, identified on the adjacent matrices, detail the necessary actions for successful revitalization and enhancement of the Howard Street Corridor.

### Strategic Direction and Priority Catalyst Projects

Recommended Activities	Key Partners
<b>Strategic Direction and Oversight</b>	
Steering Committee to oversee Phase III of the Howard Street Strategic Plan	Existing Steering Committee with addition of Key Corridor Stakeholders
Define organization to oversee Howard Street which includes maintenance and policing activities	Steering Committee
Pursue required approvals necessary for agencies to commit funding for planned improvements	Each member agency/organization of the Steering Committee shall pursue necessary approvals within their respective jurisdiction to commit future funding
<b>Priority Catalyst Projects</b>	
Centre Street Station Area - Economic Development Plan	City of Baltimore, Baltimore Development Corporation, Downtown Partnership, Westside Renaissance
Develop Comprehensive Design and Engineering Package for: - Centre Street Station Improvements - Priority on Low Impact Development strategies - Lexington Street Southbound Platform Transit Furnishings	Baltimore City Department of Transportation (Lead): - Parking lane removal/light rail station platform widening at Centre Street Station (with MTA coordination) - Streetscape improvements (sidewalks, curbs, trees and tree wells, pedestrian lighting and furnishings (with MTA and BDC coordination)
Develop plans for 2-way Park Avenue conversion and roundabouts at Fayette and MLK Blvd.	City of Baltimore Department of Transportation (Lead)
Bus Stop Improvement Plan for Fayette St. and Howard St. intersection	Maryland Transit Administration, City of Baltimore Department of Transportation, Baltimore Development Corporation

### Policy Implementation Actions and Phasing

		Actions	Phasing		
			Short-Term	Mid-Term	Long-Term
<b>Regulatory</b>	<b>Zoning</b>	Encourage mixed-use with transition to adjacent areas			
		Review parking maximums			
		Cluster land uses, as appropriate			
	<b>Approvals</b>	Expedite permitting for projects that meet goals			
	<b>Safety</b>	Enhance corridor lighting, signage, etc.			
Extend publicity for Downtown Partnership security					
<b>Financial</b>	<b>Small Business</b>	Target small business loans			
		Provide quarterly forum on financial tools			
		Offer free website listings for area businesses			
		Sponsor semi-annual events to showcase local stores			
	<b>Programs</b>	Access historic tax credits, referencing an updated map of historic structures			
		Utilize affordable housing financing options			
	<b>Infrastructure</b>	Dedicated State allocation for transit upgrades			
		Tax Increment Financing / Special Assessment District			
<b>Continue Existing Policy, Programs and Initiatives</b>	Target Block Focus using current public investment				
	Facade improvements and architectural assistance				
	Downtown Partnership clean program				
	Clearinghouse fo government funding sources				
	Implement wayfinding for parking and other resources				
	Create a map and develop walking tour of historic structures and markers along corridor				

## Phase III - Comprehensive Action Plan

Recommended Activities	Key Partners
<b>Economic Development</b>	
Develop detailed Economic Implementation Plan to include: Financial Feasibility, Funding Needs, Fiscal Impacts, Benchmarking, and Technical Assistance. Economic Implementation Plan should establish benchmarks for committing public investment based on private sector development activity	City of Baltimore, Baltimore Development Corporation, Downtown Partnership, Westside Renaissance
Continue storefront improvement program. Initiate focused "block by block" storefront program.	Baltimore Development Corporation, Downtown Partnership, Westside Renaissance, University of Maryland Medical System
<b>Urban Design, Transit and Transportation</b>	
Develop Comprehensive Schematic Design and Engineering Package for recommended Howard Street improvements as a follow-up to Centre Street Station redesign. Confirm priority projects and complete 100% design for key pilot projects. Consolidated Design and Engineering package shall include: - Lexington Station - Short Term Improvements with feasibility analysis for Long Term Improvements - Lexington Street - completion of re-design and renovation - Corridor Strategy for Low Impact Development best practices - Infrastructure coordination, utility upgrades, and stormwater management plan - Corridor streetscape for station and non-station blocks - Lighting, Landscape, Public Art, Furnishings - Note: Baltimore Street Station improvements will be developed in coordination with Arena project and Red Line. Existing MTA engineering projects will be evaluated for consistency with Steering Committee recommendations and modified as necessary within the consolidated Design and Engineering Package.	Maryland Department of Transportation, Maryland Transit Administration, Baltimore City Department of Transportation (BCDOT), Department of Public Works, Department of Planning  Note: Baltimore City Department of Transportation can take the lead on the following improvements: - Streetscape improvements (sidewalks, curbs, trees and tree wells, pedestrian lighting and furnishings (with MTA and BDC coordination) - Lexington St reopening between Park and Liberty (scheduled for construction during second half of 2009) - Park Avenue 2-way conversion & roundabouts at Fayette and MLK Blvd.
Transportation Plans - Bus Stop Improvement Plan - Investigate additional improvements for Eutaw Street - Develop a Parking Management Plan to improve use of existing parking resources - Develop a Transportation Demand Management program to increase transit use for existing employees and new development which may include the creation of a Transportation Management Association	City of Baltimore Department of Transportation, City Parking Authority, Downtown Partnership, Maryland Transit Administration
LRT Vehicle Mid-Life Upgrades - Incorporate concepts to minimize impact of vehicles including wheel shrouds and branding opportunities	Maryland Transit Administration
Open Space Planning - evaluate and update Westside open space recommendations, implement Howard's Park	City of Baltimore Department of Parks and Recreation, Westside Renaissance, Baltimore Development Corporation, Department of Public Works, University of Maryland
Refine Special Corridor Design Guidelines in coordination with Comprehensive Plan Update, Westside Initiative Plan and Historic Resources. Integrate the City's Transit Oriented Development (TOD) objectives and principles.	City of Baltimore Department of Planning, Baltimore Development Corporation, Westside Renaissance, Maryland Historic Trust
<b>Related Projects</b>	
Historic District - Continued coordination and planning activities	City of Baltimore, Maryland Historic Trust
State Center - Develop "Gateway" design beneficial to State Center and Howard St Corridor	Department of General Services, Maryland Department of Transportation, City of Baltimore, Private Developer, Department of Public Works
Pratt Street - Coordinate gateway and circulation improvements with Howard Street plans	Baltimore Development Corporation, City of Baltimore
Arena Site - Coordinate RFP process with Howard Street recommendations for enhanced transit facilities	Baltimore Development Corporation, Maryland Transit Administration, Private Developer
Superblock - Coordinate Right-of-way improvements with potential improvements for bus stops	Baltimore Development Corporation, Maryland Transit Administration, Private Developer
Red Line Transit - Coordinate Baltimore St LRT improvements with Locally Preferred Alternative	Maryland Transit Administration, City of Baltimore
UMB & UMMS - Maryland General Hospital - Master Plan and Howard Street Improvements	University of Maryland Medical System

## Establishment of the Howard Street Working Group

Upon completion of the Draft June 2009 Steering Committee Recommendations, a Howard Street Working Group was established to focus on short term implementation improvements. The Working Group includes representatives from the MTA, MDOT, the Baltimore Development Corporation (BDC), the Downtown Partnership of Baltimore and the City of Baltimore's Departments of Planning and Transportation (BCDOT).

The Working Group met regularly through late 2009 and 2010 to coordinate for prioritized implementation measures. In February 2010, their efforts resulted in the signing of an "Intergovernmental Agreement by and among Maryland Transit Administration and the Mayor and City Council of Baltimore and Baltimore Development Corporation." This Intergovernmental Agreement signals the commitment of three agencies in particular, the MTA, BDC, and BCDOT, to fund and expedite specified improvements for the corridor, including transit facility upgrades at Lexington Station, as well as catenary, landscaping, and façade improvements. A full copy of this agreement is provided in Appendix A.



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Appendix



# Appendix A

## Intergovernmental Agreement By and Among Maryland Transit Administration and the Mayor and City Council of Baltimore and Baltimore Development Corporation

February 3, 2010

### INTERGOVERNMENTAL AGREEMENT

### BY AND AMONG

MARYLAND TRANSIT ADMINISTRATION

AND

THE MAYOR AND CITY COUNCIL OF BALTIMORE

AND

BALTIMORE DEVELOPMENT CORPORATION

FEB 3 2010

This Intergovernmental Agreement ("IGA") entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2010, by and between the **Maryland Transit Administration** ("MTA"), a modal agency of the Maryland Department of Transportation acting for and on behalf of the State of Maryland located at 6 St. Paul Street, Baltimore, Maryland 21202, the **Mayor and City Council of Baltimore** ("CITY"), a municipal corporation of the State of Maryland, acting by and through the **Baltimore City Department of Transportation** ("BCDOT") located at 417 E. Fayette Street, Baltimore, Maryland 21202, and the **Baltimore Development Corporation** (BDC) located at 36 S. Charles Street, Suite 1600, Baltimore, Maryland 21201, acting for and on behalf of the City of Baltimore, hereinafter sometimes collectively referred to as the "Parties."

#### Recitals

WHEREAS, the MTA, BCDOT and BDC mutually agree to fund and expedite the design, construction and operation of certain transit, city street and development improvements related to Howard Street, hereinafter called "HOWARD ST. IMPROVEMENTS", that would benefit the Parties hereto and would improve the appearance of Howard Street, provide enhanced transit service, encourage Transit-Oriented Development, promote improved air quality, reduce congestion, and provide transportation options for the citizens of Baltimore City and the State of Maryland; and

WHEREAS, the MTA is franchised by the CITY, to operate Light Rail along Howard Street; and

WHEREAS, the CITY owns certain real property, known as Howard Street, hereinafter called "PROPERTY"; and through its agency, BCDOT, maintains Howard Street and the intersecting contiguous streets; and

WHEREAS, BCDOT and BDC have funds, subject to availability, that will be transferred to MTA to expedite the implementation of the HOWARD ST. IMPROVEMENTS; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

1. Recitals: The Recitals are hereby made a part of this IGA and incorporated herein.
2. Term: The CITY acknowledges the existing franchise granted to MTA for the right to operate transit services along Howard Street in perpetuity. This IGA will remain in effect until such time as the improvements listed below are completed, and continue to run concurrently with the MTA franchise from the CITY.
3. HOWARD ST. IMPROVEMENTS by the PARTIES.

Improvements by MTA

(i) Relocation of the Light Rail Lexington Station SB Platform and Shelters: MTA will complete the design and construction of the transit improvements as listed below:

- a. Relocation of the Light Rail Lexington Station Southbound (S/B) Platform from its present location between Fayette and Lexington Streets, to between Lexington and Saratoga Streets; and the Replacement of Bus Shelters on the Northbound (N/B) side of Howard Street; and potentially replacement or addition of other shelters on or adjacent to Howard Street to be determined at a later date based on funding availability; and
- b. Included in the relocation will be a new highblock with glass railings on the S/B side, new or modified highblock with glass railings on the N/B side, light rail and bus shelters, ticket vending machines (TVMs) and other transit amenities such as benches, trash receptacles, etc.; and
- c. Remove transit related items from the S/B platform presently located on the westside of Howard Street between Fayette and Lexington Streets and restore underlying sidewalk area; and
- d. MTA has programmed \$1,400,000.00 for the design and construction of these improvements which at this time is considered sufficient; and
- e. MTA will seek any additional funds that may be needed for these improvements; and
- f. A CITY permit is required for this work and all CITY or local agency permit fees are hereby waived.

(ii) Replacement Catenary Poles:

- a. MTA will complete the design and construction work for Replacement Catenary Poles that will allow for the removal of the existing poles and crossbeam system that the Light Rail catenary wires are now connected at four (4) locations on each side of Howard Street between Fayette and Saratoga Streets. The exact locations are just north of Fayette Street at Sta. N/E 4+72+/-; just south of Lexington Street at Sta. N/E 7+64+/-; just north of Lexington Street at Sta. N/E 8+42+/-; and just south of Saratoga Street at Sta. 12+01+/-; and
- b. CITY will provide MTA with funding in the amount of \$1,800,000.00 for the construction work from its remaining State of Maryland FY 2009 and FY 2010 appropriation for the Westside Revitalization Project; and
- c. Review of the design will be coordinated by MTA with both BCDOT and BDC; and
- d. Actual construction will proceed under the direction of MTA. CITY may provide, at its own option and expense, an inspector during construction; however, MTA's Resident Engineer shall have final authority during construction; and
- e. A CITY permit is required for this work and all CITY or local agency permit fees are hereby waived; and
- f. MTA will fund the design and the CITY will provide funding as stated in (ii) b. for construction of these improvements.

(iii) Landscaping Improvements:

- a. MTA will complete the design and construction of landscape improvements on Howard Street, which may include such elements as landscaping, streetscaping, planters, and other amenities such as shelters, benches, and trash receptacles; and
- b. BCDOT will provide MTA with funding in the amount of \$600,000.00 for the design and construction of the landscaping improvements; and
- c. The landscaping improvement design shall be completed in full coordination and approval of BCDOT; and
- d. The area covered by the landscape improvements will be both east and west sides of Howard Street from Baltimore Street to Franklin Street. This constitutes the five (5) blocks known as the Zero Block, 100 Block, 200 Block, 300 Block and 400 Block; and
- e. Actual construction will proceed under the direction of MTA. BCDOT may provide, at its own option and expense, an inspector during construction,

however, MTA's Resident Engineer shall have final authority during construction; and

- f. A CITY permit is required for this work and all CITY or local agency permit fees are hereby waived; and
- g. BCDOT will seek any additional funds that may be needed for these improvements; and
- h. BCDOT will provide to Downtown Partnership or others by separate contract or agreement sufficient funds to maintain and replenish the Landscape Improvements implemented by MTA, as completed or following a warranted period if one is provided; and
- i. MTA will provide BCDOT and BDC with copies of any as-built plans for the improvements.

(iv) Lexington St. Improvements: BCDOT at its own cost and expense is providing approximately \$1,000,000.00 for the work presently underway for the Re-Opening of Lexington Street to traffic and continuous streetscape design from Park Avenue to Liberty Street.

(v) Light Rail Signage Improvements: MTA at its own cost and expense is providing approximately \$500,000.00 for signage improvements at five (5) Light Rail Stations along Howard Street in the Central Business District. This work is already underway at the five (5) Light Rail Stations which are Convention Center, University Center/Baltimore Street, Lexington Market, Centre Street and Cultural Center.

(vi) Facade Improvements: City will make \$900,000.00 available to Downtown Partnership or others by separate contract or agreement from its remaining State of Maryland FY 2007 and FY 2008 appropriation for the Westside Revitalization Project to conduct, manage and reimburse property owners for Facade Improvements made along Howard Street.

(vii) Light Rail Convention Center Station Improvements:

- a. BDC, on behalf of the Baltimore Hotel Corporation (City non-profit that owns the Hilton Baltimore Hotel) has completed a conceptual design for Light Rail Convention Center Station Improvements; and
- b. MTA shall provide BDC with funding in the amount of \$45,000.00 for the conceptual design product; and
- c. BDC shall provide MTA with electronic copies of any plans or specifications developed as part of the conceptual design; and
- d. Pending availability of future funding and other priorities, MTA may endeavor in the future to utilize this conceptual design product to complete a final design leading toward a construction project for the Light Rail Convention Center

Station Improvements.

(viii) Additional Projects and/or Improvements: The Parties may endeavor to initiate or complete future projects and/or improvements related to Howard Street under the terms of this IGA. Responsibilities for Funding, Design, Construction and Maintenance will be determined on a project by project basis.

MTA shall have the right, with notice to the CITY, to make such modifications or improvements to the HOWARD ST. IMPROVEMENTS as needed to keep the improvements and MTA's operations in compliance with the Americans with Disabilities Act of 1990, any other applicable law concerning accessibility for persons with disabilities, and any regulations promulgated under any such law.

4. Ownership of Property by the CITY.

(i) The CITY will retain ownership of the PROPERTY following construction of the HOWARD ST. IMPROVEMENTS and Landscaping Improvements.

(ii) Should the CITY sell, develop or modify the PROPERTY in such a way that adversely affects the usage of the HOWARD ST. IMPROVEMENTS, the CITY shall be responsible for reimbursing MTA for any portion of funds appropriated from the Federal Transit Administration (FTA) and/or State of Maryland for all costs incurred for planning, designing and constructing the HOWARD ST. IMPROVEMENTS.

(iii) Beginning with the completion of the HOWARD ST. IMPROVEMENTS under this IGA, and subsequently every year (annually) thereafter, the BCDOT and MTA will jointly inspect Howard Street to determine the condition of the pavement within the project area and/or in the franchise area and transit stop areas. If it is determined that the condition has deteriorated to the extent that major reconstruction is needed, BCDOT and MTA will endeavor to develop and secure funding as appropriate to repair and reconstruct to correct major deficiencies if identified in the inspection.

5. Maintenance and Repairs; Snow Removal.

(i) The CITY will be responsible, at its sole expense, for all post-construction maintenance as determined by the CITY or by the request of MTA, including but not limited to:

- a. cutting and trimming the grass, trees and shrubs as needed to maintain an aesthetically pleasing area, as well as to ensure safe operation of MTA Light Rail and Buses; and
- b. signing, marking and striping, except for those signs which may be erected by MTA, for the purpose of providing information to MTA transit patrons (e.g. bus stop signs, schedule panels); and
- c. minor surface repair due to pavement failures (e.g. patching, pothole repair); and

- d. Sealing and patching cracks, potholes and other pavement failures; and
- e. snow removal and salting or de-icing for treatment of ice accumulation from all roadways, parking areas, vehicle entrances, sidewalks, and bus stop locations; and
- f. cleaning/removal of graffiti; and
- g. maintenance and operating costs of lighting (including fixture replacement, etc.); and
- h. maintenance and repair to original blue shelters, fencing, bicycle facilities and pedestrian crossings; and
- i. maintenance of the Howard Street storm drainage system and both underground and surface storm water management facilities, and
- j. maintenance, in reasonably good condition, of all landscape as may be assigned to Downtown Partnership or other entity by contract or agreement.

(ii) The CITY shall at all times exercise its rights hereunder, and shall maintain HOWARD STREET in a manner consistent with safe and efficient practices, all at the CITY's sole cost and expense.

(iii) The MTA shall maintain informational bulletins and other appurtenances required by transit service operation at the MTA's sole cost and expense.

6. Access to the Property. The CITY, by its execution of this IGA, hereby grants to the MTA, its employees, contractors, agents or licensees, at no cost or expense, a nonexclusive right of entry through, on, and over the PROPERTY as may be required by MTA to construct and perform any necessary maintenance and repairs of the HOWARD ST. IMPROVEMENTS.

7. Indemnity and Liability. To the extent permitted by law, existing appropriations and available insurance coverage, the parties hereto shall protect, indemnify, defend and hold harmless, and shall require in its agreements with contractors and subcontractors that they shall protect, indemnify, defend and hold harmless one another, its officers, agents, employees, successors and assigns against and with respect to any and all Liabilities arising out of or in any way connected with post construction maintenance work performed by the Parties. "Liabilities" shall include any and all losses, claims, damages, suits, or costs whatsoever (including attorney fees and any costs arising from a claim or suit), to the extent allowable under Section 5-303 of the Courts and Judicial Proceedings Article, Annotated Code of Maryland, as to the CITY and the full extent required under this IGA as to all contractors and subcontractors which arise: (a) out of injury to any person (including without limitation loss of limb or death); (b) out of damage to or destruction of any property of any person whomsoever; (c) out of interruption of rail or transit service (including without limitation loss of revenue or other income); (d) out of damage to the destruction of the environment; (e) out of, or occasioned by, any breach or default by either party (or its agents, officers, employees, successors, assigns, or contractors) in the performing of any

of its obligations hereunder; or (f) under any applicable law. The foregoing obligations shall survive termination of this IGA with respect to Liabilities arising during the term of this IGA.

The contractors shall name the MTA and the CITY as additional insureds on its insurance coverage.

8. Notices. Unless otherwise agreed or specified herein, all notices or other communications to the Parties pertaining to all matters herein shall be deemed to be given when made in writing and either personally delivered or deposited in the United States mail, postage prepaid, return receipt requested, at the following addresses:

For MTA:

Maryland Transit Administration  
Office of Engineering  
6 Saint Paul Street  
Baltimore, Maryland 21202  
Attention: Chief Engineer

With a copy to:

Maryland Transit Administration  
1501 Washington Boulevard  
Baltimore, Maryland 21230  
Attention: Deputy Administrator of Operations

For CITY:

Baltimore City Department of Transportation  
417 E. Fayette Street  
Baltimore, Maryland 21202  
Attention: Alfred H. Foxx, Director

Baltimore Development Corporation  
36 S. Charles Street, Suite 1600  
Baltimore, Maryland 21201  
Attention: M. J. Brodie, President

Parties may change the address to which notices to it are directed by a notice actually delivered to the other Parties.

9. Termination for Convenience. Notwithstanding the foregoing, the MTA and/or the State, the CITY, BCDOT, and BDC may terminate this IGA, in whole or in part, upon providing a written 180 days termination notice. The MTA and/or State, the CITY, BCDOT, and BDC shall pay all reasonable costs incurred up to the date of termination and all reasonable costs associated with termination of the IGA. However, the CITY, BCDOT, and BDC may not be reimbursed for

anticipatory profits. Termination hereunder, including the determination of the rights and obligations of the Parties, shall be governed by the provisions of COMAR 21.07.01.12A(2).

10. Non-assignment and Non-waiver.

- a. The CITY and BDC shall not assign any of its rights or delegate any of its duties hereunder without the express prior written consent of MTA. Any attempted assignment or delegation without MTA's consent is void ab initio.
- b. The failure of MTA at any time to insist upon strict performance of any provision of this IGA, or to exercise any right or remedy under this IGA, or other franchise or agreement, shall not impair any such right or remedy or be deemed a waiver or relinquishment thereof.

11. Headings, Etc. The headings set forth herein are for convenience only and shall not effect any construction or interpretation of this IGA. The singular herein shall be read to include the plural, and vice versa, unless the context clearly requires otherwise.

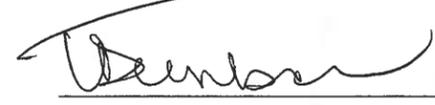
12. Severability. It is the intent of the Parties that this IGA be enforceable. If any provision hereof shall be determined to be void by any court of competent jurisdiction, then such determination shall not affect any other provision of this IGA, all of which other provisions shall remain in full force and effect. If any provision of this IGA is capable of two constructions, one of which would render the provision valid, then the provision shall have the meaning that renders it valid.

13. Miscellaneous. This IGA:

- a. shall inure to the benefit of and bind the Parties and their respective successors or assigns;
- b. constitutes the entire agreement between the Parties with respect to its subject matter;
- c. may be amended or supplemented only by a writing signed by the Parties hereto;
- d. may be executed in several counterparts, each of which shall constitute an original; and
- e. shall be governed by the laws of the State of Maryland, and any disputes arising from this IGA shall be resolved in the courts of Maryland, without regard to provisions in the law concerning conflict of laws.

IN WITNESS WHEREOF, the Parties hereto have caused this IGA to be executed by their respective duly authorized officers.

WITNESS:

  
\_\_\_\_\_

MARYLAND TRANSIT ADMINISTRATION

  
Ralign T. Wells Date 1/26/10  
Administrator

WITNESS:

  
\_\_\_\_\_

MAYOR AND CITY COUNCIL OF BALTIMORE

  
Alfred H. Foxx Date 1/22/2010  
Director, Department of Transportation

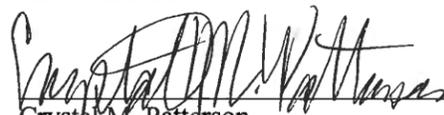
WITNESS:

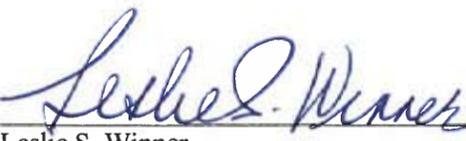
  
\_\_\_\_\_

BALTIMORE DEVELOPMENT CORPORATION

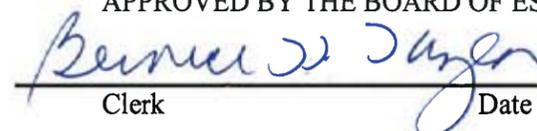
  
M. J. Brodie Date 1/28/2010  
President

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

  
Crystal M. Patterson  
Assistant Attorney General  
Maryland Transit Administration

  
Leslie S. Winner  
Chief Solicitor  
Mayor and City Council of Baltimore

APPROVED BY THE BOARD OF ESTIMATES

  
Clerk Date FEB 3 2010

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## Appendix B

### Lexington Station Plan Recommendations

The following is a summary document prepared for MTA, which presents the Lexington Station Area LRT-related Short Term improvements identified in the Strategic Plan.

The document includes:

- Pages B2-B6: Station Amenities information including Strategic Plan illustrations and Enseicom drawings and preliminary quote.
- Pages B7-B11: Information on Station improvements including plan diagrams, sections, 3d illustrations, phasing strategies and cost models.
- Pages B12-B15: For information purposes, examples of OCS pole /span wire foundations used in Portland Transit Mall project.

In submitting this document, the consultant team offers the following observations and recommendations:

#### Station Amenities:

##### *Shelter Design:*

- The illustrations included in the Plan recommend that the new shelters be sized in width and length for light rail passenger volumes. The extended length also anticipates increased ridership in the future. The size should also accommodate locating the TVM under the canopy to avoid multiple canopy structures and sidewalk clutter.
- The conceptual shelters are based on the Enseicom portfolio. Following ZGF's meeting with the Enseicom CEO in November 2008 to discuss advertizing shelter opportunities, Enseicom provided the attached drawings and price quotation. The contact for Enseicom is Constantine Moussis, C.E.O. His Admin. Assist. is Jo-Anne Whitlock, 514-486-2626 x10, www.ensei.com. The Enseicom drawings illustrate non-advertizing shelters.
- The shelter design will need to be approved City of Baltimore agencies.

##### *High Block:*

- The Plan includes illustrations for both straight run and u-run high blocks. Preferred layout should be determined on a case by case basis. Protective glass is required where platform is higher than 30" above grade, hand and cane rail required for remainder of platform ramp. The foundation can be designed to allow future isolation from surrounding pavement in case long range improvements are implemented – this would minimize demolition of paving when high block is removed.
- We recommend working with Enseicom to develop details which are compatible with the shelter design and offer potential maintenance strategies.

#### Streetscape / Station Area Improvements:

Over the last year, the team has observed that the MTA engineering work has been hampered by issues with existing conditions, coordination in the Howard Street R.O.W., and an integrated approach. We have also heard varied, and conflicting stories regarding status and use of vaults from MTA and Steering Committee members. Therefore, we recommend that MTA should request and receive strong City commitment for assistance on dealing with underground vaults and utility coordination before proceeding with additional engineering or construction work on the Lexington Stop improvements.

##### *For removal of the eight existing steel, OCS support structures:*

- Review current engineering package against Evaluation Criteria for consistency with Steering Committee Recommendations – (please note, the attached Plan diagrams illustrate the recommended "build-once, do not preclude future improvements" strategy).
- The subsurface conditions will vary. Opinions regarding ownership, integrity and rights of access into vaults also vary. Designing for below grade structures in urban sidewalks with vaults is done frequently and often requires design modifications in the field. The engineering package and estimate for the pole relocation should consider these factors. For information purposes, we have included sample illustrations of foundation varieties used for the Portland Mall Revitalization.
- For the new/replacement poles, we recommend the use of span wire poles with new/engineered footings, not cantilever arms. We believe double cantilever arm poles will not achieve the desired visual improvement to the Howard Streetscape relative to the expenditure.
- Relocate the 8 new poles to define the sidewalk zone and transit zone – this arrangement will function in both the short term and long term. The existing mid-block/plain OCS poles with span wires can remain in their current locations.

##### *Related Streetscape/Landscape Improvements:*

With City involvement on vault and utility coordination, strategic landscaping of Howard Street between Fayette and Saratoga may be accomplished. This effort could be a model project for defining Howard Street as a "Green Street" per the recommendations of the Baltimore UDARP panel.

## Corridor and Station Area Placemaking

### Transit Furnishings

The image of transit on the Howard Street corridor can be enhanced with a new design for shelters and high blocks. The design for new shelters should be complementary to the existing bus shelters provided through an advertising contract (in the photo lower left). There should be an emphasis on transparency in the design of the transit furnishings in order to provide greater visibility of the storefronts and historic character of the buildings. With greater visibility also comes a perception of increased safety. The coordination with the bus shelter contract also may incorporate a similar maintenance agreement. The conceptual images to the right are for illustrative purposes. The development of the final design for the shelter and high blocks will need to be done in consultation with City of Baltimore agencies.

#### Shelters

- Utilize Bus Shelter Contract to provide maintenance.
- Design for transparency and convenient pedestrian movement.
- Use high-capacity shelters to also provide locations for ticket vending machines.
- Consider opportunities for sustainability such as the integration of solar pv panels to provide electricity for lighting and signage, i.e.d. lighting and rainwater collection.

#### High Blocks

- Design for transparency.
- Long-term - the high blocks may be removed when fleet transitions to low-floor vehicles.



### Streetscape Furnishings

The image and coherence of Howard Street may be improved with the implementation of a unified furnishing plan.

#### Furnishings

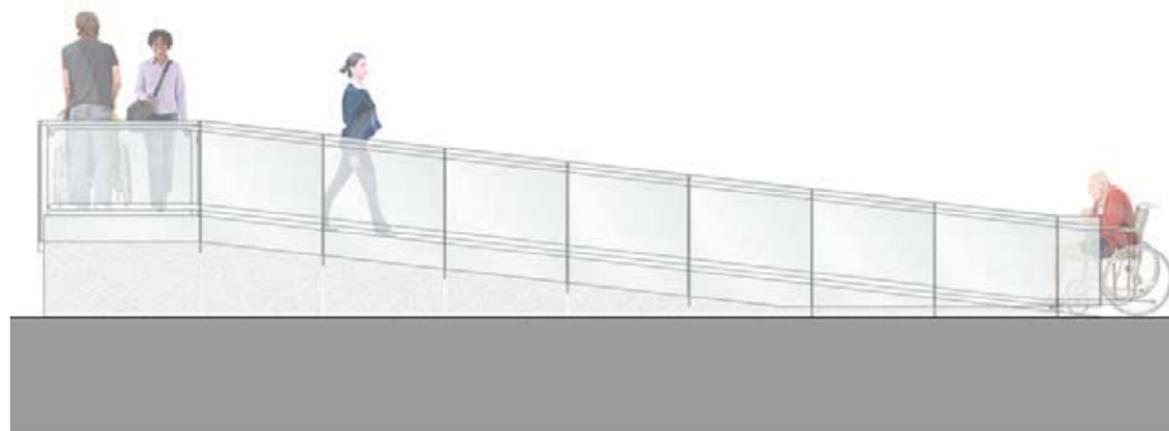
- Develop a family of furnishings - existing bus shelters, lighting, seating and trash receptacles - for the entire Howard Street corridor.
- Provide a more consistent level of pedestrian lighting for the entire corridor with street light fixtures, shelter lighting, and storefront/facade lighting.



Conceptual Transit Furnishings Study  
Illustration from November 12, 2008 Steering Committee Meeting

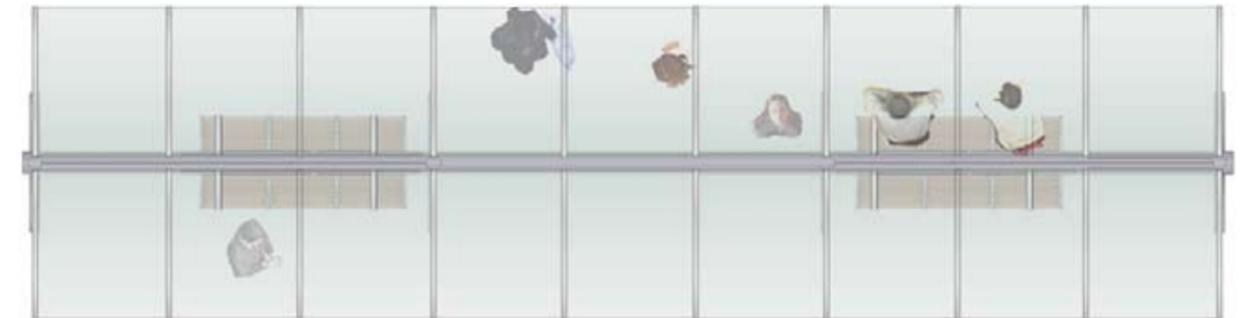


Section-Elevation



Elevation - Potential Straight-Run High-Block, U-Run Similar

Note: Glass may be limited to waiting area in areas 30" above grade - refer to image on left page for this example.



Plan of 9 Bay Shelter from above



Elevation - 7 Bay Shelter



Elevation - 9 Bay Shelter

Note: TVM's are not illustrated in these elevations, but should be located within the Shelter canopy area.  
Bay layout and windscreen locations to be reviewed based on site conditions.

Enseicom Drawings

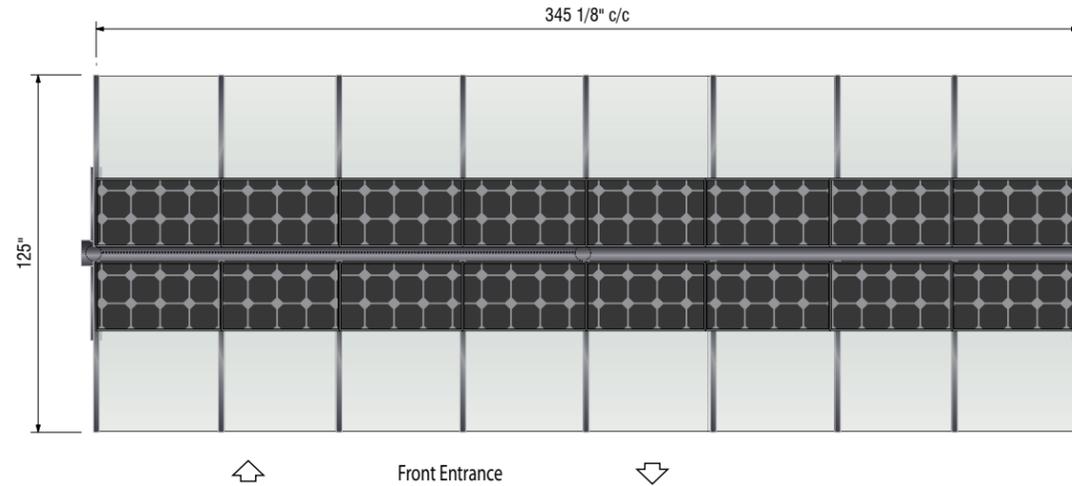
**CANTILEVER NON-AD "COX" SHELTER**

Shelter fabricated of aluminum c/w 3/8" thk clear tempered glass at back & sides with "ceramic frit" silver screened safety lines.  
3/8" thk clear laminated glass roof.

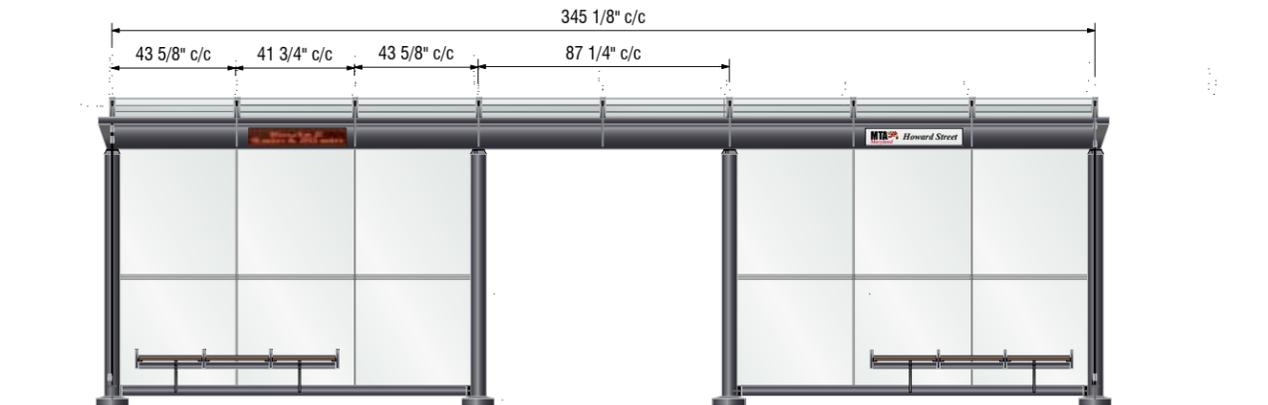
Aluminum components of shelter receive black powder coat paint.

Shelter supplied with following items:

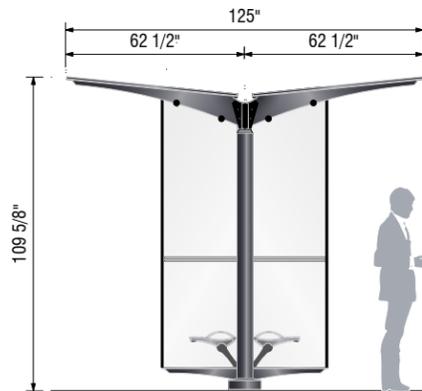
- (1) Backlit "Stop Name" panel with graphic & color TBD
- (2) Three-seated wooden bench with steel base
- Solar panel units (exact number TBD)
- (1) "Next Bus" unit ("Next Bus" unit supplied by others) model TBD, located in upper torsion bar
- LED lighting



TOP VIEW • Scale: 3/16" = 1'-0"



FRONT ELEVATION • Scale: 3/16" = 1'-0"



LEFT ELEVATION • Scale: 3/16" = 1'-0"

<b>JOB #</b>	QT08-0274	
	<b>DRAWING #</b>	D-6072-5D-7-R1
<b>CLIENT</b>	CLIENT:	MTA Howard Street
	LOCATION:	Baltimore, MD
	PROJECT:	Shelters
	ACCT. EXECUTIVE:	Con Moussis
<b>GRAPHIC LAYOUT</b>	DATE:	November 19 2008
	SCALE:	ind.
	DESIGNER:	A. Allen
	TIME:	
<b>APPROVAL</b>	<b>REVISIONS</b>	
	TYPE:	DESIGNER: DATE:
	Bench Position	AA 11-21-08
	APPROVED AS IS <input type="checkbox"/>	APPROVED AS ANNOTATED <input type="checkbox"/>
<b>NOTICE</b>	CLIENT:	X
	DATE:	
	ACCT. EXECUTIVE:	X
	DATE:	
<p>THE DESIGN AND DRAWINGS REMAIN THE PROPERTY OF ENSEICOM SIGNS INC. AND ARE PROTECTED BY LAW. THEY MAY NOT BE ALTERED, ISSUED, OR REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT FROM ENSEICOM. ALL DOCUMENTS TO BE RETURNED TO ENSEICOM AT COMPLETION OF WORK. CONTRACTOR TO SITE VERIFY ALL DETAILS AND DIMENSIONS AND REPORT ANY AND ALL DISCREPANCIES TO ENSEICOM BEFORE COMMENCING WITH THAT RELATED PORTION OF THE WORK. ONLY SIGNED, SEALED AND STAMPED DOCUMENTS ARE TO BE USED FOR CONSTRUCTION PURPOSES.</p>		



225 Rue NORMAN, LACHINE (QUÉBEC) CANADA H8R-1A3  
T 1.800.663.0673 • T 514.486.2626 • F 514.486.6465  
1235 WILLIAMS PARKWAY P.O. BOX 68544 BRAMPTON ON L6S-4S4  
T 1.800.663.0673 • T 905.670.7833 • F 905.670.7832

## Enseicom Drawings

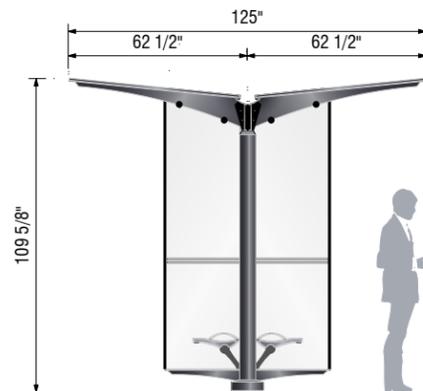
### CANTILEVER NON-AD "COX" SHELTER

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3/8" thk clear laminated glass roof.

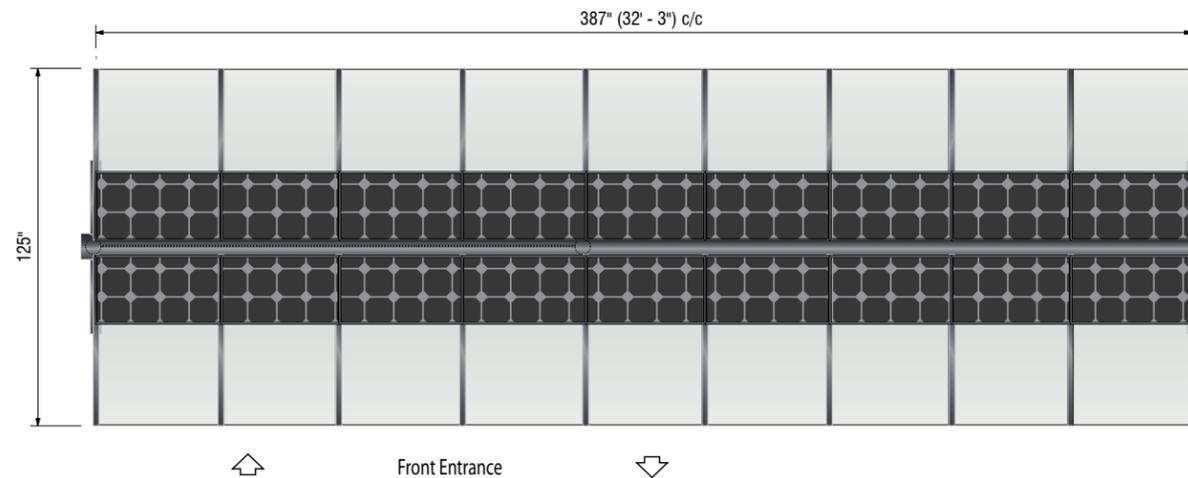
Aluminum components of shelter receive black powder coat paint.

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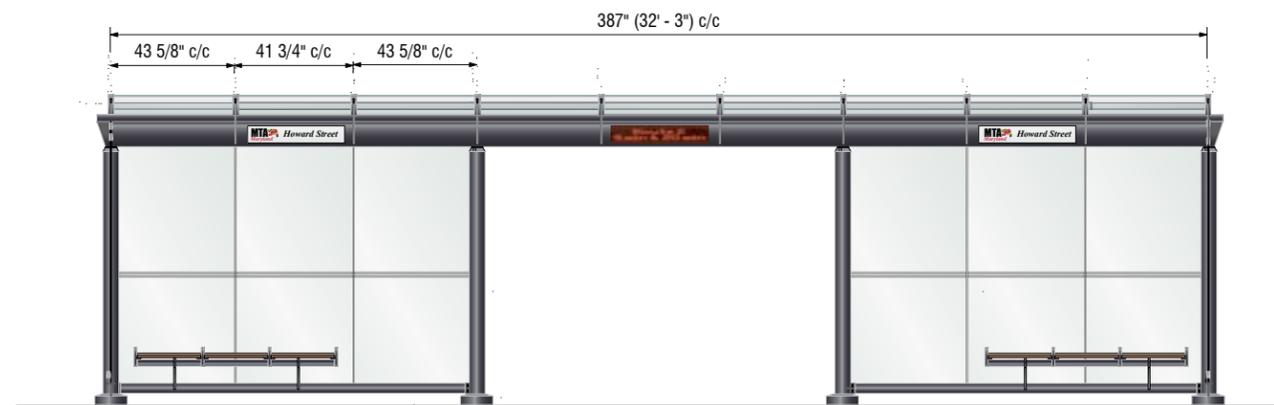
- (2) Backlit "Stop Name" panel with graphic & color TBD
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- Solar panel units (exact number TBD)
- (1) "Next Bus" unit ("Next Bus" unit supplied by others) model TBD, located in upper torsion bar
- LED lighting



LEFT ELEVATION • Scale: 3/16" = 1'-0"



TOP VIEW • Scale: 3/16" = 1'-0"



FRONT ELEVATION • Scale: 3/16" = 1'-0"

JOB #	QT08-0274			
	DRAWING #	D-6072-5D-5-R3		
CLIENT	CLIENT:	MTA Howard Street		
	LOCATION:	Baltimore, MD		
	PROJECT:	Shelters		
	ACCT. EXECUTIVE:	Con Moussis		
GRAPHIC LAYOUT	DATE:	November 12 2008		
	SCALE:	ind.		
	DESIGNER:	A. Allen		
	TIME:			
	REVISIONS	TYPE:	DESIGNER:	DATE:
	Disposition	AA	11-17-08	
Dimensions	AA	11-18-08		
Bench Position	AA	11-21-08		
APPROVAL	APPROVED AS IS	<input type="checkbox"/>	APPROVED AS ANNOTATED	<input type="checkbox"/>
	CLIENT:	<b>X</b>		
	DATE:			
	ACCT. EXECUTIVE:	<b>X</b>		
NOTICE	DATE:			
	<p>THE DESIGN AND DRAWINGS REMAIN THE PROPERTY OF ENSEICOM SIGNS INC. AND ARE PROTECTED BY LAW. THEY MAY NOT BE ALTERED, ISSUED, OR REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT FROM ENSEICOM.</p> <p>ALL DOCUMENTS TO BE RETURNED TO ENSEICOM AT COMPLETION OF WORK. CONTRACTOR TO SITE VERIFY ALL DETAILS AND DIMENSIONS AND REPORT ANY AND ALL DISCREPANCIES TO ENSEICOM BEFORE COMMENCING WITH THAT RELATED PORTION OF THE WORK.</p> <p>ONLY SIGNED, SEALED AND STAMPED DOCUMENTS ARE TO BE USED FOR CONSTRUCTION PURPOSES.</p>			



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1235 WILLIAMS PARKWAY P.O. BOX 68544 BRAMPTON ON L6S-4S4  
T 1.800.663.0673 • T 905.670.7833 • F 905.670.7832

Enseicom Shelter  
Preliminary Quotation

**QUOTATION**

QT08-0274 A

November 28, 2008

Page 1 of 1

Project: <b>MTA HOWARD STREET</b>	Sales Rep: <b>CONSTANTINE MOUSSIS</b>
Billing Address: <b>ZGF ARCHITECTS</b> 320 SW OAK STREET SUITE 500 PORTLAND OR USA	Contact: <b>GREG MATTO</b> Phone: 503-417-4566 Fax: 503-224-2482 Cell: 971-285-0654 Email: <b>gmatto@zgf.com</b>
Site Address:  USA	Contact: Phone: Fax: Cell: Email:
Notes:	

Item No.	Description	Drawing No.	Quantity	Unit Price	Extended Price
<b>OPTION 1</b>	<b>SHELTER (EXCLUDING NEXT BUS SYSTEM)</b>	<b>D6072-5D-7-R1</b>	<b>1</b>	<b>\$ 25,228.00</b>	<b>\$ 25,228.00</b>
	<b>SOLAR LED LIGHTING ON BOTH SIDES (FULL LENGTH OF SHELTER)</b>	<b>D6072-5D-7-R1</b>	<b>2</b>	<b>\$ 3,860.00</b>	<b>\$ 7,720.00</b>
	<b>BENCHES (4 PER SHELTER)</b>	<b>D6072-5D-7-R1</b>	<b>4</b>	<b>\$ 900.00</b>	<b>\$ 3,600.00</b>
<b>OPTION 2</b>	<b>SHELTER (EXCLUDING NEXT BUS SYSTEM)</b>	<b>D6072-5D-5-R3</b>	<b>1</b>	<b>\$ 26,758.00</b>	<b>\$ 26,758.00</b>
	<b>SOLAR LED LIGHTING ON BOTH SIDES (FULL LENGTH OF SHELTER)</b>	<b>D6072-5D-5-R3</b>	<b>2</b>	<b>\$ 3,860.00</b>	<b>\$ 7,720.00</b>
	<b>BENCHES (4 PER SHELTER)</b>	<b>D6072-5D-5-R3</b>	<b>4</b>	<b>\$ 900.00</b>	<b>\$ 3,600.00</b>
				<b>\$ -</b>	<b>\$ -</b>
	<b>SITE SURVEY IN BALTIMORE</b>		<b>1</b>	<b>\$ 1,200.00</b>	<b>\$ 1,200.00</b>
	<b>DESIGN / TECHNICAL</b>		<b>1</b>	<b>\$ 1,600.00</b>	<b>\$ 1,600.00</b>
	<b>TECHNICAL</b>		<b>1</b>	<b>\$ 1,500.00</b>	<b>\$ 1,500.00</b>
	<b>ENGINEERING STAMP</b>		<b>2</b>	<b>\$ 700.00</b>	<b>\$ 1,400.00</b>
	<b>CRATING AND JIGS</b>		<b>2</b>	<b>\$ 520.00</b>	<b>\$ 1,040.00</b>
	<b>LOADING</b>		<b>1</b>	<b>\$ 4,250.00</b>	<b>\$ 4,250.00</b>
	<b>TRANSPORT (FLAT RATE FOR 2 SHELTERS)</b>		<b>2</b>	<b>\$ 5,000.00</b>	<b>\$ 10,000.00</b>
	<b>INSTALLATION</b>				
	<b>FOUNDATIONS</b>				
	<b>PERMIT/SIGN</b>				
	<b>PERMIT/ELECTRICAL</b>				
	<b>PERMIT/OTHER</b>				
	<b>BOND</b>				

<b>NOTES</b> This quotation is valid for (30) days after date of submission.	Sub-total	<b>\$ 95,616.00</b>
	GST 0.0%	\$ -
	PST 0.0%	\$ -
	<b>TOTAL USD \$</b>	<b>\$ 95,616.00</b>
	<b>DEPOSIT 30%</b>	<b>\$ 28,684.80</b>
	<b>BALANCE</b>	<b>\$ 66,931.20</b>

**IT IS THE CLIENT'S RESPONSIBILITY TO READ ALL TERMS AND CONDITIONS OF THIS QUOTE AS DESCRIBED IN THE ATTACHED DOCUMENT**

Order placed this \_\_\_\_\_ day of \_\_\_\_\_ 2008, and accepted by:

**ENSEICOM INC.**

**ZGF ARCHITECTS**

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Signature*

**CONSTANTINE MOUSSIS**

**GREG MATTO**

( Printed Name and Title )

( Printed Name and Title )

## Lexington Station Transit Improvements - Short Term

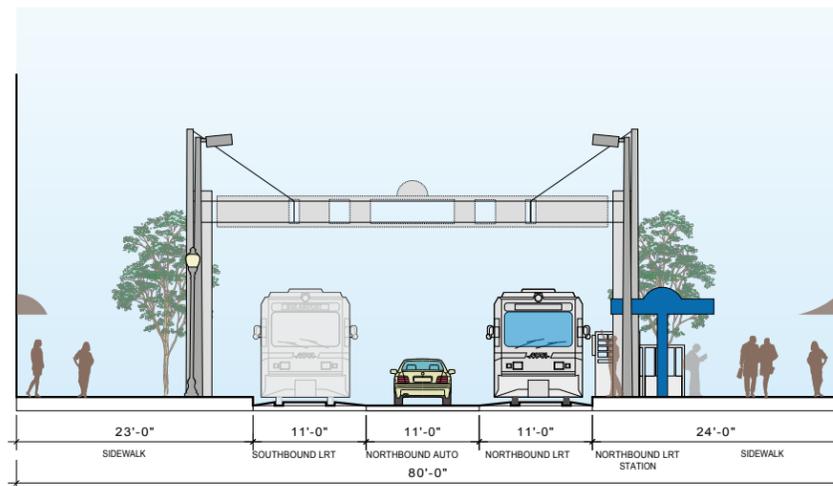
### Short Term Improvements

- Relocate southbound platform.
- Remove 4 OCS Structures and replace with new OCS poles and span wire.
- Reconstruct streetscape, OCS poles, landscaping to accommodate long term plans.

### Plan - Short Term Improvements

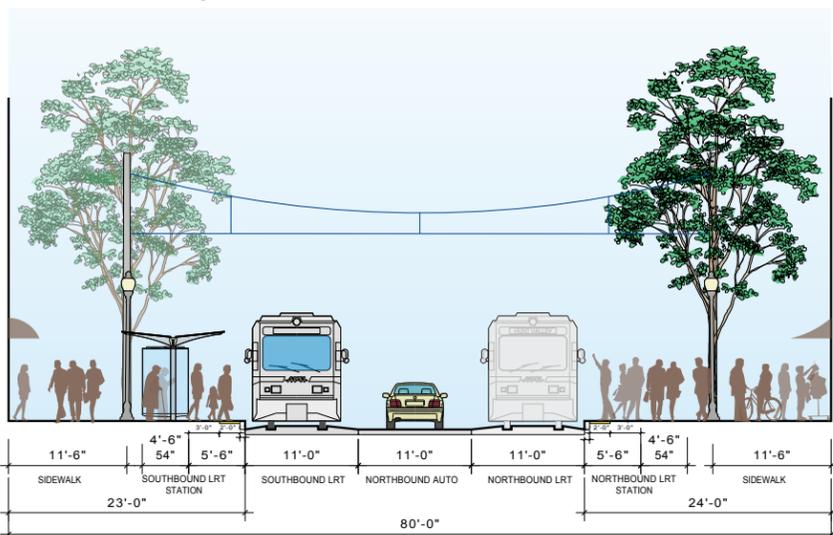


### Lexington Station Section - Existing Condition



### Section - Short Term Improvements

Note: Develop foundation design for new OCS Poles to accommodate the use of span wires, and does not require the use cantilever arm poles



View from Mid-Block West Side of Street Looking South Toward Relocated Platform



View from Saratoga Looking South



View from above Lexington Looking North



View from above Saratoga Looking South



## Lexington Station - Short Term and Long Term Improvements - OCS, Street Tree, Vault Evaluation and Recommendations

### Lexington Station - Long Term

View from above Lexington Looking North



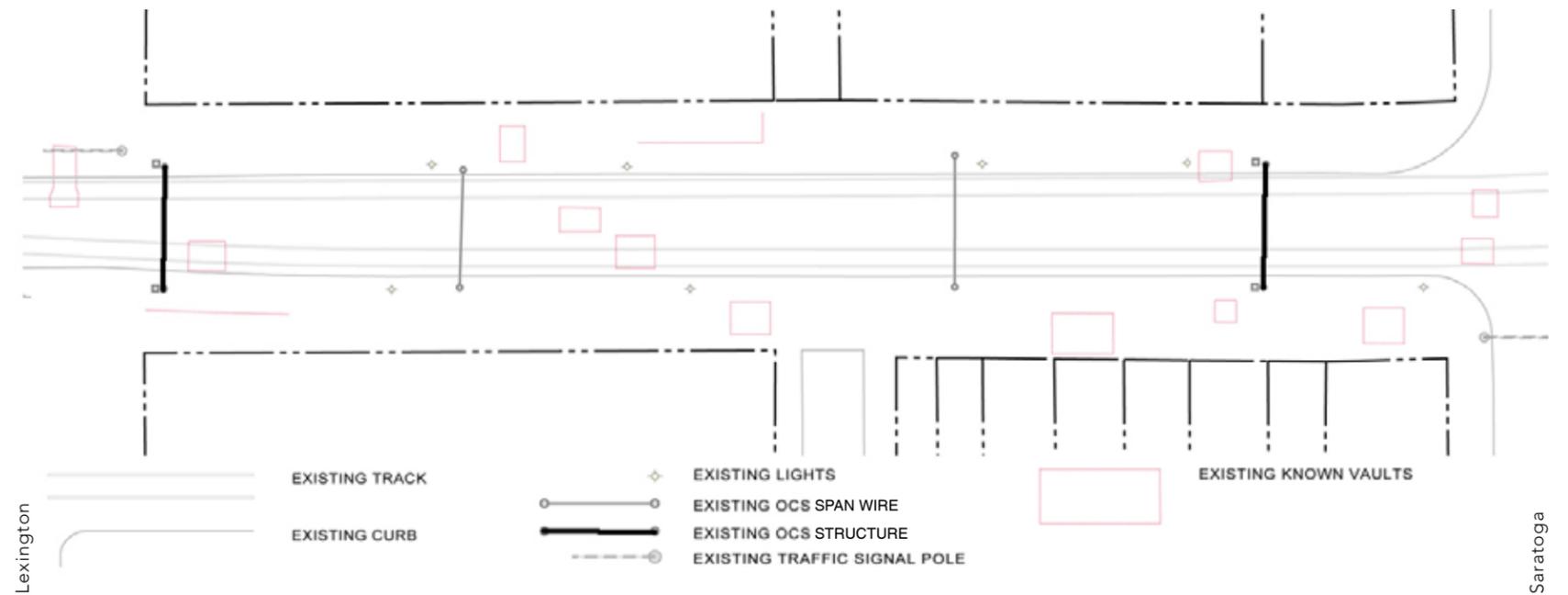
View from above Saratoga Looking South



These diagrams illustrate a preliminary analysis of potential OCS Pole, Street Tree and Vault locations and potential relocation opportunities.

The block between Lexington and Saratoga is illustrated. There are 2 OCS span structures between Lexington and Fayette which should be removed also.

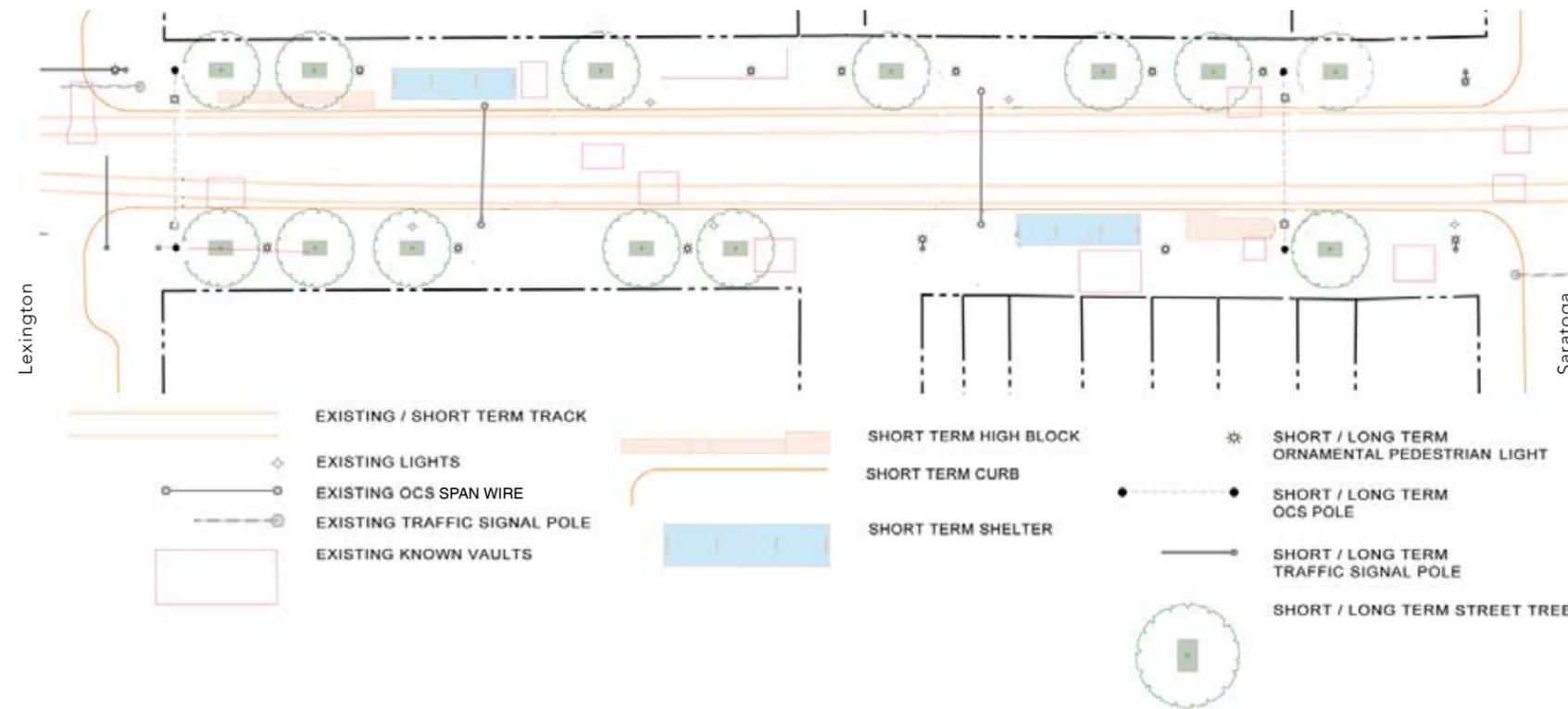
### Existing Conditions



### Existing Conditions

- Existing OCS poles are identified
- Existing, known underground vaults are located. Information based on engineering drawings provided by MTA.

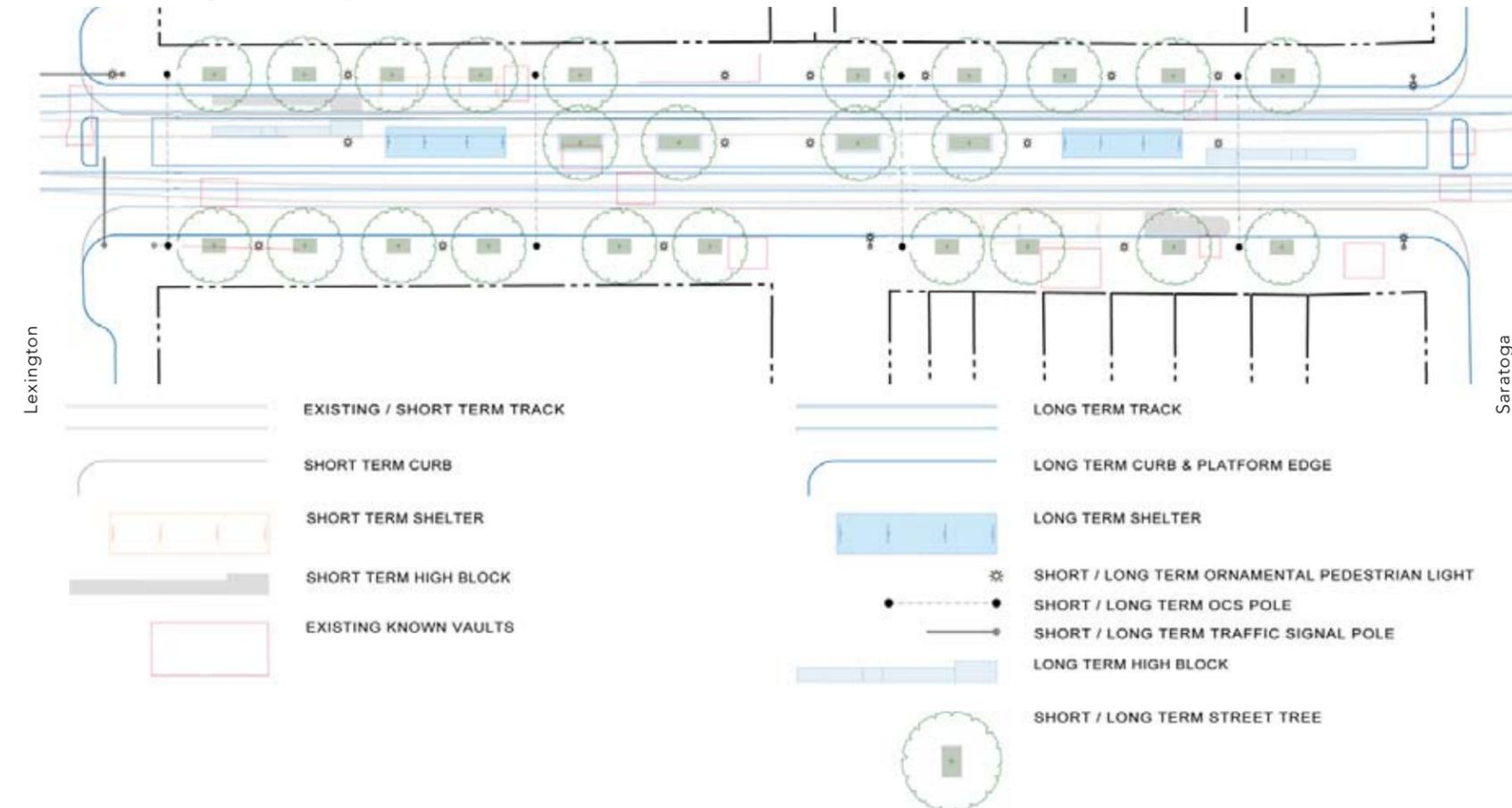
### Potential Short Term Improvements



#### Short Term Improvements

- Existing OCS Structures replaced with new OCS poles and Span wires. Existing OCS span wire poles remain in their current locations for the short term.
- Improvements include new high block ramps (straight run or u-run to be determined), shelters, new street trees and paving.
- New Street trees and OCS poles are located to accommodate potential long term reconfiguration of station to center platform with through travel lane.

### Potential Long Term Improvements



#### Long Term Improvements

- In coordination with corridor development, construct the center platform and right-hand through-travel lane.
- Design of center platform should accommodate future transition to narrow body, low floor vehicles.

## Lexington Station - Potential Phasing

The diagrams below illustrate the potential phasing for Short Term and Long Term improvements of the Lexington Station.

### Short Term

- Relocate southbound platform to Lexington-Saratoga block (1).
- Reconstruct streetscape, OCS poles, street lights and landscaping (2) to accommodate long term plans.

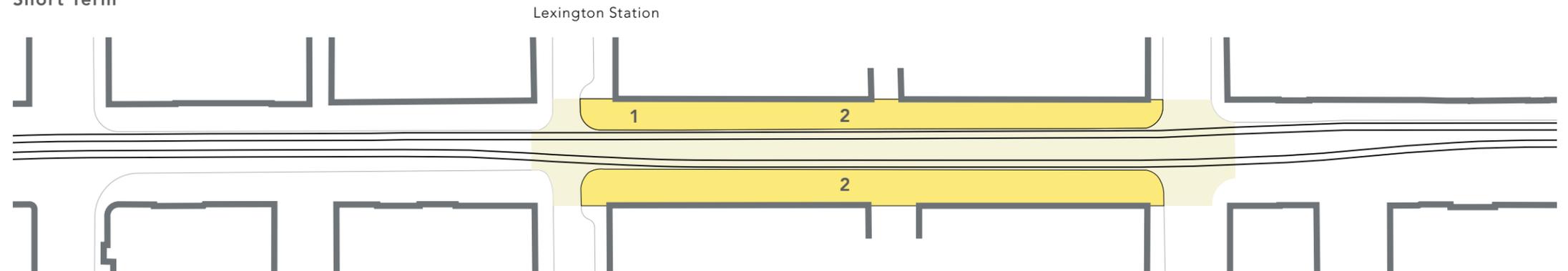
### Long Term - Preliminary Phase

- In coordination with corridor development – construct crossover tracks (3) to accommodate temporary one-way service on existing northbound track in construction zone, shift southbound track (4) and west sidewalk (5). OCS poles, streetlights, landscaping and sidewalk paving from Short Term construction are to remain.
- Build west-half of new median platform (6). Design should accommodate future transition to narrow body, low floor light rail vehicles.
- Reconstruct a portion of Lexington and Saratoga intersections (7).
- Reconstruct portions of streetscape, OCS poles, street lights and landscaping south of Lexington and north of Saratoga (8), to accommodate long term plans.

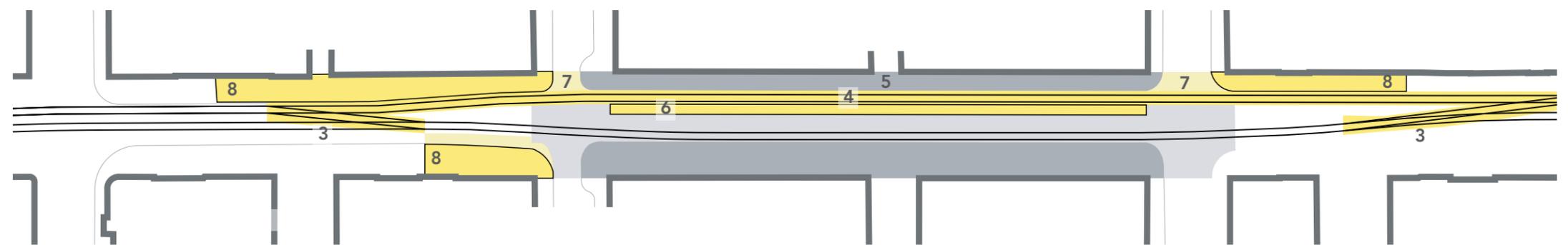
### Long Term - Final Phase

- Construct reverse (permanent) crossover tracks (9) to accommodate temporary one-way service on new southbound track in construction zone, shift northbound track (10) and east sidewalk (11). Construct new auto lane (12).
- Complete east-half of new median platform (13). Relocate shelters and other transit and pedestrian amenities (14) to median platform. Remove both existing highblocks (15).
- Reconstruct remaining portions of streetscape, OCS poles, street lights and landscaping south of Lexington and north of Saratoga (16), to accommodate long term plans.
- Reconstruct remaining portions of Lexington, Saratoga and Fayette intersections (17).

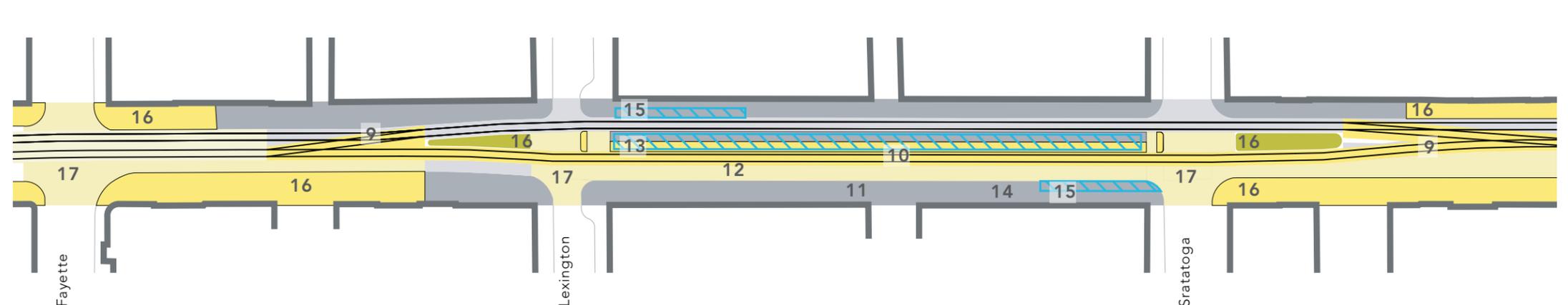
### Short Term



### Long Term - Preliminary Phase



### Long Term - Final Phase



# Lexington Station - Cost Model

## Short Term

### Transit Improvements share

2 renovated/new, side platforms, existing track alignment, new ocs poles and systems

**\$2,152,500**

### Streetscape Improvements share

Re-constructed sidewalks, new amenities, landscaping

**\$1,242,000**

## Long Term

### Transit Improvements share

New median platform, shift NB and SB track, new trackway and systems, through-auto lane on east, new intersections

**\$6,898,000**

### Streetscape Improvements share

Re-constructed sidewalks, new amenities, landscaping

**\$1,778,000**

### Total

**\$12,070,500**

## Comparison

### Long Term: built as one phase

New median platform, shift NB and SB track, new trackway and systems, through-auto lane on east, new intersections, re-constructed sidewalks, new amenities, landscaping

**\$10,084,220**

Approximately \$2M premium for building in two phases by:

- paying for mobilization, temporary controls twice
- paying for some intersection repair, trackway repair, auto lane paving in Phase 1 that will be removed in Phase 2
- building of new curbs and gutters twice in Lexington to Saratoga block
- building and demolishing outer 8 feet of sidewalk in Lexington to Saratoga block

## Short Term Description

- Limits of Work: Lexington to Saratoga block and intersections (except demo of SB station amenities in Fayette to Lexington block)
- Inclusions: Site Maintenance: traffic control, street cleaning and security during construction
- Utilities: no allowance for Phase 1 improvements
- Intersections: repair existing paving
- Roadway: re-pave auto lane
- Track construction: none; minor restoration of existing trackway surfaces only
- Sidewalk reconstruction: demolition and reconstruction of curb and gutter, paving, corner ramps, platform tactile
- Shelters and amenities: removal of existing, installation of new shelters, furnishings, renovation or replacement of highblock ramps.
- LRT station electrical: an allowance for conduit, grounding, transformers at platforms.
- Landscaping: construction of new tree wells, new trees.
- Lighting and traffic control signals: removal and replacement of elements affected – signal poles, street lights, traffic controller cabinet; did not include train to wayside interconnect or PTR train warning flashing signs.
- Overhead catenary system: removal of large ocs poles (for former arches) and other standard poles affected; replacement with all standard ocs poles.
- TES and OCS construction: traction electrification system and overhead catenary system construction – an allowance for train signals affected.
- General conditions: permits, bonds, insurance, management, safety, temporary facilities, testing, mobilization, hazardous materials, DBE program, overtime – as a % of subtotal construction.
- Design contingency: % of subtotal construction
- CM/GC Fee: as a % of subtotal construction

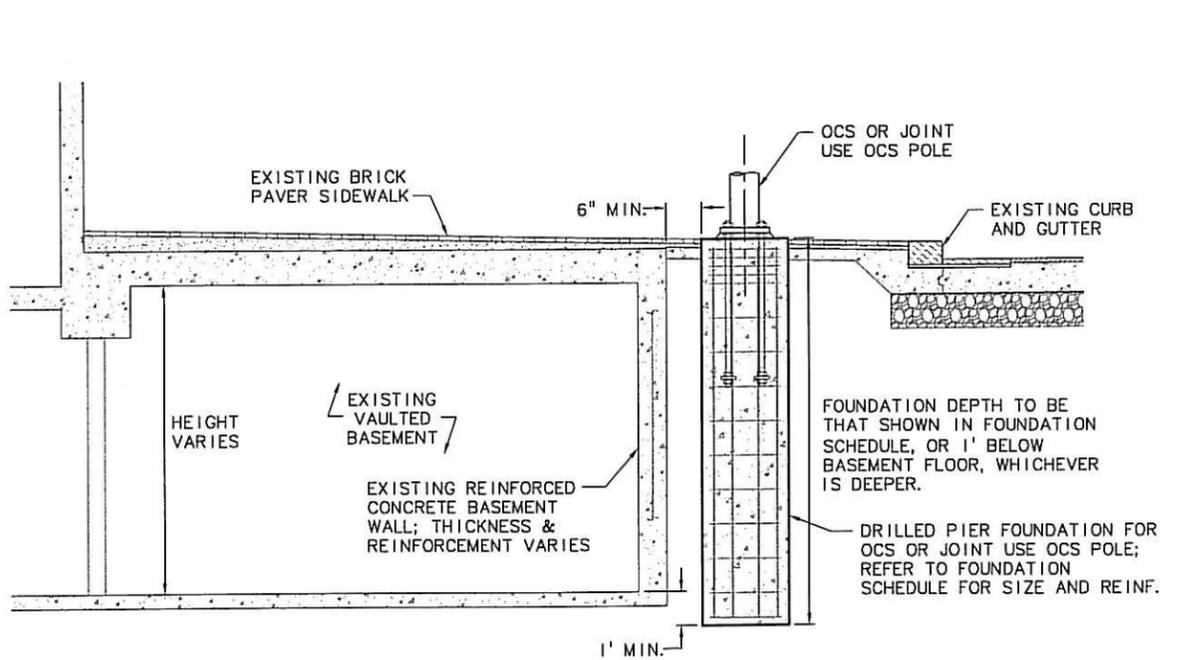
## Long Term Description

- Limits of Work: Fayette to Saratoga (both blocks and three intersections)
- Inclusions: Site Maintenance: traffic control, street cleaning and security during construction
- Utilities: an allowance for options that move trackways
- Intersections: complete rebuild of Fayette, Lexington and Saratoga paving
- Roadway: re-pave auto lane, both blocks
- Track construction: demolition of existing trackways affected; restoration of surface of existing trackways to remain, new tangent and curved trackways, crossovers and track drains.
- New track electrical: an allowance for ductbanks, TES and signals, boxes, insulated joints, corrosion control, testing.
- Sidewalk reconstruction:
  - Lexington to Saratoga block: partial demolition (outer 8 feet but Phase 1 amenities remain); new median platform
  - Fayette to Lexington block: sidewalk demo and re-paving, new tree wells and trees, new amenities
  - Both blocks: reconstruction of curb and gutter, corner ramps
- Shelters and amenities: shelters, transit signs and amenities relocated from Phase 1 to new platform; new tactile, highblock ramps at median platform (if before fleet change to low-floor vehicles)
- LRT station electrical: an allowance for conduit, grounding, transformers at platforms.
- Landscaping:
  - Lexington to Saratoga block: Phase 1 tree wells, trees, amenities remain; new median platform raised tree planters and trees.
  - Fayette to Lexington block: new tree wells and trees, new amenities
- Lighting and traffic control signals:
  - Lexington to Saratoga block: Phase 1 signal poles, street lights, traffic controller cabinet remain
  - Fayette to Lexington block: removal and replacement of elements affected – signal poles, street lights; did not include train to wayside interconnect or PTR train warning flashing signs.
- Overhead catenary system: Lexington to Saratoga block: Phase 1 improvements remain  
Fayette to Lexington block : removal of large ocs poles (for former arches) and other standard poles affected; replacement with all standard ocs poles.
- TES and OCS construction: traction electrification system and overhead catenary system construction – an allowance for train signals affected.
- General conditions: permits, bonds, insurance, management, safety, temporary facilities, testing, mobilization, hazardous materials, DBE program, overtime – as a % of subtotal construction.
- Design contingency: % of subtotal construction
- CM/GC Fee: as a % of subtotal construction

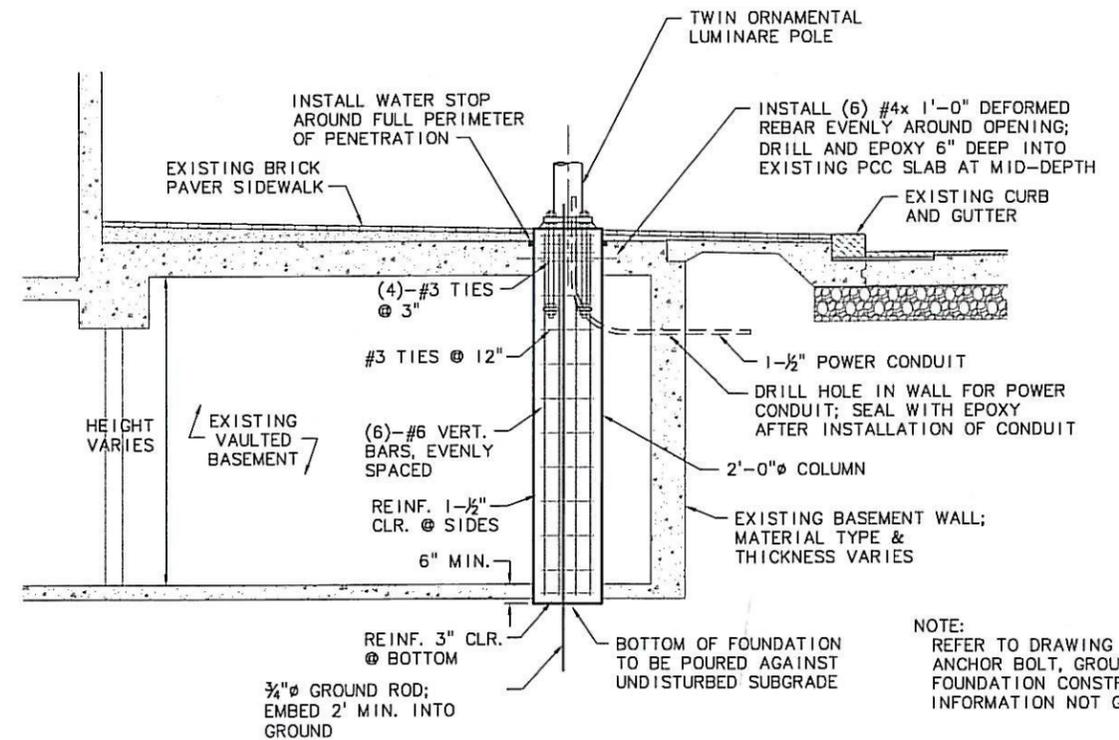
## OCS Pole Foundations - Examples

For information purposes, sample illustrations of foundation varieties used for the Portland Mall Revitalization are included here.

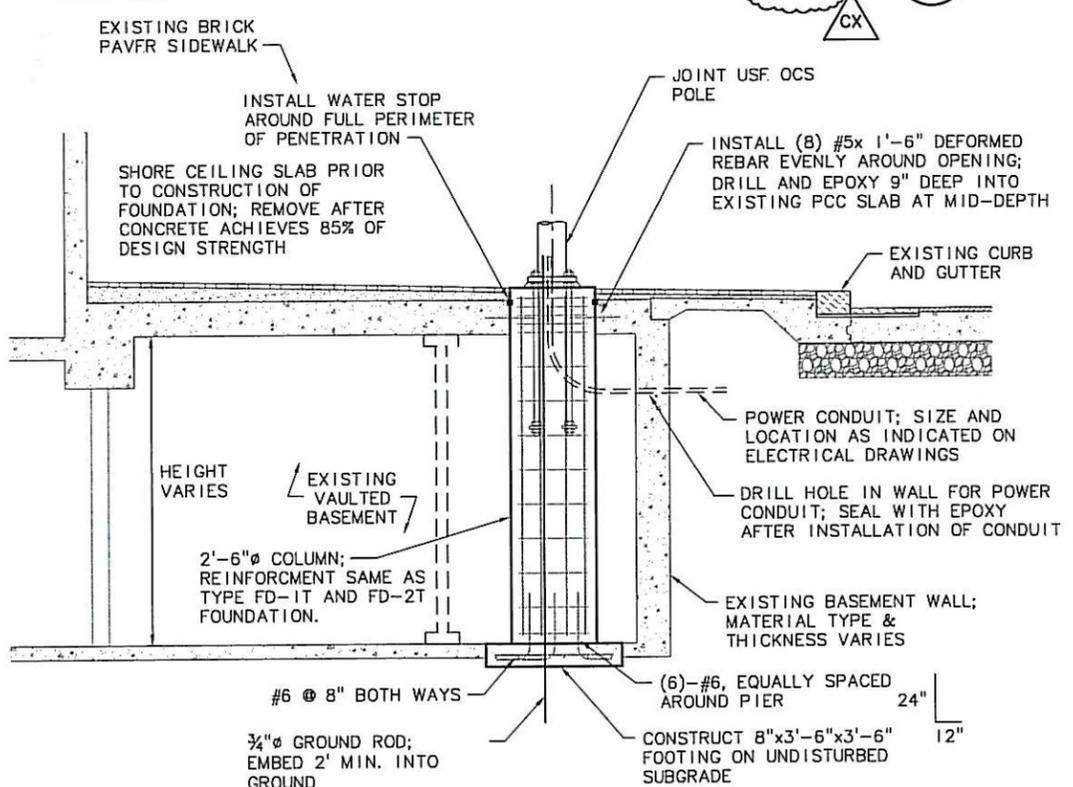
R



**DRILLED PIER POLE FOUNDATION NEAR BASEMENT VAULT**  
 SCALE: 3/8" = 1'-0"  
 S36-823, S36-824, S36-825, S36-826, S36-828, S36-831



**TWIN ORNAMENTAL LUMINAIRE FOUNDATION BASEMENT VAULT PENETRATION**  
 SCALE: 3/8" = 1'-0"  
 S36-822



**JOINT USE OCS POLE FOUNDATION BASEMENT VAULT PENETRATION**  
 SCALE: 3/8" = 1'-0"  
 S36-822, S36-829

- GENERAL NOTES:**
- REFER TO SHEET S36-800 FOR GENERAL NOTES REGARDING FOUNDATION CONSTRUCTION AND MATERIALS.
  - CONCRETE TO HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60 KSI.
  - ANCHOR BOLTS, INCLUDING NUTS AND WASHERS, SHALL BE HOT DIP GALVANIZED.
  - PROVIDE BOLT PATTERN TEMPLATE FOR ANCHOR BOLT INSTALLATION.
  - THE TOP 1' + THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE EPOXY COATED. EPOXY MATERIAL SHALL BE NON-CONDUCTIVE TO ELECTRICITY AND SUITABLE FOR ADHERING TO A GALVANIZED METAL SURFACE.
  - TACK WELD VERTICAL BARS TO TOP AND BOTTOM TIES.
  - NO. 3 SPIRALS AT 4" (MAX.) PITCH MAY BE SUBSTITUTED FOR HOOP TIES.
  - CONDUIT RISER SHALL BE INSTALLED IN FOUNDATION AND STUBBED UP INTO POLE AT LOCATIONS SHOWN IN PLANS. ROTATE REBAR CAGE TO AVOID INTERFERENCE, IF NECESSARY. FOR DUCTBANK LAYOUT, CONDUIT SIZES, ETC., REFER TO SYSTEMWIDE ELECTRICAL PLANS.
  - ANCHOR BOLTS TO HAVE 2 FULL THREADS VISIBLE ABOVE TOP NUT AFTER NUTS ARE TIGHTENED.
  - CONTRACTOR TO INSURE THAT ALL NEW CONSTRUCTION ON VAULTED BASEMENT CEILING AND WALLS IS FULLY WATERPROOF.
  - SPECIAL INSPECTIONS REQUIRED FOR FOUNDATIONS CONSTRUCTED WITHIN EXISTING BASEMENTS AND VAULTS INCLUDE: STEEL CONSTRUCTION; CONCRETE CONSTRUCTION; AND ANCHORS - ADHESIVE.

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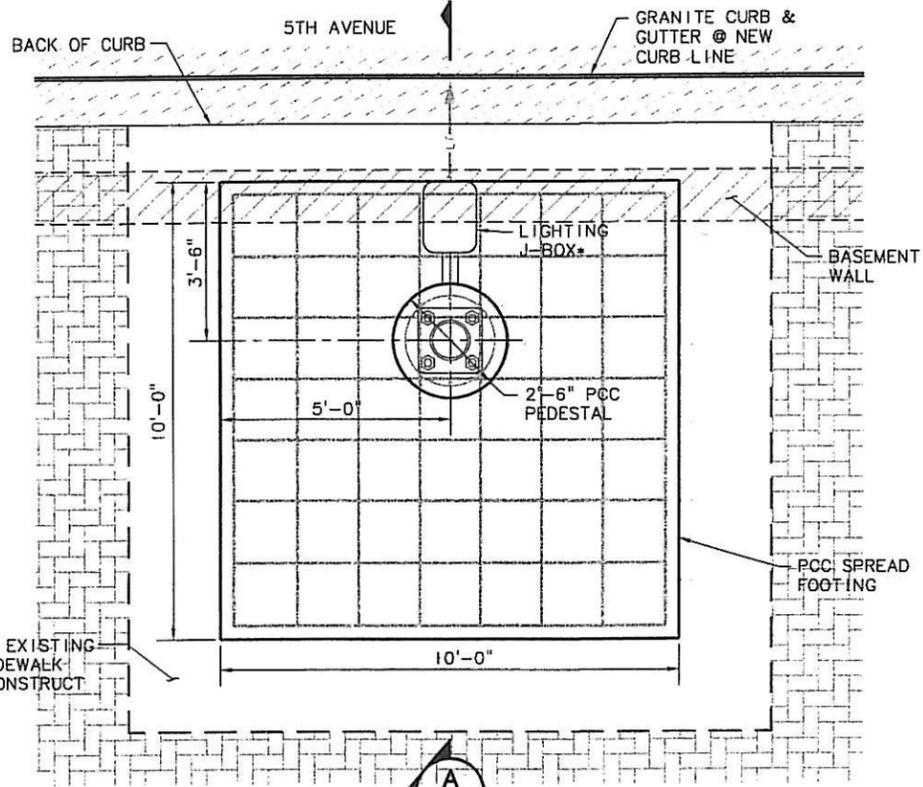
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			FO #55
			ISSUED FOR CONSTRUCTION
NO.	DATE	BY	APPR.
		CHK.	

JAB	8/18/06
DESIGNED	DATE
JAB	8/18/06
DRAWN	DATE
KL	1/24/07
CHECKED	DATE
JAB	1/26/07
APPROVED	DATE

**TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON**  
**URS** **TRI MET**  
 CAPITAL PROJECTS AND FACILITIES DIVISION  
 710 N.E. HOLLADAY STREET  
 PORTLAND, OREGON 97232

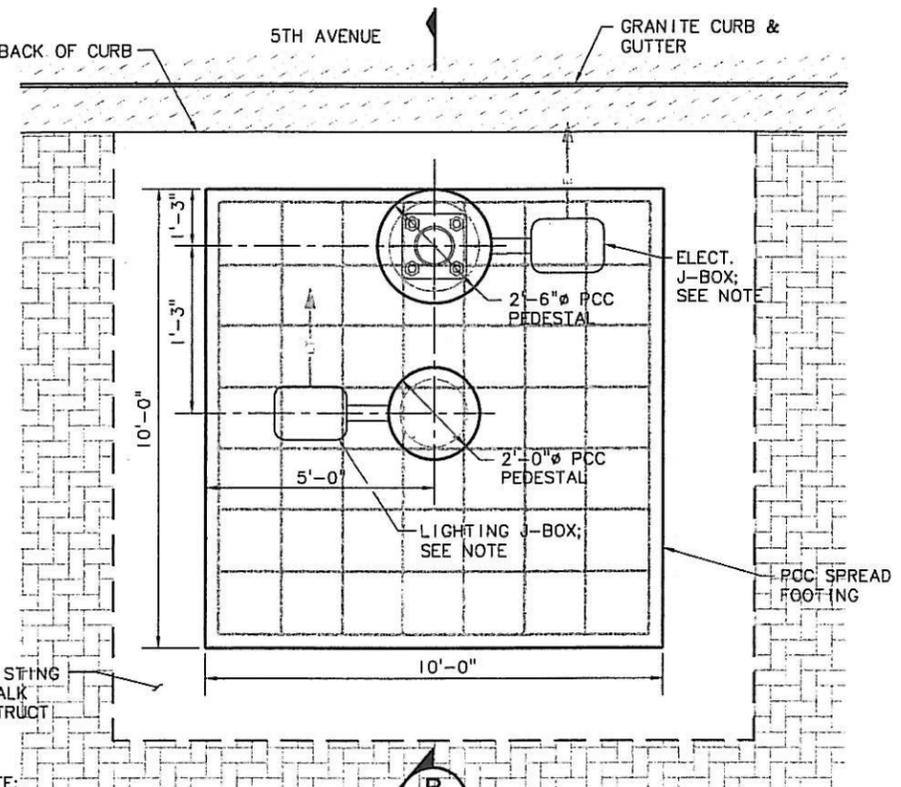
<b>SOUTH CORRIDOR PROJECT</b>			
PORTLAND MALL SEGMENT			
FOUNDATIONS			
OCS POLE FOUNDATIONS AT BASEMENT VAULTS			
DETAILS			
SUBMITTED:	DATE:	APPROVED:	DATE:
MLD.jpg	1-26-07		1-26-07
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	S36-841-CX	RH050506LE	428

Original Drawing Stamped and Sealed by JOHN A. BALDWIN



NOTE:  
SEE ELECTRICAL DRAWINGS  
FOR LOCATION OF J-BOX AND  
SERVICE LINES

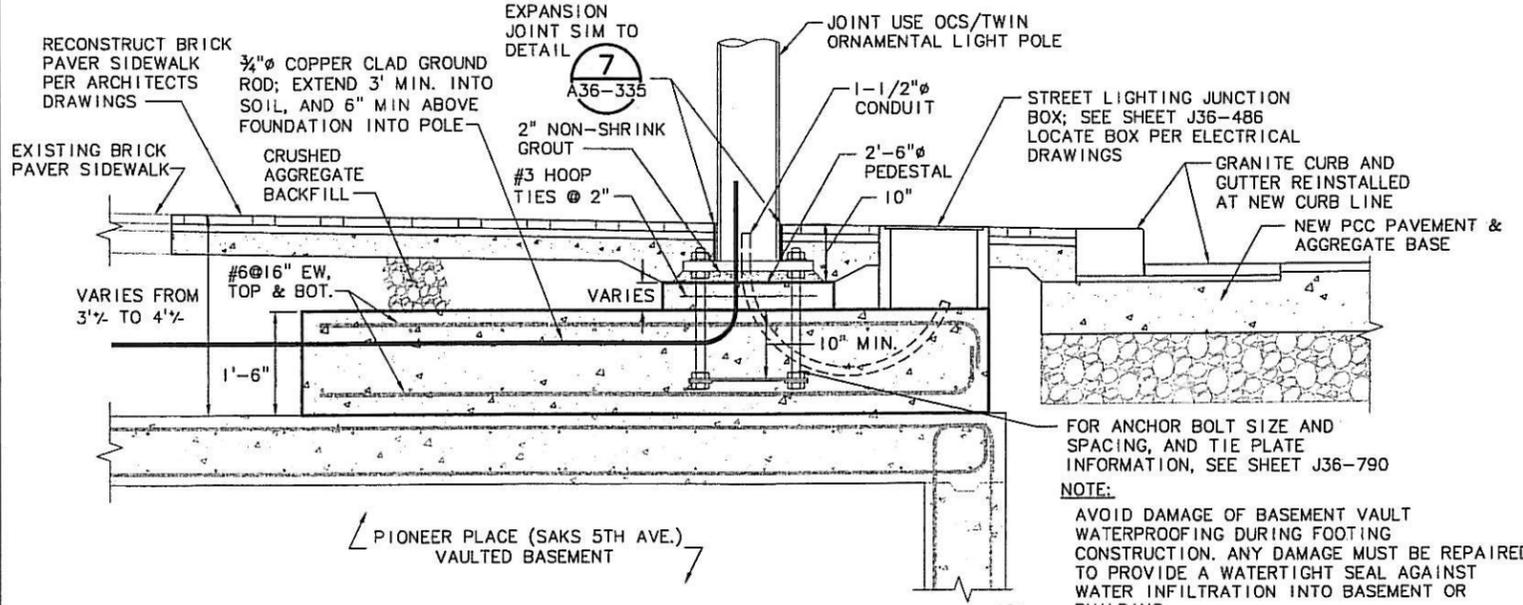
**JOINT USE POLE FOUNDATION: PIONEER PLACE**  
SCALE: 1/2" = 1'-0"



NOTE:  
SEE ELECTRICAL DRAWINGS  
FOR LOCATION OF J-BOX AND  
SERVICE LINES

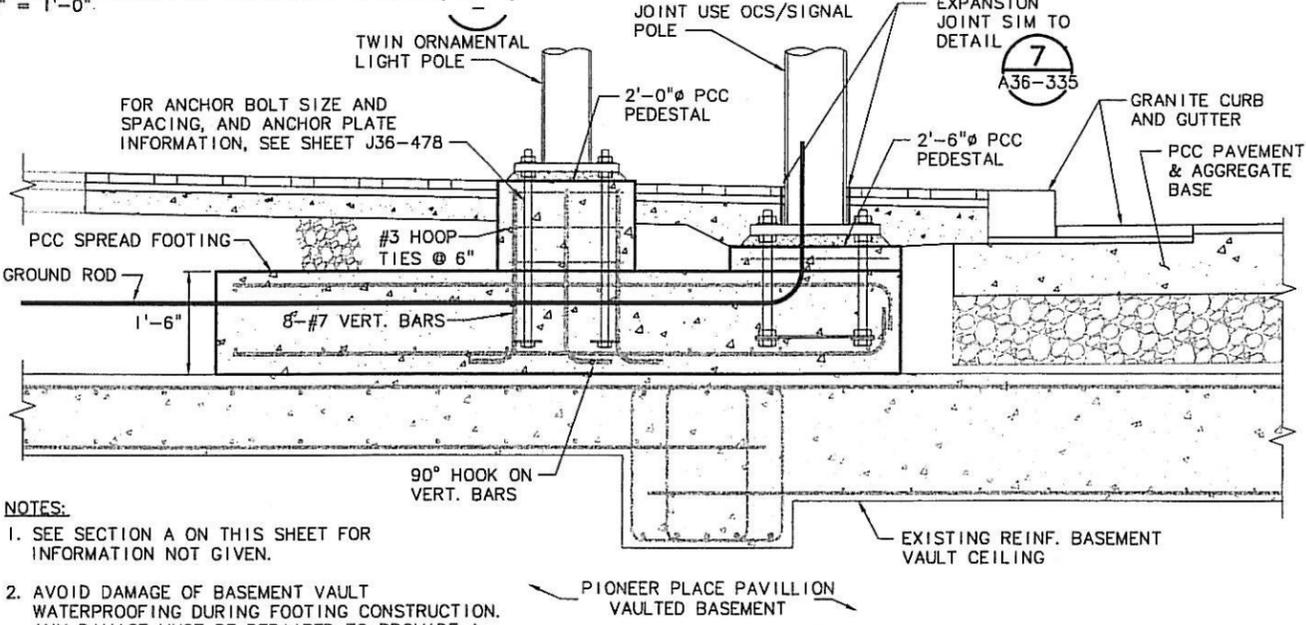
**JOINT USE POLE & TWIN ORNAMENTAL  
FOUNDATION: PIONEER PLACE**  
SCALE: 1/2" = 1'-0"

- GENERAL NOTES:**
- REFER TO SHEET S36-800 FOR GENERAL NOTES REGARDING FOUNDATION CONSTRUCTION AND MATERIALS.
  - CONCRETE TO HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. REINFORCING STEEL TO HAVE A YIELD STRENGTH OF 60 KSI.
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  - ANCHOR BOLTS TO HAVE 2 FULL THREADS VISIBLE ABOVE TOP NUT AFTER NUTS ARE TIGHTENED.



**SECTION: JOINT USE POLE SPREAD FOOTING**  
SCALE: 3/4" = 1'-0"

FOR ANCHOR BOLT SIZE AND SPACING, AND TIE PLATE INFORMATION, SEE SHEET J36-790  
NOTE:  
AVOID DAMAGE OF BASEMENT VAULT WATERPROOFING DURING FOOTING CONSTRUCTION. ANY DAMAGE MUST BE REPAIRED TO PROVIDE A WATERTIGHT SEAL AGAINST WATER INFILTRATION INTO BASEMENT OR BUILDING

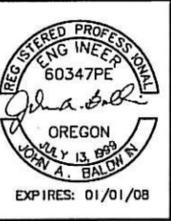


**SECTION: JOINT USE POLE SPREAD FOOTING**  
SCALE: 3/4" = 1'-0"

NOTES:  
1. SEE SECTION A ON THIS SHEET FOR INFORMATION NOT GIVEN.  
2. AVOID DAMAGE OF BASEMENT VAULT WATERPROOFING DURING FOOTING CONSTRUCTION. ANY DAMAGE MUST BE REPAIRED TO PROVIDE A WATERTIGHT SEAL AGAINST WATER INFILTRATION INTO BASEMENT OR BUILDING

NO.	DATE	BY	CHK.	JAB APPD.	REVISIONS
1-26-07	KL	JAB			ISSUED FOR CONSTRUCTION

JAB DESIGNED	8/18/06	DATE
JAB DRAWN	8/18/06	DATE
KL CHECKED	1/24/07	DATE
JAB APPROVED	1/26/07	DATE



TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

**URS TRIOMET**

CAPITAL PROJECTS AND FACILITIES DIVISION  
710 N.E. HOLLADAY STREET  
PORTLAND, OREGON 97232

SUBMITTED: *Met/Den* DATE: 1-26-07 APPROVED: *Leah Robbins* DATE: 1-26-07

**SOUTH CORRIDOR PROJECT**  
PORTLAND MALL SEGMENT

FOUNDATIONS AT BASEMENT VAULTS  
DETAILS: PIONEER PLACE

SCALE: AS NOTED DRAWING NO.: S36-842 CONTRACT NO.: RH050506LE SHEET NO.: 429

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