



# DUNDALK MARINE TERMINAL RECONSTRUCTION OF BERTHS 11-13, PHASE 1

FY 2024 Port Infrastructure Development Program (PIDP)

## PROJECT NARRATIVE



*Maryland Department of Transportation  
Maryland Port Administration*

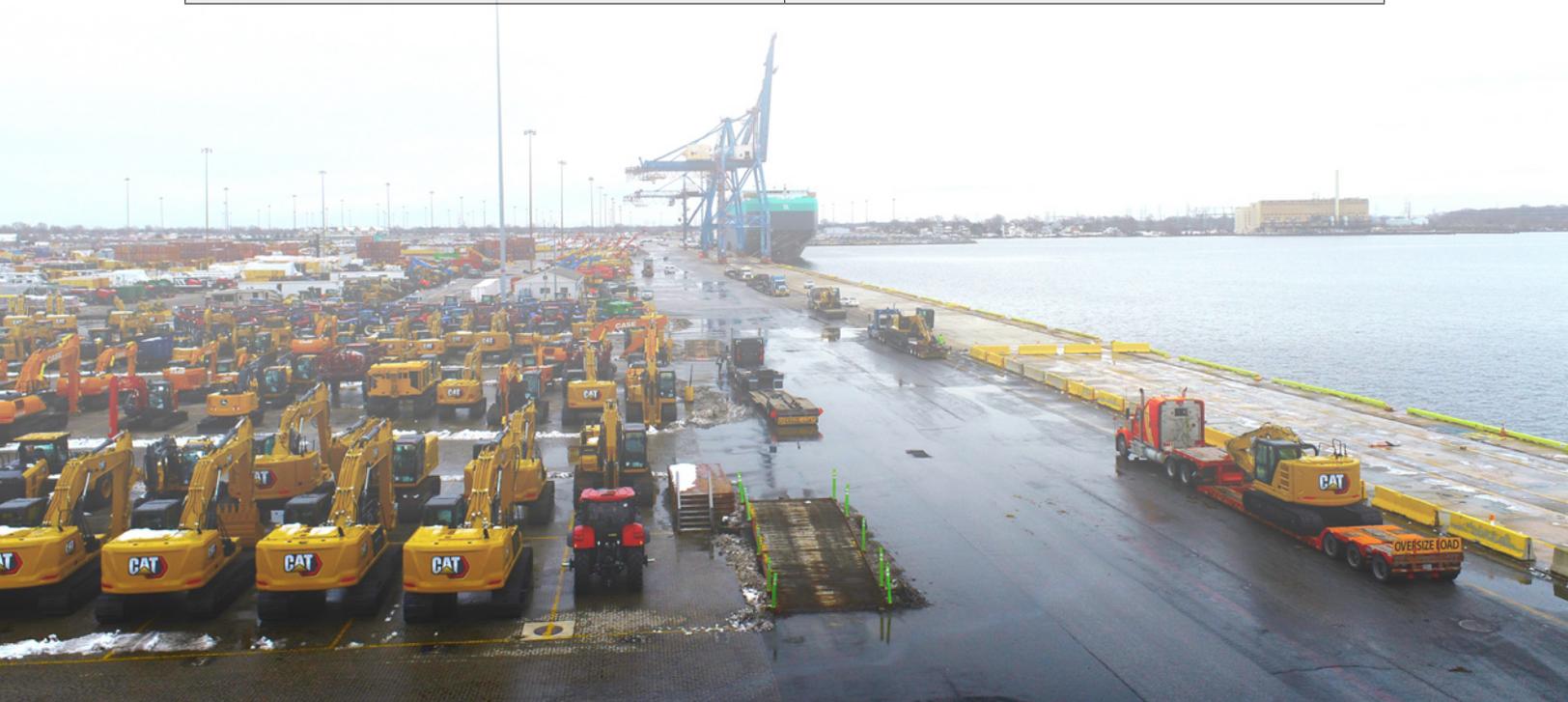
**MAY 10 2024**

## NARRATIVE INTRODUCTORY INFORMATION

Field Name	Guidance
Name of lead applicant	Maryland Port Administration (MDOT MPA)
Is the applicant applying as a lead applicant with any joint applicants?	No Joint Applicants.
Does the applicant or joint applicant own the property where the grant-funded improvements will occur?	Yes
Is the applicant seeking funding under the small project at a small port set-aside?	No
Project name	“Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1”
Project description	The Maryland Department of Transportation Maryland Port Administration (MPA) is requesting a \$30,906,076 grant from the FY 2024 Port Infrastructure Development Program (PIDP). The requested funding would support the construction of the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 (the Project). Port of Baltimore’s Dundalk Marine Terminal Berth 11 is severely restricted after an inspection in 2021 due to deteriorated condition of the wharf infrastructure. This application is seeking funding to reconstruct portions of Berth 11 . Phase 1 is part of an overall six-phase plan to reconstruct Berths 11-13.
Is this a planning project?	No
Is this a project at a coastal, Great Lakes, or inland river port?	Coastal Port in Chesapeake Bay, Maryland
Is this project located in a noncontiguous State or U.S. territory?	No
Geographic Coordinates (in Latitude and Longitude format)	39.25543N, -76.53314W
Is this project in an urban or rural area?	Urban Area
Project Zip Code	21222
Is the project located in a Historically Disadvantaged Community?	Yes

## NARRATIVE INTRODUCTORY INFORMATION

Has the same project been previously submitted for PIDP funding?	No
Is the applicant applying for other Federal discretionary grant programs (managed by DOT or a separate agency) in 2024 for the same work or related scopes of work?	Yes, INFRA, Federal Share of \$30,906,076
Has the applicant previously received DOT funding for the same work or related scope of work?	No
Has the applicant previously received TIGER, BUILD, RAISE, FASTLANE, INFRA, USMHP, or PIDP funding?	Yes
PIDP Grant Amount Requested	\$30,906,076
Total Project Cost	\$51,510,126
Total Federal Funding	\$30,906,076
Total Non-Federal Funding	\$20,604,050
Will the applicant be seeking approval to expend funds prior to grant agreement execution?	No
Will RRIF or TIFIA funds be used as part of the project financing?	No
Does the applicant use LOGINK or a similar logistics platform provided or sponsored by the People's Republic of China or Chinese state-affiliated entities?	No



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## SECTION I: PROJECT DESCRIPTION

The Maryland Department of Transportation Maryland Port Administration (MPA) is requesting a \$30,906,076 grant from the FY 2024 Port Improvement Development Program (PIDP). The requested funding would support the construction of the **Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1** (the Project). A large portion of MPA’s Dundalk Marine Terminal Berth 11 is severely restricted after an inspection in 2021 due to critical condition of the wharf infrastructure. Since that time, MPA has temporarily revised the berthing to accommodate two RORO vessels instead of three. As deterioration continues, it is anticipated the remainder of Berth 11 may be restricted and further limit the DMT Berths 11-13 to one ship thus losing 50% of its current cargo capacity and its economic sustainability. Without federal funding, the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project will not proceed, causing Berth 11 to completely close.

Thirty-five percent of cargo at DMT is handled at Berths 11 – 13, so these berths are critical to the sustainability of the terminal operations. Phase 1, the reconstruction of the infrastructure components of Berth 11, is shown on Figure 1-1. Phase 1 is part of an overall six-phase plan to reconstruct Berths 11-13 for safety, productivity, and increased resiliency of operations. Table 1-1 outlines the phases which are illustrated in Figure 1-2. The design of Phase 1 is nearly complete (60%). This PIDP application is seeking funding for construction of those Phase 1 components in Berth 11, as illustrated in Figure 1-1.

Phase 1 consists of the rehabilitation and replacement of 597 linear feet of wharf deck including pilings, substructure, storm water drainage, utilities, and installation of new mooring bollards, cleats, pneumatic fenders, flood barriers, and tidal gates on stormwater outfalls. This reconstruction will enable the Port to safely reopen Berth 11 to accommodate automobile and High & Heavy Roll On/Roll-Off (RORO) cargo ships. The Project Narrative is divided into seven sections, consistent with the PIDP Notice of Funding Opportunity (NOFO), which describe the project and its alignment with merit criteria and other considerations of the PIDP program.

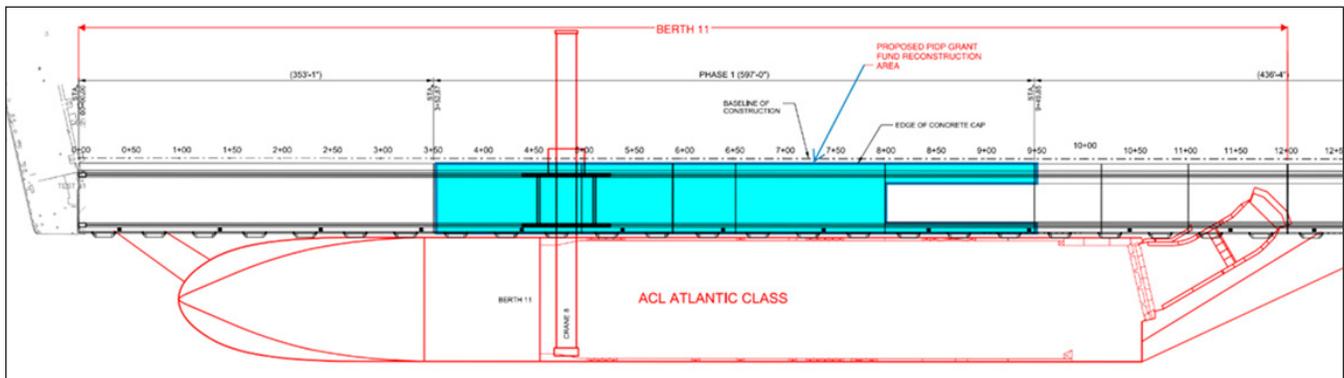


Figure 1-1: Project Limits

Table 1-1: Berths 11-13 Phased Reconstruction Costs

PHASE	TOTAL COST
Phase 1	\$51.5 M
Phase 2	\$50.3 M
Phase 3	\$54.1 M
Phase 4	\$55.2 M
Phase 5	\$52.5 M
Phase 6	\$51.2 M
Total	\$314.8 M

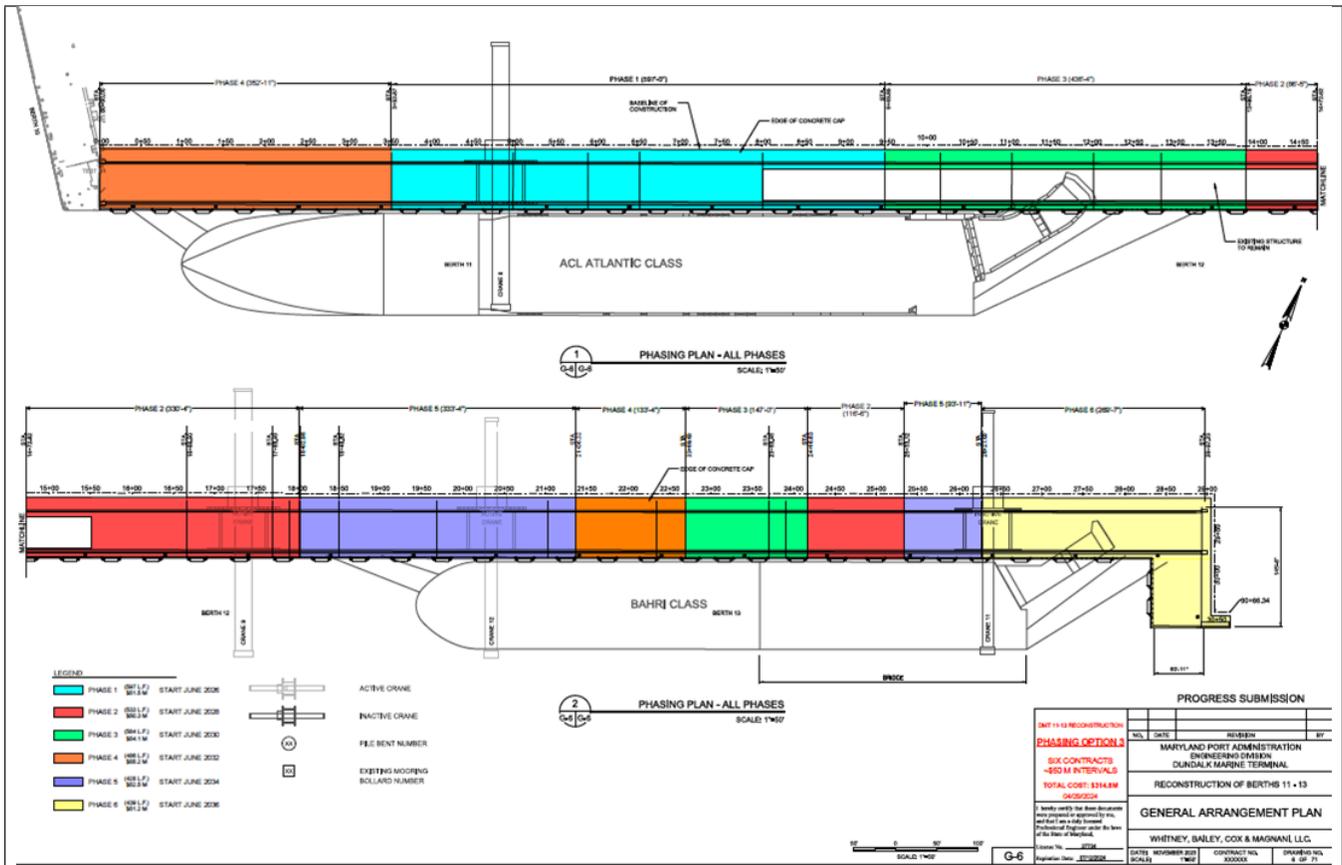


Figure 1-2: Reconstruction Phasing Berths 11-13

### 1.1 Detailed Statement of Work

MPA is pursuing a grant for construction of the Project. The work will consist of full demolition and replacement of 447 feet of the Berth 11 wharf and the partial demolition and replacement of an additional 150 feet of that wharf as shown in Figure 1-1. The Project is currently 60% designed and progressing towards completion. MPA understands that, if awarded, the Project must receive USDOT NEPA approval (Environmental Assessment) and have the grant agreement in place by MARAD prior to advertising and initiating construction tasks. If the project receives PIDP grant funding, the statement of work in this section would serve as the foundation of the grant agreement. The project schedule is found in Section 6.2. The project consists of primary work elements delivered through three tasks as listed below.

#### Task 1: Grant Administration

MPA will administer the project in compliance with the grant agreement. To begin the funded project, MPA will submit a detailed project work plan (PWP), budget, and schedule for the project. The PWP will describe, in detail, the steps necessary to complete the project’s Statement of Work. The PWP will also include information about the project management approach (including team organization, team decision-making process, roles and responsibilities, interaction with MARAD, and the quality assurance and quality control procedures). MPA acknowledges that work on Tasks 2 and 3 will not commence until the PWP has been completed and submitted to the MARAD, and MPA has received approval in writing.

Once a grant agreement is in place, MPA will coordinate with MARAD and adhere to specific terms of the agreement that define reporting on project milestones, performing monitoring activities, submitting payment requests for reimbursement, and ultimately performing project closeout.

Task 1 Deliverables: Detailed Project work plan, budget, and schedule

## Task 2: Construction Procurement

MPA will advertise for contractors utilizing an open procurement process consistent with MPA and MARAD agreement terms. The current ongoing design will produce the construction contract documents. The firm developing the design documents, which include contract drawings, specifications, and a construction cost estimate, will also provide services during the solicitation and construction phases. Construction inspection support will be provided by the MPA Construction Department and the Engineer of Record.

MPA will be responsible for reviewing and scoring all responses to the construction contract advertisement. An evaluation of the proposals will be performed, and a contractor will be selected based on best value. MPA will negotiate final contract terms and a Project Labor Agreement (PLA) with the selected contractor.

*Task 2 Deliverables:* Conformed Contract Documents including Project Specifications and Drawings

## Task 3: Construction Activities

The project will include the full demolition and replacement of 447 feet of the Berth 11 wharf and the partial demolition and replacement of an additional 150 feet of that wharf. A 46.5 feet wide portion of the structure is to remain in place since it was part of the Dundalk Marine Terminal Berth 11-12 Deck Upgrades project that was completed in October 2018. The edge beam and battered/ plumb pile cap adjacent to the sheet pile wall will only be replaced for the 150-foot-length of the project area.

The detailed Scope of the Project includes:

- Demolish and remove the existing wharf deck slab, precast concrete deck beams, concrete pile caps, prestressed concrete piles, and rail cross overs in their entirety within the limits of the proposed work.
- Install new steel sheet pile bulkhead wall consisting of alternating steel wide flange “king” piles and sheet piles. Install sheet pile encapsulation in tidal zone.
- Install new lateral support batter piles and plumb piles landside of the new sheet pile bulkhead. Construct new landside concrete sheet pile cap beam.
- Install new storm drains, junction boxes, manholes and associated appurtenances.
- Relocate waterline, electrical, and communication duct bank located landward of the new sheet pile cap beam.
- Drive new 24-inch square prestressed concrete plumb and batter piles, construct new reinforced concrete pile caps, install new precast concrete deck slabs, pour new reinforced concrete topping slab, install new concrete sea curb, bollard pedestal and edge beam.
- Install new galvanic corrosion protection for sheet pile bulkhead.
- Install new mooring bollards, cleats, and pneumatic fenders.

### 1.2 Transportation Challenges

The Port of Baltimore is the nation’s leading RORO destination. More than 35 percent of the cargo at DMT is handled by Berths 11 to 13. A waterfront inspection concluded the deck portion of Berth 11 was in critical condition and was closed for safety. The bollards along Berth 11 can continue to be used for mooring due to being recently upgraded. The Port temporarily reconfigured Berths 11-12 to retain the ability to service two vessels. As deterioration continues the bollards will become unusable and the ability to berth ships at DMT 11 will be lost. If MPA is only able to moor one vessel along Berths 11-13 then MPA will lose 50 percent of the cargo that currently docks there.

**Challenge:** The 50 percent reduction in capacity for automobile and High & Heavy RORO equipment handling, which accounts for thirty-five percent of the business line at the terminal, results in an unsustainable business climate for the terminal.

**Solution:** This project will immediately repair and rehabilitate Berth 11 to restore the terminal to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the terminal resulting in a sustainable business climate.

As the terminal’s capacity diminishes, the supply chain for the automobiles and High & Heavy RORO equipment will be moved to other ports further from their ultimate destination (shown in Table 1-2). The extended supply chain will require an annual increase of 1,841,848 truck miles to reach the ultimate destination, as detailed in the Benefit Cost Analysis in Appendix A.

**Table 1-2: Geographic Distributions of Autos and High & Heavy RORO Units Using Berths 11-13**

	NYC AREA	PHILADELPHIA REGION	WESTERN PA	SOUTH JERSEY	MD/DC/ DE	NEW ENGLAND	CHICAGO	DETROIT	VIRGINIA	CENTRAL OHIO
Auto Imports	4,943	4,943	2,471	4,943	7,414	2,471	7,414	4,943	4,943	4,943
Auto Exports	0	3,688	738	738	2,951	0	1,475	2,951	1,475	738
High & Heavy RORO Imports	1,925	1,283	1,283	0	1,283	642	1,925	1,283	1,2830	642,0
High & Heavy RORO Exports	405	203	1,013	0	405	0	2,026	0	0	0

Source: Maryland Port Administration

**Challenge:** The substantial increase in truck miles due to the extended supply chain increases green house gases (GHG) attributable to transportation. As noted above, if the MPA is forced to close Berth 11 a larger amount of cargo will relocate to other ports resulting in even larger transportation-related GHG.

**Solution:** This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and heavy RORO equipment cargo remains at the Port preventing the 1,841,848 truck miles from increasing the GHG emissions attributable to transportation.

**Challenge:** The substantial increase in truck miles due to the extended supply chain will result in more trucks on the road. In addition, some of the High & Heavy RORO equipment is considered over dimension requiring a permit and impacting free flow on roads. The congestion on the roadway will be increased by these trucks thus increasing the crash risk and commute time for all drivers on the roadway. If the MPA closes Berth 11, the congestion, crash risk, and commute time will increase further..

**Solution:** This project will immediately repair and rehabilitate Berth 11 to restore the MPA to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the Port avoiding the increased truck miles and accompanying congestion and risk associated with the 1,841,848 truck miles.

**Challenge:** Cost of goods must account for all transportation costs in the supply chain. Truck freight has a higher cost per ton than waterborne freight. When the automobile and High & Heavy RORO equipment is forced to shift to other ports due to the Berth 11 closure, the truck freight cost will increase in the supply chain. This results in an increased price for consumers.

**Solution:** This project will immediately repair and rehabilitate Berth 11 to restore the terminal to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remains at the terminal resulting in the lower cost of goods remaining in place for consumers.

**Challenge:** When the Berth 11 closes, the weight and size of the High & Heavy RORO equipment increases wear and tear on the roads. This increases life cycle costs for these roads. The increased work zones needed for repairing the roads more frequently disrupt traffic flow and increase risk for highway workers and the traveling public.

**Solution:** This project will immediately repair and rehabilitate Berth 11 to restore the Port to full automobile and High & Heavy RORO capability. The automobile and High & Heavy RORO equipment cargo remain at the Port avoiding the increase in roads impacted by the over-dimension equipment and the corresponding increase in work zones and increased risk for highway workers and traveling public.

### 1.3 Project History

Founded in 1706, the Port of Baltimore, located on the Patapsco River of the Chesapeake Bay, Maryland, handles multiple cargo types. It is the nation's leading automobile and High & Heavy RORO (including agricultural equipment and construction project equipment) port. While located in one of the country's strongest urban markets, the Port is also an important gateway for the import and export of automobiles and High & Heavy RORO equipment to and from rural areas, including farming and construction equipment such as combines, tractors, wheel loaders, and excavators providing critical connectivity to international markets. This multi-faceted facility serves as a vehicle for industrialization and modernization, growing both the urban and rural economies.

#### The Dundalk Marine Terminal at Port of Baltimore

The Dundalk Marine Terminal (DMT) is the largest general cargo facility at the Port of Baltimore and the primary reason for the Port's top port ranking for automobiles and High & Heavy RORO equipment in the US. The terminal's Berths 11 to 13 are focused on these two cargos and account for 35 percent of DMT's business.

Supporting these berths are 225 acres of auto and 93 acres of High & Heavy RORO equipment storage at the port.

DMT has close, easy intermodal access for trucks to I-95 and I-695. Direct rail access provides a convenient transfer point for farm and construction equipment traveling to and from the Midwest. In addition, it contains over eight miles of rail inside their secure facility. Both CSX and Norfolk Southern have the ability to move freight through DMT. These intermodal accesses attract shippers to DMT. Wallenius Wilhelmsen, the largest RORO carrier in the world recently signed a 20-year, 150-acre agreement with the MPA for DMT to serve as its East Coast hub thus supporting the need for sustained RORO facilities.

#### THE DUNDALK MARINE TERMINAL SERVES AS A KEY US ENTRY POINT FOR FARM AND CONSTRUCTION EQUIPMENT

*Baltimore's proximity to the Midwest's major farm and construction equipment manufacturers has helped the Port become the leading U.S. port for combines, tractors and hay balers, and in importing excavators and backhoes. This equipment increases production and leads to the export of US goods*

## Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1

The Dundalk Marine Terminal Berths 11-13 are critical to the economic sustainability of the terminal. In 2021, a waterfront inspection determined the project area was in critical condition, a high priority infrastructure redevelopment program was implemented. The six phases of this redevelopment will restore the structural integrity of the three berths, increase strength to 1000 psf, and increase resiliency to extreme weather events. This PIDP application is only for construction cost of Phase 1 which is to reconstruct components of Berth 11, the oldest of the three, where a portion was condemned due to extreme deterioration and is barricaded to prevent any vehicle access. Deterioration has continued in the remaining Berth 11 operational structure, and it is possible it could close in the near future due to safety concerns. Specifically, there are severe cracks and spalls, with exposed reinforcement, on the deck and pile cap beams. Pile cap beams with delaminated and spalled corners have exposed reinforcement that have corroded and need to be replaced. While many of the precast concrete piles have been previously repaired with grout filled fiberglass jacket encapsulations, many more piles still require repair. Many of those that have been repaired are failing once again. Due to close spacing of the batter and plumb piles in lateral support pile cap, the piles with cracks could not be jacketed. Additionally, the sheet pile wall in the tidal zone exhibits significant deterioration with significant section loss, holes and pitting of the sheet pile. The poor condition of the sheet piling has resulted in sink holes developing on the landside. Photos illustrating the condition of Berth 11 are shown in Figures 1-3 and 1-4 below:



*Figure 1-3: Berth 11. Severely Spalled Precast Concrete Pile*



*Figure 1-4: Berth 11. Severely Delaminated Concrete Pile Cap with Exposed Reinforcement*

Thirty-five percent of cargo received at DMT arrives at Berths 11-13. In 2023, the MPA handled 128,382 automobiles and 33,769 RORO units at the Berths 11-13. Of these units 77% of the automobiles were imported while 76% of the RORO units were imported, as shown in Table 1-2 above. It is further estimated by the MPA that if Berth 11 completely fails, about 50% of the automobile and High & Heavy RORO units would have to move to other East Coast ports.

The grant requested project, which is the first phase of construction to reconstruct DMT Berths 11-13 will offer resilience investments that will allow large automobile and RORO ships to dock at Berth 11. The Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 design is 60% complete. The grant request is only for the construction portion of the Berth 11 rehabilitation.

Activities related to the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 are included in statewide relevant planning documents. The Consolidated Transportation Program (CTP) is Maryland's six-year fiscally constrained capital budget for transportation projects. The CTP contains projects and programs across the Maryland Department of Transportation. The Dundalk Marine Terminal Reconstruction of Berths 11-13, is listed in the MDOT FY 2024-2029 CTP as part of the Primary Development and Evaluation Program.

## 1.4 Applicant and Project Parties

The Applicant and lead recipient for the project is the MPA.

MPA is a Transportation Modal Unit within MDOT and is the Applicant and Lead Recipient for this PIDP Grant. As a political subdivision of the State of Maryland, MPA is eligible for a PIDP Grant. MPA owns DMT and is the landlord to entities that utilize the Terminal.

MPA is an eligible applicant with the authority to plan, construct, own, operate, and maintain the grant-funded project.

The proposed project does not include dredging activities.

## Section II: Project Location

The Port of Baltimore is strategically located in the Mid-Atlantic region of the U.S. East Coast and is in the northeast part of an expansive region that includes northeast Virginia, Washington D.C., and the cities of Baltimore, Columbia, and Annapolis in Maryland. This region, with over 9.7 million people, is the third-largest consumer market in the United States.

While the Port is inland, it is directly connected to the Atlantic Ocean via the Chesapeake Bay. This unique characteristic makes the Port ideally located to receive overseas shipments for distribution to the Eastern and Midwest U.S. and is within a day's reach of one third of U.S. households. Because of the outstanding highway access near the Port, trucks can reach 35% of America's manufacturing base and 32% of its population overnight. The Port serves East Coast and Midwest locations with both its automobile and RORO imports. It is a vital port for equipment and automobile manufacturers and farmers in the Midwest that rely on the Port for their exported goods.

Although the greater Washington/Baltimore region is a thriving consumer market, Baltimore, where DMT at the Port is physically located, is a Historically Disadvantaged Community, Opportunity Zone, an Urbanized Area, and an Area of Persistent Poverty as defined in Section 2.1.

### 2.1 Geographic Location and Geospatial Information

While the Port of Baltimore includes elements of both a coastal seaport and an inland seaport it is classified as a **Coastal Seaport** as defined by the NOFO. It is located in an **Urban Area** (as defined by the NOFO), on the Chesapeake Bay, in Baltimore City, Maryland. Figure 2-1 presents the location of the Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project. The project's coordinates are **39.25543 N Latitude and -76.53314 W Longitude**.

DMT Berth 11 is in Baltimore City, Maryland (an Urban Area with a population of over 50,000 inhabitants, as defined by the 2020 Census and the 2024 NOFO). According to the 2020 Census, this Urban Area has a

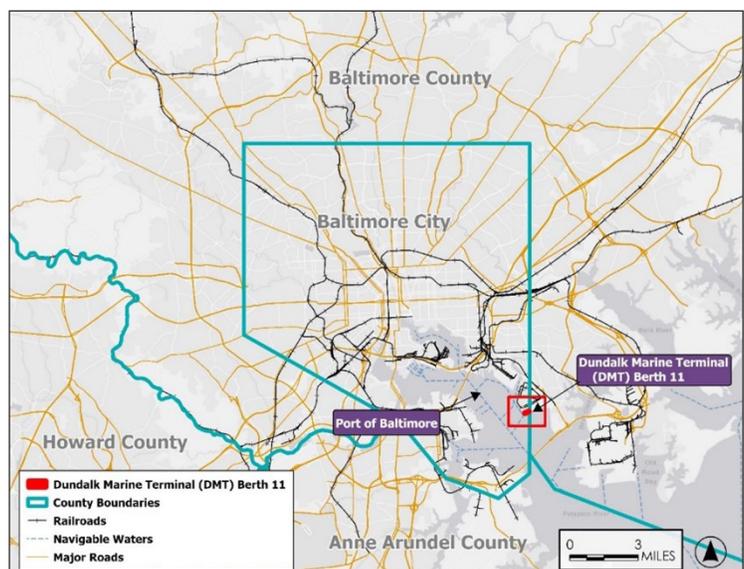


Figure 2-1: Project Location Map

population of 2,203,663. The project is located in Census Tract 245102606.05, Baltimore City, Maryland, a Historically Disadvantaged Community (HDC)<sup>1</sup> that meets both County and Census Tract Definitions of Areas of Persistent Poverty (APP)<sup>2</sup>, is within a federally designated Opportunity Zone (ID 24510260605) and is adjacent to Empowerment Zones and Choice Neighborhoods in Baltimore, Maryland.

Beyond the project location’s census tract, Baltimore City is also economically distressed. Baltimore City has an unemployment rate of 4.0% (January 2024 data), with the national average for the same period at 3.7%, and a Baltimore City poverty rate of 18.5% (2022 data).

Baltimore City’s population is 67.1% African American or Hispanic. The unemployment rate for African American residents of Baltimore City was 14.8% (January 2024 data), a more than 10 percentage point difference from the total Baltimore City unemployment rate. This marked difference underscores the impact that systemic inequities have on cities like Baltimore.

The Port of Baltimore is a substantial employer and economic generator (\$982.7 million in local purchases) for the city.<sup>3</sup> Jobs at the Port provide better than average wages (average port worker \$82,907 compared to average Maryland worker \$69,750). The Project enables the DMT to remain open for automobiles and heavy RORO equipment will support re-stabilization of Baltimore City’s economic growth, and will catalyze future redevelopment and economic prosperity.

Demographic data for the project area was obtained from the EPA’s EJScreen tool, displayed in Table 2-1. Although no project activities are proposed in Dundalk proper, it is noteworthy that the project falls within 0.5 miles of the city boundary, prompting the inclusion of demographic information for Dundalk in the table for context.

**Table 2-1: Project Area Demographics**

TOPIC	BALTIMORE, MD	DUNDALK, MD	CENSUS TRACT 24510260605
Population	592,211	66,465	5,842
People of Color	73%	34%	52%
Low-Income	39%	35%	57%
Limited English Households	2%	3%	2%
Unemployment	7%	7%	6%

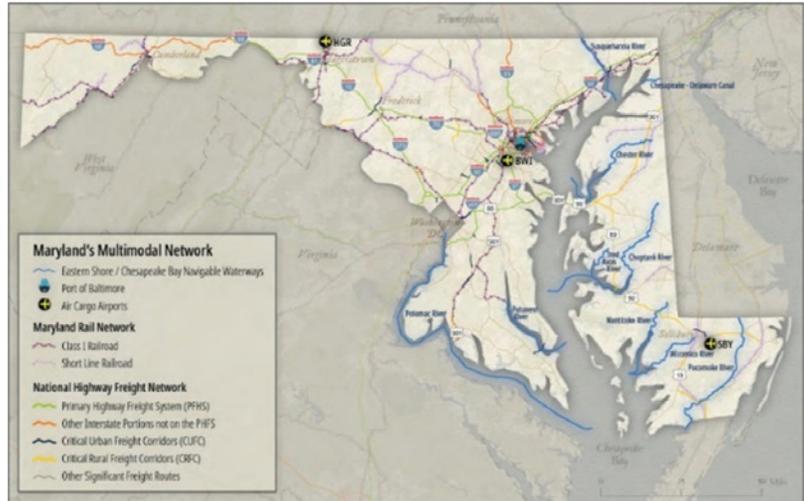
Source: U.S. Census Bureau, American Community Survey (ACS) 2017 -2021

## 2.2 Connections to Existing Transportation Infrastructure

DMT has direct access to multiple modes of transportation, including local roads, state highways, the interstate highway system, the national freight rail network, the marine highway system, and Baltimore Harbor, as illustrated on Figure 2-2. Many major transportation arteries are within minutes of DMT. Baltimore has a confluence of several interstates that are part of the National Highway Freight Network and is part of the state of Maryland’s Multimodal Freight Network as illustrated in Figure 2-2, including the following by classifications (highways with segments in multiple classifications are listed under their highest classification):

1 The Climate and Economic Justice Screening Tool (CEJST) identifies the project location within Census Tract 24510260605 as a Historically Disadvantaged Community<sup>13</sup>  
 2 <https://maps.dot.gov/BTS/GrantProjectLocationVerification/>  
 3 THE ECONOMIC IMPACTS OF THE PORT OF BALTIMORE, 2023 (maryland.gov) Page 16 and 17

- **Primary Highway Freight System:** I-695, I-70, I-95, S150, S173, S2, and the local road network surrounding the Port of Baltimore
- **Non-Primary Highway Freight System:** I-895, I-195, I-83, I-395, and I-795<sup>4</sup>
- **Rail Access:** DMT contains over eight miles of rail inside their secure facility. Both CSX and Norfolk Southern have the ability to move freight through DMT.



Source: Maryland Statewide Freight Plan, 2022

**Figure 2-2: Maryland's Multimodal Network**

In addition, the region includes several local roads classified as Critical Urban Freight Corridors. DMT's access to several routes on the National Highway Freight Network provides connectivity of goods and supplies throughout the eastern seaboard. DMT has direct access to Baltimore Harbor and other local waterways and is the designated automobile and High & Heavy RORO terminal at the Port. DMT is located on the M-95 Marine Highway.

## Section III: Grant Funds, Sources, and Uses of Funds

### 3.1 Port Infrastructure Development Program Costs

The Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project has a construction cost of \$51,510,126 and is consistent with the project eligibility requirements for a PIDP Grant, based on the 2024 NOFO. Appendix F includes a detailed cost estimate that is based on recent engineering projects and the 60% design already completed for this project. These project costs do not include any previously incurred expenses and is not seeking reimbursement for the design or the NEPA process for this project. MPA does not expect that there will be any pre-obligation expenses incurred before executing a PIDP Grant agreement.

### 3.2 Funding Request, Sources of Funds, Funding Availability, and Funding Commitments

MPA requests \$30,906,076 in PIDP Grants to complement \$20,604,050 of MPA funds for the Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project. The project, therefore, would be funded 60% by PIDP, and 40% by State of Maryland funds, with no additional federal funds. Table 3-1 summarizes project costs. The breakdown of funding is presented in the following subsections. There are no restrictions or conditions on the timing, sequencing, or availability of non-federal funding.

**Table 3-1: Funding Breakdown**

CONSTRUCTION	PIDP FUNDING	MPA/MDOT FUNDING	TOTAL
Year 1	\$16,071,159	\$10,714,106	<b>\$26,785,266</b>
Year 2	\$14,834,916	\$9,889,944	<b>\$24,724,861</b>
<b>Total:</b>	<b>\$30,906,076</b>	<b>\$20,604,050</b>	<b>\$51,510,126</b>

<sup>4</sup> NATIONAL HIGHWAY FREIGHT NETWORK VISUALIZATION TOOL (arcgis.com)

## Non-Federal Funding

If a PIDP Grant is awarded, MPA/MDOT commits to funding its \$20,604,050 portion of the project. Appendix C includes a letter stating MPA/MDOT's commitment to funding its portion.

## Federal Funds

No federal funds are currently committed to this project. MPA/MDOT applied for the FY 2024 Multimodal Project Discretionary Grant Opportunity on May 6, 2024.

Without federal funding, the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project will not proceed, causing Berth 11 to completely close. This will stall the region's economic growth and reduce automobile and High & Heavy RORO equipment capacity on the East Coast.

## Section IV: Merit Criteria

### 4.1 Achieving Safety, Efficiency, or Reliability Improvements

#### 4.1.1 Safety

The Maritime Transportation Security Act sets forth requirements for safety and security at all marine terminals owned by the MPA. Meeting the requirements of the Act each year is a goal of MPA, however, as noted in their 2019 Strategic Plan, exceeding those requirements, by staying up-to-date and implementing cutting edge technologies and procedures to secure terminals and maintain the highest level of safety, is preferred.<sup>5</sup>

The Project in this PIDP application is to reconstruct a portion of Berth 11 and prevent its infrastructure failure causing it to close. If Berth 11 were to close due to lack of funding, the DMT would only be able to handle one ship at a time in Berths 11-13 causing the 50% of the automobile and High & Heavy RORO cargo to relocate to other ports adding approximately 1,841,848 of additional roadway miles required to transport the cargo and increasing the likelihood of accidents and thus, fatalities as described below.<sup>6</sup> A detailed analysis of how safety impacts were calculated follows. However, this analysis is conservative, since it is based on only Berth 11 closing and its cargo shifting to other ports. In reality, if Berth 11 closes, as anticipated without this construction project, substantially more cargo will shift to other East Coast ports increasing truck travel with corresponding impacts to safety. A summary of the analysis is illustrated in Table 4-1.

According to the BCA, safety benefits are derived from comparing the vehicle miles traveled (VMT) and truck travel distance today compared to what happens if Berth 11 closes. The savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and heavy RORO equipment origin and destination points now served by Berth 11 compared to the use of other Northeast ports that would occur without the completion of the project. Safety benefits are defined in terms of reduced accidents and associated injuries as the result of the reduced vehicle truck miles traveled due to the completion of the Project. Accidents per 100 million VMT were developed from Surface Transportation, A Comparison of the Costs of Road, Rail and Waterways Freight Shipments that are not Passed on to Consumers, GAO, Report to the Subcommittee on Select Revenue Measures, Committee on Ways and Means House of Representatives, January 2011.

<sup>5</sup> MDOT MPA Strategic Plan 2019, p 19

<sup>6</sup> The value of an accident, a fatality, injury, or property damage only (PDO) was collected from BTS Motor Vehicle Safety Data, 2015 National Transportation Statistics, 2015, and the Benefit Cost Analysis Guidelines for Discretionary Grant Programs, January 2023, Table A-1.

**Table 4-1: Accidents per 100 Million VMT**

	ACCIDENT/PROBABILITY 100 MILLION VMT	VALUE PER ACCIDENT, 2022\$
Fatal Accident Cost (K)	1.13369	\$14,022,900
Severe Injury Accident Cost (A)	79.92426	\$217,600
PDO Accident Cost	203.40039	\$9,100

Source: Traffic accident incident per 100 million miles from BTS Motor Vehicle Safety Data, 2015 National Transportation Statistics, 2015; Benefit Cost Analysis Guidance for Discretionary Grant Programs, Office of the Secretary, U.S. Department of Transportation, December 2023, Table A-1: Value of Reduced Fatalities and Injuries

The accident rates per 100 million VMT by type of accident were multiplied by the VMT savings annually under the completion of the Berth 11 Project, to estimate the number of accidents by type (due to the reduced VMT). The estimated number of annual accidents by type saved were then multiplied by the value of accidents (by type) to estimate the total annual value of accidents that would be avoided under the “With Project” scenario due to savings in VMT. These safety savings were estimated through 2044, and then discounted under a 3.1 percent discount rate. The safety benefits and reduction in accidents and fatalities with the construction of the Project were valued to be approximately \$8.4 Million.

### **Worker Safety**

MPA is committed to the safety of its workers and users, such as longshoremen. Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project will enhance the safety of DMTs longshoremen by providing infrastructure that enables safer terminal operations and High & Heavy RORO cargo handling by restoring a deteriorating infrastructure to a new and safe condition. Currently the load capacity is 100 psf and it will increase to 1000 psf once the project is completed creating safer infrastructure.

#### **4.1.2 Efficiency and Reliability**

The Project is Phase 1 of a six-phase project identified by MPA as critical to enhancing cargo operations at DMT. The six phases are anticipated to take approximately twelve years to complete, however, Phase 1 is urgently needed to prevent the complete closure of Berth 11.

**Efficiency.** As noted earlier, a portion of Berth 11 was closed in 2021. The Port temporarily reconfigured Berths 11-13 to accommodate two large RORO ships. If the Project is not completed quickly, Berth 11’s continued deterioration will result in the closing of the entire berth and a 50% reduction of RORO capacity at Berths 11-13. As the top RORO port in the US and having signed a 20-year lease with WWL to have DMT serve as its East Coast hub, a 50% reduction of mooring capacity at DMT Berths 11-13 would substantially modify the RORO supply chain for all of the US. The Project would prevent that reduction and RORO supply chain modification from occurring. The efficiency of the supply chain for the current RORO cargo and for the anticipated increased RORO cargo will be sustained and enhanced through the Project.

**Reliability.** The 2021 waterfront inspection discussed previously resulted in the condemnation of a portion of Berth 11 due to the critical, unsafe condition of the infrastructure. The remaining section of Berth 11 was rated marginal but still safe for employees and mooring. However, sections of infrastructure continue to deteriorate and are anticipated to reach the point of critical, unsafe condition causing the closing of the entire Berth 11 and reduction of RORO vessel capacity at DMT Berths 11-13 by 50%. The Project will demolish the deteriorated infrastructure, replacing it with improved components bringing this portion of Berth 11 back to 100% operational capacity at Berths 11-13. In addition, the Project improves the ability of the MPA to continue operations through or recover from extreme storm events by installing flood barriers, tidal gates and an upgraded stormwater handling system. The Project supports the MPA’s direction of always having safe berth operations and protecting the valuable cargo for RORO cargo ships

MPA is responsible for increasing waterborne commerce through the Port for the benefit of the State. To fulfill this mission, the MPA must manage, develop, innovate, and collaborate with multiple agencies and entities that make the Port work. In order to maintain a modern port facility, the MPA continues to develop projects that will maintain and grow commerce and economic activity within its boundaries. As part of this project development over the last several decades, key infrastructure improvements such as reconstructing Berths 11-13 at Dundalk Marine Terminal have been identified.

This Project also supports several goals outlined in the in the MDOT State Freight Plan including:

- Ensure a Safe, Secure and Resilient Transportation System
- Maintain a High Standard and Modernize Maryland’s Multimodal Transportation System
- Provide Better Transportation Choices and Connections

Furthermore, the objectives achieved by the Project includes modernizing infrastructure to facilitate the movement of goods through increased cargo capacity at Berth 11.<sup>7</sup>

A rehabilitated Berth 11 will provide a flexible, resilient and reliable facility for cargo handling operations. Stormwater system upgrades including backflow prevention devices and flood barriers will allow for safe berth operations and protection of valuable cargo during extreme rainfall and storm surge events. Rehabilitated water, lighting and electrical utility systems will provide uninterrupted services within the Berth work and transit areas. Construction materials and other features, including fendering and corrosion protection, will achieve a 75-year design life.

#### 4.2 Supporting Economic Vitality

Approximately 51,366 jobs in Maryland are generated by Port activity, including 20,193 direct jobs, 23,950 induced jobs, and 7,223 indirect jobs. Approximately 101,880 other jobs in Maryland are related to activities at the Port. When combining direct, induced, and indirect jobs with related jobs, there are more than 222,310 jobs linked to the Port, including jobs in the outlying rural areas.<sup>8</sup>

Marine cargo at the port generated \$70 Billion in economic activity for the State of Maryland in 2023.<sup>9</sup> This year, record volumes are projected again increasing at an annual growth rate that is greater than its neighboring ports on the North Atlantic.

The Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project is cost effective, as indicated in the BCA (Appendix A) and summarized in the following text. The project will provide additional automobile and High & Heavy RORO cargo capacity at the Port, preventing the diversion of that cargo bound for the Mid-Atlantic to other ports. This project’s monetized benefits are summarized as follows, with a full BCA undertaken in accordance with USDOT requirements, shown in Appendix A:

- Determination of the Safety Benefits which results from the savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and High & Heavy RORO origin and destination points now served by Berths 11-13 compared to the use of the terminals at other ports that would occur without the completion of the Project.
- Determination of Environmental Benefits which results from the savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and Agricultural Equipment and Construction Machinery (High & Heavy RORO ) origin and destination points now served by Berth 11-13 compared to the use of the terminals at other ports.

7 [https://www.mdot.maryland.gov/OPCP/MDOTSFPVisionGoalsObjectivesMatrix\\_4-5-21.pdf](https://www.mdot.maryland.gov/OPCP/MDOTSFPVisionGoalsObjectivesMatrix_4-5-21.pdf)

8 <https://mpa.maryland.gov/Documents/EconomicImpactReport2023Summary.pdf>

9 Bureau of Labor Statistics

- Determination of External Trucking and National Infrastructure Benefits which results from the savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and High & Heavy RORO (Agricultural Equipment and Construction Machinery) origin and destination points now served by Berth 11-13 compared to the use of the terminals at other ports that would occur without the completion of the project.
- Determination of Economic Competitiveness Benefits which results from the savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and Agricultural Equipment and Construction Machinery (High & Heavy RORO ) origin and destination points now served by Berth 11-13 compared to the use of the terminals at other ports that would occur without the completion of the project.

These benefits are quantified over years 2022-2048 based on completion in 2028 with benefits starting to accrue in 2028. It is assumed that Project will be completed by 2028. The 2022-2048 period is used and 2022 is used as base year 0 in both the benefits and the cost calculations and discounting, as stipulated in the “Benefit-Cost Analysis Guidance for Discretionary Grant Programs”, U.S. Department of Transportation, December 2023. A 3.1% discount rate is used for all benefits and costs, with the carbon dioxide benefits discounted at 2%.

Table 2 presents the environmental, safety, infrastructure and economic competitiveness benefits generated with the completion of the Project, using a base year of 2022 and using a 3.1% discount rate, and the period ending in 2048. This is a 20-year project life assuming start of project construction in 2026 and completion in 2028. The discount period is 2022-2048.

**Table 4-2: Project Benefits**

NPV AT 3.1%	BENEFITS
Emissions	\$97,343,747.14
Safety	\$8,391,647.08
External Truck	\$8,462,483.97
Economic Competitiveness	\$51,843,288.27
<b>Total Benefits</b>	<b>\$166,041,166.47</b>

As illustrated in Table 4-3, using a 3.1% discount rate, the project has a 3.9 benefit cost ratio. This underscores the strong economic value to the nation, particularly in terms of reducing carbon footprint and enhancing the economic competitiveness to the nation’s exporters and importers, by completing the Project.

**Table 4-3: Benefit Cost Ratio**

MEASURED VALUE	TOTAL
Total Present Value of Benefits @ 3.1% over 20 Years	\$178,435,195.54
Total Present Value of Costs @ 3.1% Discount Rate	\$45,801,393.25
<b>Benefit Cost Ratio with 3.1 Discount Rate</b>	<b>3.90</b>

The alternative metric using VMT as the basis as presented in Table A-14 of the “Benefit-Cost Analysis Guidance for Discretionary Grant Programs”, U.S. Department of Transportation, December 2023, was used to evaluate whether crash reduction by crash type was appropriate for this Project’s evaluation. When using that methodology, the benefit cost ratio declines from 3.9 to 1.64, as shown in Table 4-4. A benefit cost ratio of 1.64 is significant and illustrates that the Project is highly beneficial in supporting economic vitality in the region.

**Table 4-4: Benefit Cost Ratio**

MEASURED VALUE	TOTAL
Total Present Value of Benefits @ 3.1% over 20 Years	\$75,034,952.30
Total Present Value of Costs @ 3.1% Discount Rate	\$45,801,393.25
<b>Benefit Cost Ratio with 3.1 Discount Rate</b>	<b>1.64</b>

### Non-Monetized Benefits

The Project includes many other benefits that have not been monetized and captured in the BCA model but provide significant value to the region and nation. These benefits described below include state of good repair, job creation, support of trade growth, and supply chain support.

### State of Good Repair

Constructed in 1974, Dundalk Marine Terminal Berth 11 has exceeded its useful life. Investment in infrastructure is essential to sustain a high level of operational readiness and to minimize disruptions in port activities. With Berth 11 currently unable to accommodate RORO cargo due to the deteriorated condition of the infrastructure, reconstruction will enable Berths 11 to 13 to accommodate two RORO ships docking at the same time well into the future.

### Job Creation

This Project allows MPA to maintain current services and supply-chain efficiency. It is a unionized public port providing family-supporting wages and benefits to members of the International Longshoremen’s Association (ILA).

Beyond the direct economic benefits of the proposed project, the project will generate a multiplier or domino effect - as the improvements are constructed, Port productivity will increase. As Port productivity increases, DMT will continue to become more cost competitive, enhancing its ability to capture and sustain an increasing share of cargo volume and create additional, high paying jobs. The salary of an average Port worker in the region is approximately \$83,000 versus the average occupation in Maryland which is \$69,750. Baltimore City is a low socioeconomic area designated as an HDC and APP. With 27.7% of workers and approximately 20,000 jobs at the Port coming from Baltimore City, these high paying jobs are critical to economic development within the City and the region.

### Maintaining Existing Trade and Supporting Trade Growth

The Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project, therefore, will not only allow DMT to meet demand by providing additional capacity, but will also enhance economic growth in a historically disadvantaged community. In 2023, marine cargo and cargo vessel operations supported 50,923 jobs in Maryland, either directly or indirectly. Marine cargo at the port generated \$70 billion of total economic activity in the state in 2022. Without Berth 11 replacement 50% of business at DMT Berths 11-13 will be lost.

### Supply Chain Security

There are new port developments and expansions underway along the U.S. East Coast and Canada. By enhancing the infrastructure for automobile and RORO cargo providing an economically competitive port to offload discretionary goods, such as agricultural machinery and exports from U.S. rural areas, within the U.S. rather than Canada, the security of the national and regional supply chain will be maintained.

### 4.3 Leveraging Federal Funding

Partnership is fundamental to this grant application, which proposes federal-state collaboration to meet the goal of an improved waterfront industrial zone, connected by rail, highway, and navigable waters by making infrastructure improvements that facilitate increased economic development.

The full 40% of matching funds for the entire project is provided by MPA/MDOT.

There is a need to reconstruct DMT Berth 11 to avoid losing business and to accommodate increased activity driven by market demands. The benefits to the City and County are extensive – the creation of high-quality jobs and benefits for an underemployed and underserved workforce, local employment for Baltimore residents, increased safety for the region, and the reduction of growing waterfront decay and blight.

### 4.4 Port Resilience

The Project supports one of the strategic initiatives of MDOT’s 2024 Transportation Resilience Plan of Serving Communities and Supporting the Economy by expanding transportation options to allow Maryland’s diverse communities to access opportunities and to support the movement of goods.<sup>10</sup> By increasing capacity at the Port, the Project will maintain and attract additional automobiles and additional RORO that could not otherwise dock at DMT Berth 11.

Many disadvantaged communities are disproportionately affected by pollution and environmental hazards. Reconstructing DMT Berth 11 will mitigate future environmental impacts resulting from deteriorating facilities. Climate change disproportionately impacts vulnerable communities, including those located in coastal areas prone to sea-level rise and extreme weather events. New storm water infrastructure, flood barriers and relocation of waterlines, electrical, and communication landward would improve resiliency for the future.

The project will support goal IN-12 of the City of Baltimore’s Disaster Preparedness and Planning Project to enhance the resiliency. One of the action items of IN-12 is to encourage the development of integrated flood protection systems that use structural (engineering) and non-structural (wetlands) measures within the City’s waterfront to better adapt to impacts from hazard events and climate change.<sup>11</sup> The Project’s integration of flood barriers, tidal gates and an upgraded stormwater handling system allows the Port to recover more quickly from storm surge events and high-intensity short duration storms at the terminal.

## SECTION V: Selection Considerations

### 5.1 Climate Change and Sustainability

The Port remains committed to closely aligning its goals and accomplishments with the stewardship of Maryland’s ecological resources and the wellbeing of neighboring communities. The Project recognizes the synergy between environmental compliance, initiatives exceeding compliance, community engagement, effective cost management, and operational efficiencies at the Port.

#### Reduced Air Pollution

The savings in the truck travel distance and resulting VMT (and ton-miles) to serve the automobiles and High & Heavy RORO origin and destination points which would be served by Berth 11 compared to the use of the terminals at other ports that would occur without the completion of the project would ultimately reduce GHG Emissions.

<sup>10</sup> [https://www.mdot.maryland.gov/OPCP/MDOT\\_TRIP\\_Report\\_2024\\_Final.pdf](https://www.mdot.maryland.gov/OPCP/MDOT_TRIP_Report_2024_Final.pdf)

<sup>11</sup> <https://www.baltimoresustainability.org/wp-content/uploads/2019/10/2018-DP3-For-Print.pdf>

Ultimately this project will reduce GHG emissions in the transportation of the automobiles and High & Heavy RORO . Reduced GHG emissions will result due to the reduced ton-miles traveled on roadways due to the completion of the Project and the elimination of diverting automobile and High & Heavy RORO to other East Coast ports.

## **EcoPort**

Projects and priorities at the MPA are closely aligned with the stewardship of Maryland’s natural resources and the wellbeing of neighboring communities. MPA is committed to being a good neighbor to all the communities that surround its terminal operations and is also committed to meeting its obligations for improved air and water quality and reduction of impacts to the Patapsco River and the Chesapeake Bay. MPA is working to reduce diesel emissions, manage stormwater in a responsible manner, become more energy efficient, and offset environmental impacts from port operations with green projects that meet stewardship goals and provide community benefits. Through its EcoPort initiative, Port leaders, employees, tenants, and community volunteers work together to meet more stringent environmental standards and deliver excellent results.

The MPA remains committed to closely aligning its goals and accomplishments with the wellbeing of neighboring communities and reducing barriers to opportunity. This project supports these initiatives through job creation, community engagement, and quality-of-life improvements in the neighborhoods surrounding the Port.

One of the MPA’s strategic initiatives is maintaining compliance with environmental regulations given the multiple overlapping policies and programs that the MPA must implement. The MPA has been maintaining an Environmental Management System (EMS) that is recognized as an industry standard. The MPA would never be permitted to do many of the innovative activities that it undertakes, were it not for its outstanding track record of meeting rules and requirements. These programs, and their positive track record, must continue to be funded adequately for the MPA to continue to maintain its reputation as an environmental leader.<sup>12</sup>

Construction activities such integration of sea curb, flood barrier, and an upgraded drainage system allows port to recover from storm events and protect the neighboring community from the effects of storm events and environmental impacts.

## **Environmental Justice**

The project will support goal IN-12 of the City of Baltimore’s Disaster Preparedness and Planning Project to enhance the resiliency of the City’s waterfront to better adapt to impacts from hazard events and climate change.<sup>13</sup> Opportunities to increase accessibility, safety, and mobility to evacuation routes and key emergency facilities during and after extreme weather events will be discussed with the adjacent underserved communities. Risks from sea level rise and storm surge disproportionately affect different socioeconomic populations, with higher property damage and lower protection investments being deployed in socially vulnerable communities, as identified by various Social Vulnerability Indices. It is important to MPA to continue to improve not only the environmental resources on and adjacent to its property, but also be a positive steward of environmental justice and provide opportunities to focus investments on underserved communities in ways that mitigate negative impacts of climate change, pollution, and environmental hazards.

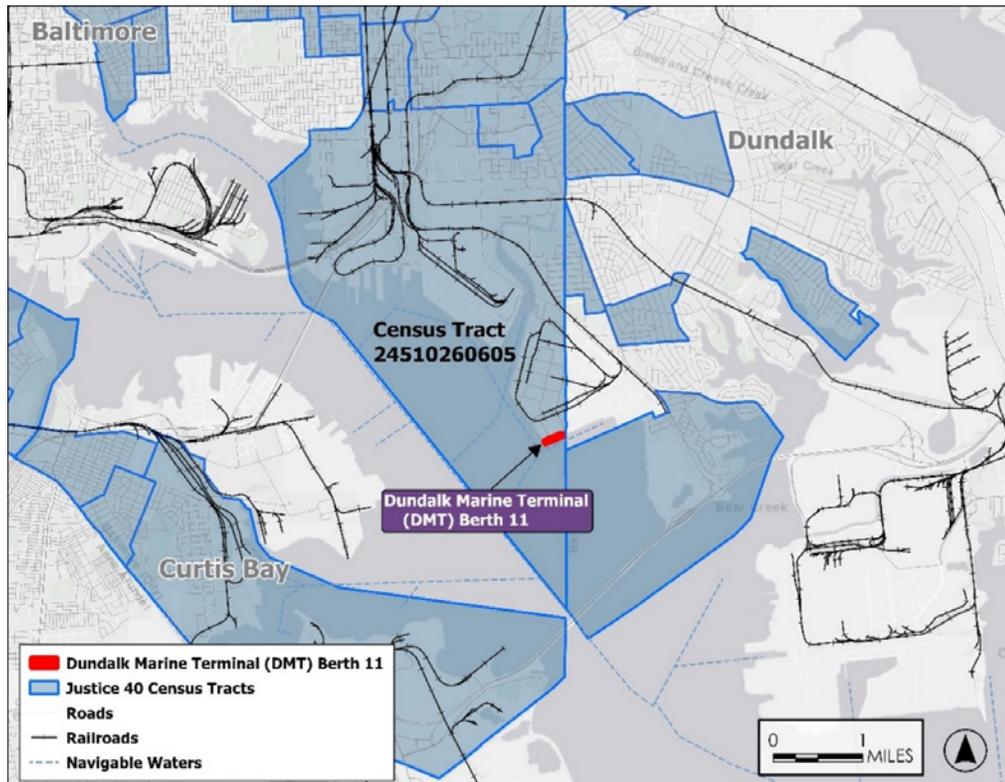
<sup>12</sup> MDOT MPA Strategic Plan 2019, p 23

<sup>13</sup> <https://www.baltimoresustainability.org/wp-content/uploads/2019/10/2018-DP3-For-Print.pdf>

## Area Description for Justice40 Analysis

The project area, Dundalk Marine Terminal (DMT) Berth 11, is located in Baltimore City, Maryland. Baltimore is classified as an Urbanized Area according to the 2020 Census, with the Urbanized Area name being Baltimore, MD, and the Urbanized Area Code as 04843.<sup>14</sup> The Climate and Economic Justice Screening Tool (CEJST) identifies the project location within Census Tract 24510260605 as a Historically Disadvantaged Community, shown in Figure 5-1.

*Figure 5-1: Justice40 Census Tracts*



Demographic data for the project area was obtained from the EPA’s EJScreen tool, displayed in Table 5-1. Although no project activities are proposed in Dundalk proper, it is noteworthy that the project falls within 0.5 miles of the city boundary, prompting the inclusion of demographic information for Dundalk in the table for context.

*Table 5-1: Project Area Demographics*

TOPIC	BALTIMORE, MD	DUNDALK, MD	CENSUS TRACT 24510260605
Population	592,211	66,465	5,842
People of Color	73%	34%	52%
Low-Income	39%	35%	57%
Limited English Households	2%	3%	2%
Unemployment	7%	7%	6%

Source: U.S. Census Bureau, American Community Survey (ACS) 2017 -2021

<sup>14</sup> U.S. Census Bureau (USCB). 2010. 2010 Census - Urbanized Area Reference Map: Philadelphia, PA–NJ–DE–MD. [https://www2.census.gov/geo/maps/dc10map/UAUC\\_RefMap/ua/ua69076\\_philadelphia\\_pa-nj-de-md/DC10UA69076\\_000.pdf](https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua69076_philadelphia_pa-nj-de-md/DC10UA69076_000.pdf)

## Section 5.2 Equity and Justice<sup>40</sup>

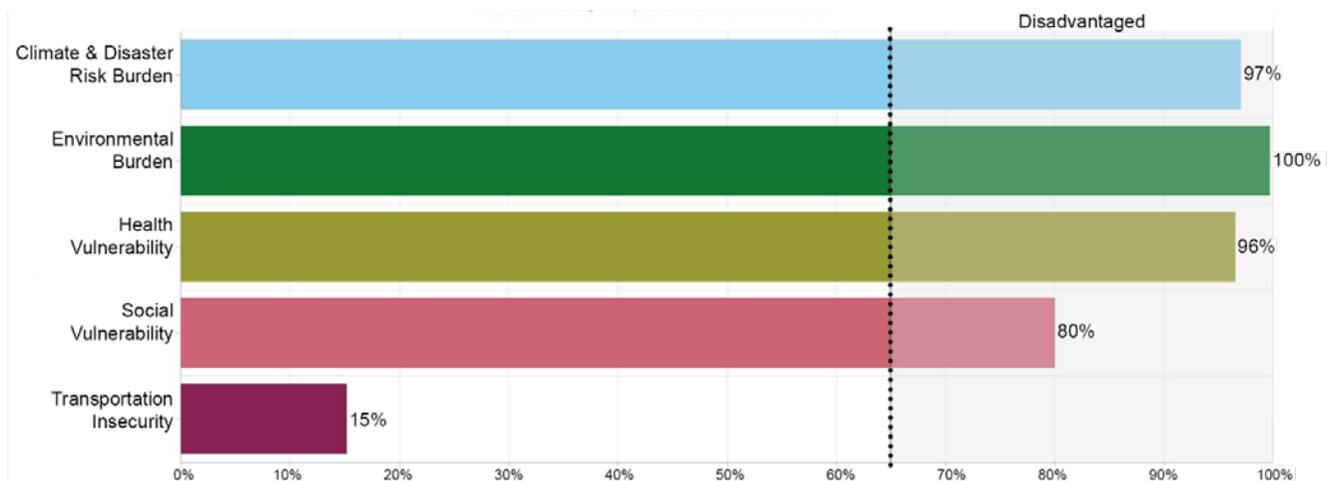
This Project represents an opportunity to support the Justice40 initiative and further equity goals by delivering benefits to a disadvantaged community. The Port remains committed to closely aligning its goals and accomplishments with the wellbeing of neighboring communities, advancing racial equity, and reducing barriers to opportunity.

More than 27% of the Port's employees are from Baltimore City, an HDC and APP with demographics as noted in Table 5-1.

### Equity Considerations

The project area was assessed using the USDOT Equitable Transportation Community (ETC) Explorer to understand how the area is experiencing disadvantages. According to the ETC, the project area is experiencing climate and disaster risk burden (97th percentile), environmental burden (100th percentile), health vulnerability (96th percentile), and social vulnerability (80th percentile). Overall disadvantage component scores are shown in Figure 5-2. An area is considered disadvantaged for any category exceeding 65 percent.

Figure 5-2: Project Area Census Tract Overall Disadvantage Component Scores



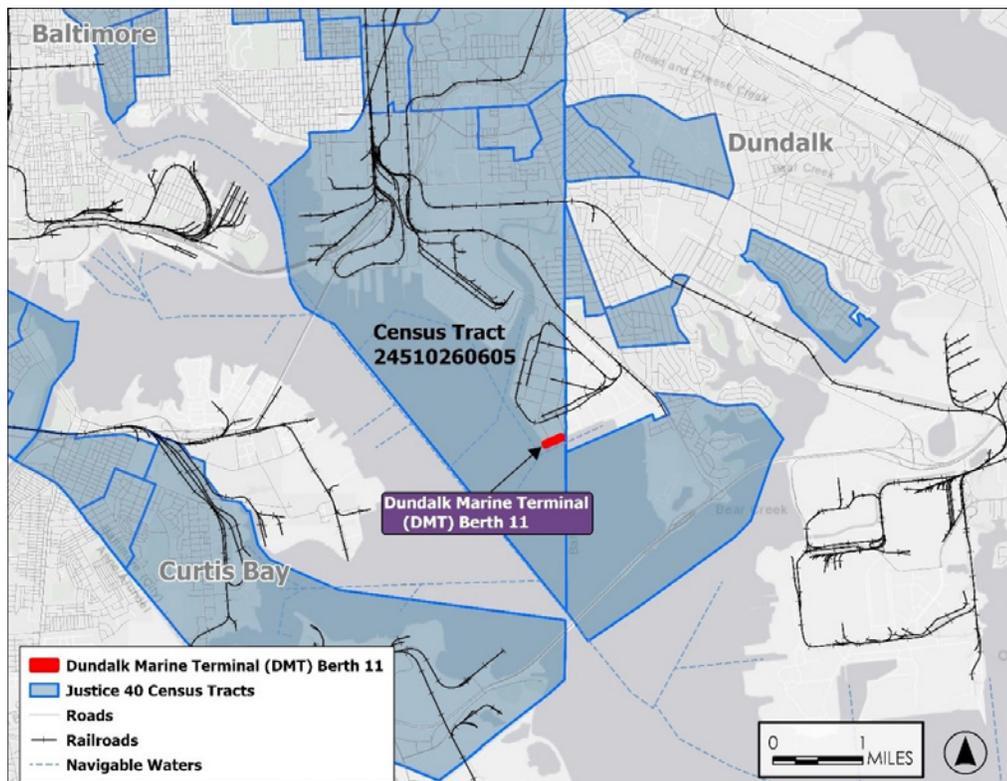
Source: USDOT Equitable Transportation Community Explorer (2024)

According to the ETC, the project area is experiencing disadvantages in every category except transportation insecurity. The highest score is for environmental burden, the project area is in the 100th percentile, nationally. The high environmental burden score is due to the following indicators: proximity to ports, proximity to railways, proximity to high-volume roadways, proximity to toxic release and hazardous sites, pre-1980s housing, diesel particulate matter levels, and ozone levels. The second highest category is climate and disaster risk burden. The project area is considered burdened for each indicator: anticipated changes in extreme weather, annualized disaster losses, and impervious surfaces. The project area is also considered disadvantaged for each indicator under health vulnerability as well: asthma prevalence, cancer prevalence, high blood pressure prevalence, diabetes prevalence, and low mental health prevalence. The project area is experiencing less social vulnerabilities than health vulnerabilities. However, the following indicators were identified as disadvantaged: 200% poverty line, no high school diploma, unemployment, housing cost burden, uninsured, age 17 or younger, and limited English proficiency. The project area is not identified as experiencing disadvantage from transportation insecurity but transportation cost burdens and transportation safety indicators are still above the 65 percentile threshold.

MPA continuously engages with the surrounding community during harbor redevelopment projects. MPA will also be engaging the community during the NEPA phase of this project prior to construction.

## Justice40

As part of the Justice40 Federal Initiative, there is a goal that 40% of the overall benefits of federal investments go to disadvantaged communities. One-hundred percent of this project would be located in a historically disadvantaged community, shown in Figure 5-3. By ensuring the reconstruction of DMT Berth 11 considers the needs and priorities of disadvantaged communities, this project would contribute to advancing the goals of the Justice40 initiative by promoting economic, environmental, and social equity.



*Figure 5-3: Disadvantaged Census Tracts*

Improving the infrastructure at DMT can lead to increased economic activity and job creation. By ensuring that job opportunities generated by the reconstruction project include opportunities to compete for hiring from disadvantaged communities, the initiative can directly benefit economically marginalized populations. Enhancing DMT Berth 11 would enhance access to opportunities in transportation and trade, which can stimulate economic development in surrounding areas. By prioritizing investments in transportation infrastructure located in disadvantaged communities, this project supports the Justice40 initiative.

Many disadvantaged communities are disproportionately affected by pollution and environmental hazards. Reconstruction of Berth 11 would mitigate future environmental impacts resulting from deteriorating facilities. Climate change disproportionately impacts vulnerable communities, including those located in coastal areas prone to sea-level rise and extreme weather events. New storm water infrastructure and relocation of waterlines, electrical, and communication landward would improve resiliency for the future. Lastly, through community engagement during the NEPA Phase prior to construction, local organizations and community stakeholders will be able to review and provide feedback allowing the local community in

the planning and decision-making process for the reconstruction project would empower them to voice their concerns and needs. This engagement phase would lead to more equitable outcomes, ensuring that the project's benefits are distributed fairly among all stakeholders, including historically marginalized groups.

### **Workforce Development, Job Quality, and Wealth Creation**

Baltimore City is an Area of Persistent Poverty with a predominantly minority population. In addition to the monetized benefits included in the BCA, the Project would benefit this area through the previously created workforce development and job training program in use at the Port today. This project will help address the racial inequity and barriers to opportunity by increasing employment opportunities and training the population to be a better fit for other opportunities. In addition, MPA will provide a federal wage rate certification.

MPA is also a part of the Baltimore Port Alliance. The Baltimore Port Alliance holds an annual Hiring & Career Expo. The most recent recruiting effort occurred on May 2, 2024 at the Community College of Baltimore County Dundalk Campus.<sup>15</sup>

## **Section VI: Project Readiness**

### **6.1 Technical Capacity**

#### **Capacity to Implement Project**

MPA has prepared this PIDP Grant Application to be in full compliance with USDOT's Notice of Funding Opportunity. The MPA has ongoing experience with USDOT Discretionary Grants and successfully executes capital projects of this size annually. MPA also confirms that it has sufficient funds to ensure operations and maintenance of items funded under the PIDP Discretionary Grant that MPA will own or control. The MPA confirms that these funds are available only for this project and will remain available until the project is completed and closed out.

MPA is experienced in undertaking large infrastructure projects, delivering them on time and within budget, and meeting the project goals. For example, the privately funded 50-foot draft, 1,200-linearfoot Seagirt Berth 4 Project, opened in January 2013, ahead of schedule and under budget. Appendix H includes letters from MPA committing to following Federal wage rate compliance.

MPA has an excellent record of successfully completing significant infrastructure projects on time, within budget, and in compliance with the procurement processes that accompany a federal grant award, all while maintaining an elevated level of operational performance in the terminal, including:

**FY 2021 CRISI (\$15.8 million):** *The Port of Baltimore Rail Capacity Modernization Project* is modernizing the terminal's intermodal rail yard infrastructure and supporting increased demand for double-stacked trains of containerized cargo to markets across the country.

**FY 2020 BUILD (\$10 million):** *The Resiliency and Flood Mitigation Improvements Project* at Dundalk Marine Terminal Project mitigates flooding and consequent damages caused by storm surge events and high-intensity short duration storms at the terminal.

**FY 2019 INFRA (\$125 million):** *The Howard Street Tunnel Project* will allow double-stacked trains to travel between Baltimore and Philadelphia. This project is currently under construction and will be completed in 2027.

<sup>15</sup> <https://www.baltimoreportalliance.org/career-expo/job-seeker>

**FY 2018 BUILD (\$6.6 million):** *The Seagirt Marine Terminal Berth 3 Modernization P3 Project* will deepen and strengthen Berth 3 and provide associated container yard improvements for a second ULCV-capable berth. The berth construction is completed, and the concrete runways in the container yard was completed in August 2023.

**FY 2013 TIGER (\$10 million):** *The Port of Baltimore Export Expansion Project*, successfully closed out in 2020, expanded handling capacity at Fairfield Marine Terminal by filling in the obsolete West Basin and constructing a rail intermodal facility to handle expanded automotive export and imports.

### Engineering, Design, and Cost Estimate

Engineering for the Project and its components is underway. MPA and their consultants all have considerable experience planning and designing terminals. The designs used for the Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project include a basis of design specifically tailored to the site conditions and intended uses and have been proven to be effective and constructable. Appendix D includes the Technical Project Information. As the owner and approver, MPA is committed to efficiently working to review and approve the final design. Appendices E and F includes a Basis of Estimate. This estimate was prepared in March of 2024.

### 6.2 Project Schedule

MPA is confident that the project can be delivered within the FY 2024 PIDP requirements, including obligation of funds by September 30, 2027, and expending funds by September 30, 2032. Table 6-1 outlines the project schedule proposed for the Project.

**Table 6-1: Project Schedule**

MILESTONE	DATE OF COMPLETION
Date of Award	October 2024
Agreement Period	October 2024 – March 2026
State and local planning approvals*	October 2024 – March 2025
Begin NEPA *	January 2025
Public Engagement *	March 2025 – October 2025
Completion of NEPA*	October 2025
Design completion*	December 2025
Real property and right of way acquisition	N/A
Approval of plans, specifications, and estimates	June 2026
Procurement	July 2026
Agreements	August – September 2026
Construction	November 2026 – November 2028

\*Activities Not Funded by PIDP Grant

### 6.3 Risk Mitigation

Table 6-2 includes an assessment of the project’s potential risks and associated mitigation strategies.

**Table 6-2: Risk Assessment**

<b>RISK</b>	<b>DESCRIPTION</b>	<b>RISK MITIGATION STRATEGY</b>
Low	Market Risk – Lack of Demand	With cargo growth growing, DMT and the Port of Baltimore are at risk for inadequate capacity rather than inadequate demand.
Low	Non-Federal Funding Match	Non-Federal funding will be provided by MPA. They are committed to funding the project and have prepared commitment letters (Appendix C).
Low	Design and Construction Schedule	MPA, and their consultants have undertaken many similar projects recently, including identical berth replacement and upgrades. Therefore, there is a high degree of confidence in the design and construction schedules and the ability to construct around ongoing terminal operations. The current supply-chain issues are delaying projects, specifically around long-lead items. MPA and their consultants have considerable experience designing infrastructure projects to enable alternative sources and will work with construction contractors on value engineering should supply-chain issues prevent timely availability. MPA will monitor and proactively mitigate factors that could impact schedule modifications. Numerous sources for the products used in this project will meet the requirements of Buy America Build America.
Low	Contractor Availability and Qualifications	The scope of work requires highly specialized construction contractors, of which there is a limited group locally. With the industry being busy and no shortage of upcoming infrastructure projects, there is a risk that there are limited responses to the requests for proposals for each project component. MPA has strong relationships with qualified contractors who have performed work at Dundalk Marine Terminal, Seagirt and other MPA facilities. MPA is confident that the project scope and relationships will yield industry interest. MPA will begin industry outreach early to allow potential contractors to allocate resources appropriately to this project and increase the likelihood of multiple bidders.
Low	Third-party Approvals	Other than local, state, and Federal permitting agencies, there are no third-party approvals required. MPA, and their consultants, have demonstrated experience in successfully and expeditiously applying for and obtaining permits and approvals. The mitigation is to accept this risk and to commence permitting as soon as possible.
Low	USACE and MDE Permits	Project activities will require Section 404 Clean Water Act (Federal) and a Wetland License/Permit (State) authorization due to the nature of the disturbances generated by the construction activities within tidal waters. The Project will require a Federal/State Joint Permit Application (JPA). While the Project will avoid and minimize impacts to submerged lands and aquatic resources, authorization of a Tidal Wetlands License (TWL) and approval of a Water Quality Certification (WQC) by the Maryland Department of the Environment (MDE) is anticipated. The Project is anticipated to require an Individual Permit (IP) from the US Army Corps of Engineers (USACE). Because the project is reconstructing the berth within the existing footprint, no issues obtaining Federal and State approvals/permits are anticipated.
Medium	Construction Cost Overrun	MPA, and their consultants have a high degree of confidence in the construction cost estimates, based on similar, recent, and ongoing projects in the northeastern United States. Any cost overrun will be absorbed by MPA, or value engineering may be used to meet the estimated cost.

## **Environmental Risk**

### ***Property Status***

There are no real property or right-of-way acquisitions required for this project.

### ***NEPA Status***

With award of Federal funds, the applicant will complete the required NEPA documentation specified by MARAD, which is expected to be an Environmental Assessment (EA) (Maritime Administrative Order 600-1, Appendix 1, Items 4 and 10), including Section 106 Consultation.

Development of a NEPA EA will include:

- A description of the components of the proposed project and the needs they will address;
- Identification and initiation of permits and approvals required to construct the project;
- Coordination of the Section 106 process to formally initiate consultation as part of the NEPA process;
- Identification of alternatives that have been considered and why they are less feasible; State and Federal agency approvals, which are anticipated to be in place prior to Federal award, will include US Army Corps of Engineers and the Maryland Department of the Environment (MDE);
- Detailed studies would be completed to provide clearances in the areas of: Section 106, Section 4(f), Threatened and Endangered Species, Effects on Waters of the United States, and Hazardous Materials and Special Wastes; and Agency reviews and comment resolution.

### ***Environmental Permits and Reviews***

MPA anticipates that the following non-Federal permits/approvals will be required for the Project:

#### MDE Water Quality Certification (Section 401 Clean Water Act)

- Approval timeline 6-9 months.
- No major new discharges proposed, just construction activity.

#### MDE Tidal Wetlands License

- Approval timeline 9-12 months.
- Do not anticipate mitigation. Will require coordination with the Maryland Department of Natural Resources (DNR). In-water time-of-year work restrictions expected.

#### MDE Stormwater Management & Erosion and Sediment Plan Approval (for the landside disturbance)

- Approval timeline 6-9 months.
- Do not anticipate the shoreline work to trigger stormwater management treatment requirements.
- Erosion and sediment control plans are included in the 30% design drawings.

#### Critical Area Commission Approval

- Approval timeline 4-6 months.
- MDOT has an MOU with the Critical Area Commission and MPA has an Exhibit attachment under the MOU defining project submittal requirements and impacts requiring mitigation

#### 20-CP General Permit for Stormwater Associated with Construction Activity (for >1 ac disturbance)

- Approval timeline 2-3 months.
- Would apply for this after the ESC Plans are approved.

MPA and their consultants routinely prepare and obtain permits and are familiar with the requirements, timelines, and conditions. MPA's schedule includes time to prepare and obtain these permits and MPA is confident in the proposed schedule and timing of the work.

### **State and Local Approvals**

The Dundalk Marine Terminal Reconstruction of Berths 11-13 Phase 1 Project will secure Federal and State approvals for impacts to tidal wetlands through the Joint Permit Application process. This process, when complete, will culminate in an USACE Individual Permit and an MDE Tidal Wetlands License and Water Quality Certification. Typical site development permits will be required as project designs are finalized, including Chesapeake Bay Critical Area Pollutant Reduction compliance and MDE stormwater management and erosion/sediment control plan approvals. Landside construction disturbance will be authorized under the General Permit for Stormwater Associated with Construction Activity. Because the project is reconstructing the berth within the existing footprint, no issues obtaining Federal and State approvals/permits are anticipated.

As a modal agency of MDOT, MPA's projects must be approved for capital funding by MDOT. This project is fully supported by MDOT, and if a PIDP Grant is awarded, it will be incorporated into the Consolidated Transportation Program (CTP). This project has the support of MDOT and elected officials due to its importance and is noted through the Letters of Support in Appendix G , CTP approval will be routine.

Baltimore's Metropolitan Planning Organization is the Baltimore Regional Transportation Board and it supports this project and will include it in its Transportation Improvement Plan should MPA be awarded a PIDP grant.

### **National, Regional, State, Local, and Industry Support**

The project has complete support from throughout the region and supply chain, as confirmed by the Letters of Support (Appendix G).

## Section VII: Determinations

STATUTORY DETERMINATION	GUIDANCE
1. The project improves the safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.	<p>This project’s BCA recognizes the following benefits:</p> <ol style="list-style-type: none"> <li>1. Safety Benefits</li> <li>2. Environmental Benefits</li> <li>3. External Truck/Infrastructure Benefits</li> <li>4. Economic Competitiveness Benefits</li> </ol>
2. The project is cost effective.	<p>The project has a benefit-cost ratio of 1.64 at a 3.1% discount rate. This Project is financially feasible and provides a high benefit-to-cost ratio, underscoring the strong economic value to the nation, particularly in terms of reducing carbon footprint and enhancing the economic competitiveness to the nation’s exporters and importers by completing the Dundalk Marine Terminal Reconstruction of Berths 11-13, Phase 1 Project. Additional details can be found in the BCA (Appendix A).</p> <p>The Project has a strong benefit-cost ratio, reflecting the cost of the project due to the reduction in truck traffic on the nation’s highways, in turn resulting in significant environmental benefits, safety benefits, external truck benefits, and economic competitive benefits. This project will restore DMT Berth 11 operations.</p>
3. The eligible applicant has the authority to carry out the project.	<p>The MPA is a Transportation Modal Unit within MDOT and, therefore, is eligible for a MARAD grant as a political subdivision of the state. MPA owns DMT and has the statute authority to carry out the project, as defined in the Maryland Transportation Code § 6-204 (2015) Subpart E.</p>
4. The eligible applicant has sufficient funding available to meet the matching requirements.	<p>The project has firm commitments from state funding sources, as evidenced in the application and in funding commitment letters in Appendix C. The funding sources are committed to the long-term performance and maintenance of the facility, ensuring that Federal dollars provide benefit for years to come and for future generations.</p>
5. The project will be completed without unreasonable delay.	<p>MPA is confident, as shown in this application, that the project can be delivered within the FY 2024 PIDP requirements, including obligation of funds.</p> <p>Appendix B includes a project schedule.</p>
6. The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.	<p>MPA/MDOT has committed \$20,604,050 million to the project.</p> <p>Without Federal funding, the project will be delayed indefinitely until additional funds are obtained or the project will be implemented in many phases, delaying the benefits, compromising business/revenue and increasing total costs.</p>

## **List of Appendices:**

Appendix A-1: BCA Narrative

Appendix A-2: BCA Spreadsheet

Appendix B: Project Schedule

Appendix C: Funding Commitment Letters

Appendix D: Project Engineering Drawings

Appendix E: SF-424C

Appendix F: Project Estimate Information

Appendix G: Letters of Support

Appendix H: Others (Federal Wage Commitments)