

MOBILE CONTAINER TERMINAL - PHASE 4 PROJECT

MOBILE, ALABAMA

**U.S. DEPARTMENT OF TRANSPORTATION / MARITIME ADMINISTRATION
FY 2022 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP)
GRANT APPLICATION**

PROJECT NARRATIVE

Submitted by:
Alabama State Port Authority – Port of Mobile





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SUPPORTING DOCUMENTATION / ATTACHMENTS

Supporting documentation for this application, including the Benefit-Cost Analysis (BCA) Report, the Benefit-Cost Analysis Excel model and the Letter of Funding Commitment, have been submitted on www.grants.gov as attachments and are also available at:

<https://www.alports.com/aspa-pidp/>.



INTRODUCTORY INFORMATION

<i>Name of applicant</i>	Alabama Port Authority
<i>Is the applicant applying as a lead applicant with any private entity partners or joint applicants?</i>	No
<i>What is the project name?</i>	Mobile Container Terminal - Phase 4 Project
<i>Project Description</i>	The Project will expand the terminal footprint by 35 acres through reclamation of an abandoned slip. A new anchored steel sheet pile, 836 feet long, will provide the riverside containment for the new fill. Container yard improvements include storm drains, utilities, high mast lighting, pavement, and fencing.
<i>Is this a planning project?</i>	No
<i>Is this a project at a coastal, Great Lakes, or inland river port?</i>	Coastal Port
<i>GIS Coordinates (in Latitude and Longitude format)</i>	Latitude: 30° 42' 43.81" N; Longitude: -88° 02' 35.92" W.
<i>Is this project in an urban or rural area?</i>	Urban
<i>Project Zip Code</i>	36603
<i>Is the project located in a Historically Disadvantaged Community or a Community Development Zone? (A CDZ is a Choice Neighborhood, Empowerment Zone, Opportunity Zone, or Promise Zone.)</i>	Located in Historically Disadvantaged Zone and Opportunity Zone
<i>Has the same project been previously submitted for PIDP funding?</i>	No
<i>Is the applicant applying for other discretionary grant programs in 2022 for the same work or related scopes of work?</i>	No
<i>Has the applicant previously received TIGER, BUILD, RAISE, FASTLANE, INFRA or PIDP funding?</i>	Yes
<i>PIDP Grant Amount Requested</i>	\$27,954,000
<i>Total Future Eligible Project costs</i>	\$69,304,000
<i>Total Project Cost</i>	\$72,960,000
<i>Total Federal Funding</i>	\$27,954,000
<i>Total Non-Federal Funding</i>	\$45,006,000
<i>Will RRIF or TIFIA funds be used as part of the project financing?</i>	No



I. PROJECT DESCRIPTION

The Alabama State Port Authority (ASPA) is requesting \$27.954 million in FY2022 Port Infrastructure Development Program (PIDP) grant funding to implement the next capacity expansion phase, designated as Mobile Container Terminal Phase 4 Expansion. The Project will increase terminal capacity to 1.0M TEUs, allowing the Port of Mobile to continue to grow its container business. The Mobile Container Terminal is part of an integrated transportation complex that includes the adjacent Garrows Bend Intermodal Container Transfer Terminal, Mobile Aeroplex at Brookley handling air freight operations, and a Logistics Park with warehousing and logistic opportunities within physical footprint of the Port of Mobile.

A. APPLICANT ELIGIBILITY

The Alabama State Port Authority (ASPA), pursuant to Alabama Code Title 33-1-12, has the power to engage in improvement, promotion, development, construction, maintenance and operations of the harbors, terminal railways, seaports and riverports within the State of Alabama and its jurisdiction. ASPA owns or operates 35 marine terminals, an intermodal container rail yard, and is developing a Logistics Park on ASPA property. ASPA owns Mobile Container Terminal, the project site for this grant application.

B. PROJECT NEED

The Alabama State Port Authority began an ambitious program to unlock its potential as a container terminal gateway port in the early 2000's with the kick-off of the Choctaw Point Terminal project. The centerpiece of the Choctaw Point development program, the Mobile Container Terminal, was permitted in 2005 and opened for business in 2008. As cargo volumes continued to increase, two subsequent construction phases were implemented to expand terminal capacity. Current terminal capacity is estimated at 650,000 TEUs (blue line). As seen in , by 2023, the terminal will handle nearly 700,000 TEUs (green bars), and thus run out of capacity. Actual container volumes from 2017 onward have tracked very closely with those forecasted in ASPA's Strategic Plan.

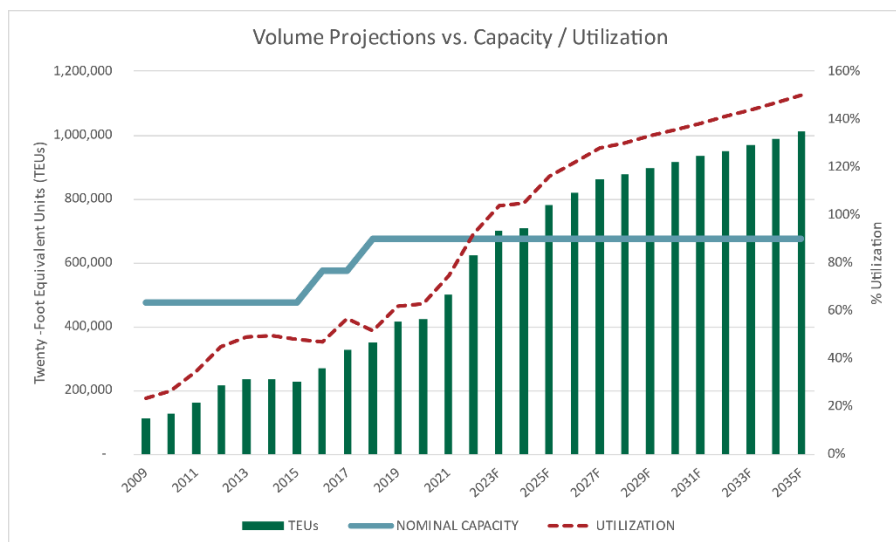


Figure 1: Volume Projections vs Capacity/Utilization

C. PROJECT BACKGROUND

The purchase of the 35.3-acre Mobile River Terminal that borders the north side of the existing Mobile Container Terminal by ASPA in 2018 provided the opportunity to extend both the berth and the container yard. Construction of a 400-foot-long berth extension that now permits simultaneous docking of both a Panamax ship and New Panamax ship was completed in 2020.

The former Mobile River Terminal was primarily a dry bulk facility and originally consisted of two finger piers that enclosed a slip. To optimize the parcel footprint for a container yard, it is necessary to first construct a bulkhead containment structure on the riverside, then fill in the slip, then raise the site grades on existing fast land. The present condition of the project site is depicted in Figure 2.



Figure 2: Current Condition of Proposed CY Expansion Site

D. STATEMENT OF WORK / PROJECT COMPONENTS

The Phase 4 Project will expand the terminal footprint by 35 acres through reclamation of an abandoned slip. A new anchored steel sheet pile, 836 feet long, will provide the riverside containment for the new fill. Container yard improvements include storm drains, utilities, high mast lighting, pavement, and fencing. The Phase 4 expansion is shown in Figure 3.

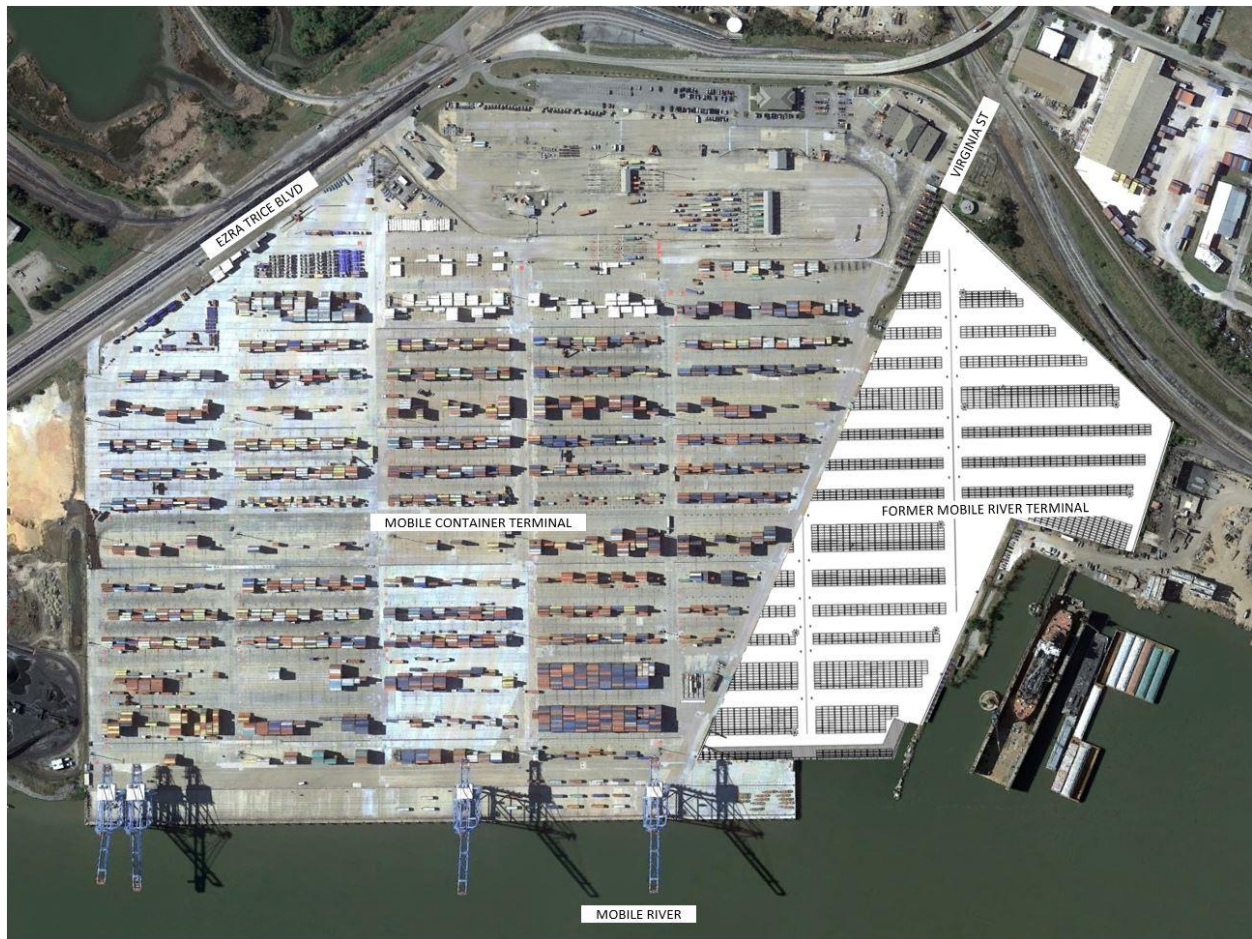


Figure 3: Plan View of Phase 4 Expansion

II. PROJECT LOCATION

A. PORT LOCATION

Mobile, Alabama's only deepwater seaport, is located at the head of Mobile Bay at the confluence of the Mobile River. The Port is served by a federal channel that is currently being deepened to a depth of 50 feet. The Port of Mobile has direct access to five Class I railroads, three regional railroads, two Interstate systems (I-10 and I-65), and 1,200 miles of inland and intracoastal waterways serving the Great Lakes, the Ohio and Tennessee River Valleys (via the Tennessee-Tombigbee Waterway), and the Gulf of Mexico.

B. PROJECT SITE

The Mobile Container Terminal is located on the west bank of the Mobile River south of the ASPA Main Docks complex and the downtown area. McDuffie Coal Terminal is situated immediately downriver from the container terminal, and the Garrows Bend ITCF is located just west of the terminal. The terminal location is shown in Figure 4.

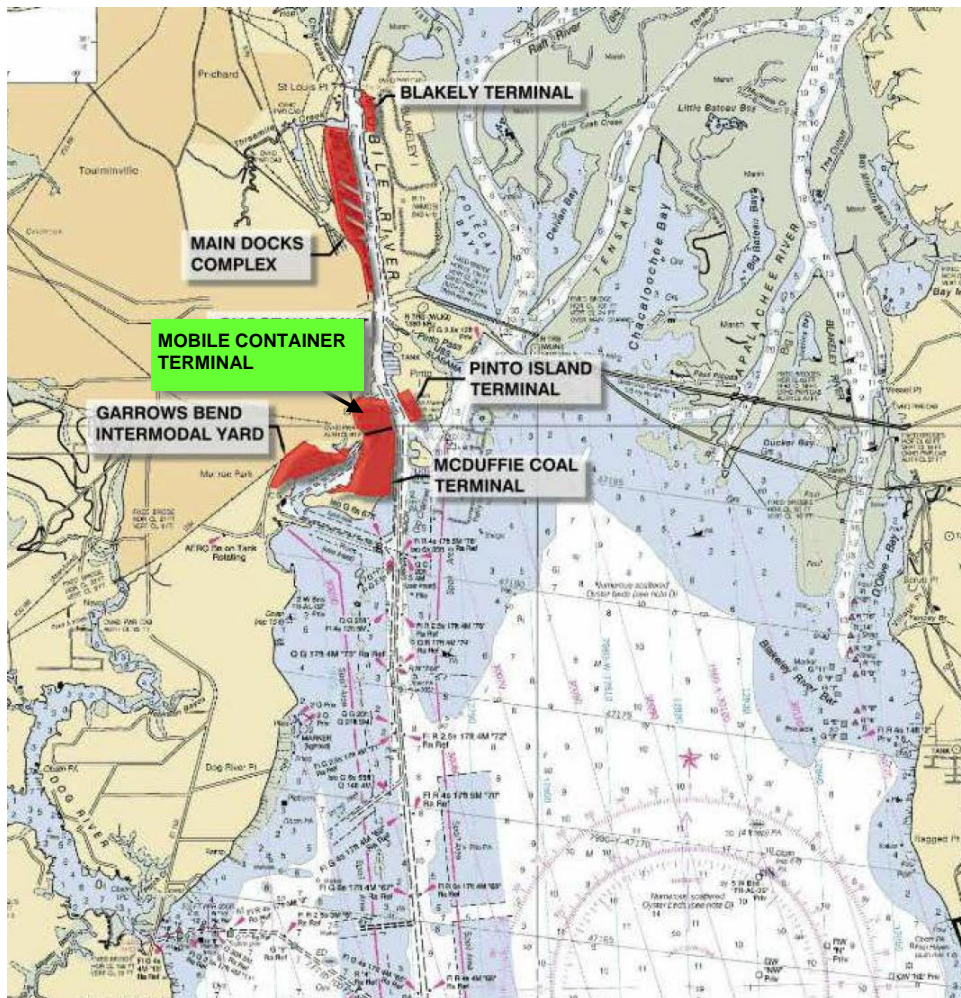


Figure 4: Terminal Location Plan

C. TRANSPORTATION CONNECTIONS

The terminal enjoys excellent modal transport links, both highway and rail. The interchange with I-10 (east-west) is less than ¼ mile from the terminal gate. I-10 connects with I-65 (north-south) approximately 5 miles from the terminal interchange. The interstate highway connectivity is shown in Figure 5.

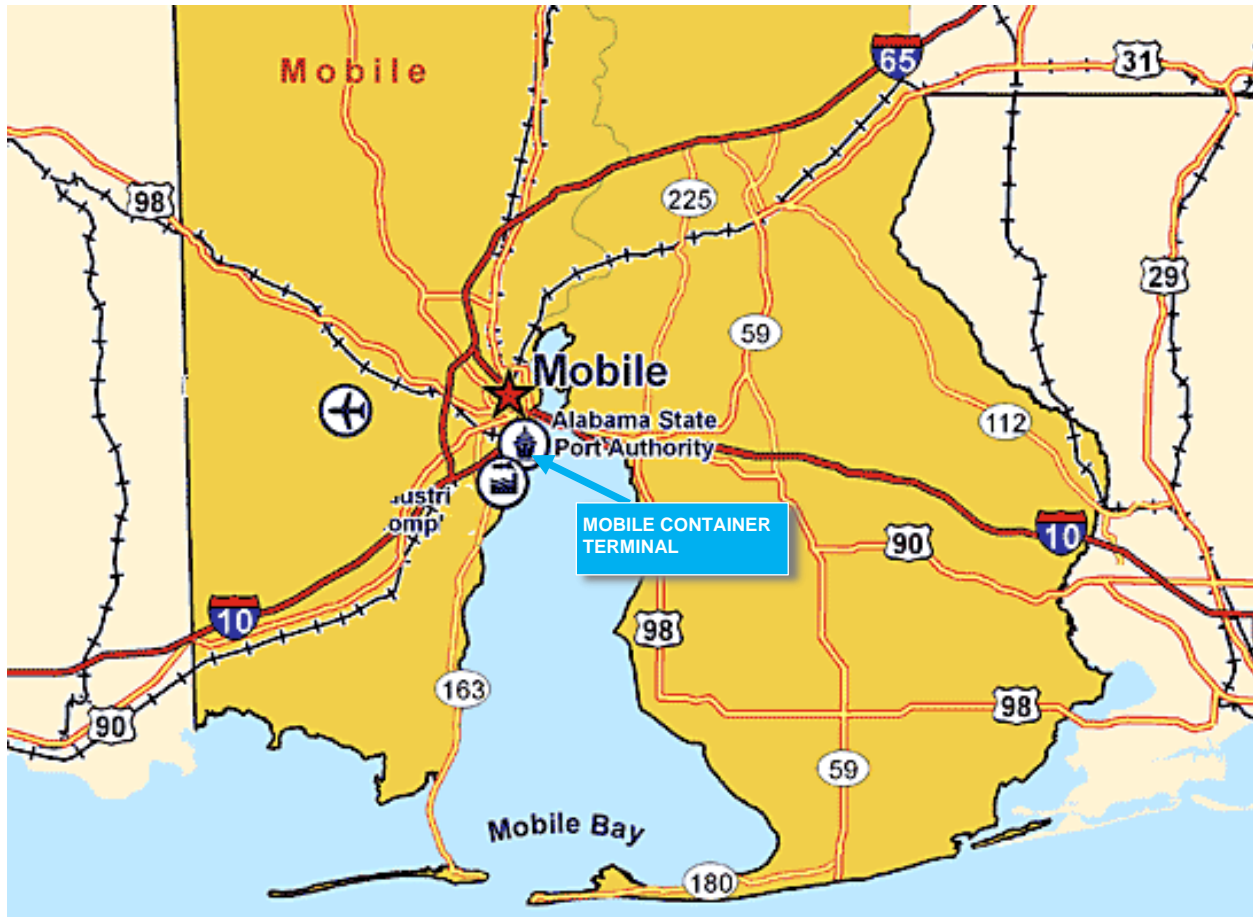


Figure 5: Interstate Highway Connectivity

The Garrows Bend ITCF is served by both Canadian National/IC Railroad and ASPA's short line railroad, Terminal Railway TASD. In turn, the Terminal Railway TASD interchanges with five Class 1 railroads (CSX, NS, CN/IC, BNSF, KCS) and three regional railroads (Alabama & Gulf Coast Railroad, the Alabama Export Railroad, and the CG Railway). ASPA has funding in place to construct an inter-terminal truck flyover directly linking the container terminal with the Garrows Bend rail intermodal terminal and the Logistics Park – both on land owned by ASPA.



D. CENSUS-DESIGNATIONS

The Port is located in the Census-Designated Urbanized Area of Mobile, Alabama (# 57925). The 2010 Census population of the Urbanized Area (as required by the FY22 PIDP), was 412,992. As of 2021, the estimated population of the Urbanized Area was 413,073¹.

E. COMMUNITY DEVELOPMENT ZONES

Mobile Container Terminal is in a census tract designated as Historically Disadvantaged and is also within an Opportunity Zone (Census Tract 12, Mobile County, Alabama²). The Garrows Bend Intermodal Container Transfer Facility is also within an Opportunity Zone (Census Tracts 12 and 74, Mobile Count, Alabama) Mobile County is not a designated county for Empowerment Zone, Promise Zone, or Choice Neighborhood development.

III. GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

A. PIDP FUNDING REQUEST

The total cost of the Mobile Terminal Expansion project is estimated at \$69.31 million. ASPA is allocating over \$41.35 million to the Project, but \$27.954 million is still needed for Project construction. If federal grant funds are not awarded, construction of the Project will be delayed indefinitely as ASPA must seek alternate sources of funding. The delay will result in additional Project costs due to rising construction costs and constrain the opportunity to provide needed additional capacity.

B. PROJECT COSTS AND FUNDING SOURCES

The Alabama State Port Authority is an independent agency of the State of Alabama with bonding authority. ASPA's capital improvement funds come from operating revenues and capital bonds. Sixty-five percent of Project funding will be ASPA or Congressionally designated funds allowable for local match purposes. Federal funding is essential to provide the final 35 percent of the Project budget to allow for construction to proceed on schedule and provide the needed capacity expansion. The cost allocation by funding source is shown in Table 1 and the funding schedule in Table 2 on the next page.

¹ [Mobile County Census](#)

² [Opportunity Zone](#)



Table 1: Project Costs & Funding Sources

Project Component	Cost	Funding Allocation	
		ASPA ³	PIDP
1. Engineering	\$3,507,000	\$3,507,000	\$0
2. Bulkhead Extension	\$11,540,000	\$6,635,000	\$4,905,000
3. Land Reclamation	\$17,911,000	\$10,299,000	\$7,612,000
4. Container Yard	\$36,346,000	\$20,909,000	\$15,437,000
TOTAL	\$69,304,000	\$41,350,000⁴	\$27,954,000

Table 2: Funding Schedule

	2023	2024	2025	2026	Total
ASPA Contribution	\$7,109,000	\$16,264,000	\$16,643,000	\$1,334,000	\$41,350,000
PIDP Contribution	\$4,565,000	\$11,102,000	\$11,380,000	\$907,000	\$27,954,000
TOTAL	\$11,674,000	\$27,366,000	\$28,023,000	\$2,241,000	\$69,304,000

C. DOCUMENTATION OF FUNDING COMMITMENT

See "Letter of Funding Commitment" Attachment on Grants.gov and <https://www.alports.com/aspa-pidp/>.

³ [Letter of Funding Commitment](#)

The Alabama State Port Authority match will include directed Congressional spending and private sector equipment contribution. The FY2022 Omnibus Appropriations Act provides \$132.7 million in directed Congressional Spending for Alabama State Port Authority Facilities and Improvements through HUD. HUD has not provided guidance as to whether those funds may be used for matching purposes, as it does for some of its other programs. Additionally, the project has a private sector contribution of up to \$30 million for two electric Ship-to-Shore gantry cranes necessary to the capacity and productivity of the Phase IV project and emissions reductions. As STS Cranes are not manufactured in the United States and cannot comply with the Buy American provision, the ASPA will seek a waiver, if the private equipment contribution is applied to the cost share.

⁴ Does not include \$3.66 million in prior expenditures.



IV. MERIT CRITERIA

A. ACHIEVING SAFETY, EFFICIENCY, OR RELIABILITY IMPROVEMENTS

i. Loading and Unloading of Goods

The Project involves expansion of the container yard which is the limiting constraint to terminal throughput. Expanding yard capacity will optimize the throughput of the two existing berths and container cranes.

ii. The Movement of Goods Into, Out of, Around, or Within a Port

Terminal capacity is considered to be 650,000 TEU per annum, as referenced in the *2018 Strategic Facility Plan Update*⁵. In 2021, MCT handled 502,623 TEU. Forecasted growth will exceed capacity by 2023. This project expands the yard footprint by 35 acres which will increase terminal capacity to 1.0M TEU, matching limiting capacity of the berths and cranes. Expansion will provide the capacity needed to meet demand until 2038.

Without this expansion, the Port will not be able to handle the growing container demand, and it is assumed that in the absence of this project, the excess demand for containerized cargo in the Port's hinterland will be served via the Port of Savannah. Therefore, in the absence of the Phase 4 Mobile Container Terminal Expansion Project, the Port of Mobile will lose an increasing volume of containerized cargo to the that is destined to or originates in the Port of Mobile's cost-effective hinterland. Therefore, beneficial cargo owners (BCOs) in the Port of Mobile's cost-effective hinterland will pay a cost penalty in shipping and receiving cargo through the Port of Savannah rather than using the Port of Mobile; the State and the nation will encounter increased environmental, safety and infrastructure costs due to a greater distance of truck miles traveled to serve the BCOs; and the BCOs will experience an increase in shipping costs. In addition, the economic impacts in terms of jobs, income, business revenue and state and local taxes associated with this lost cargo will not be realized in the state of Alabama, but instead be generated in Georgia.

iii. Operational Improvements / Port Resilience

The design for the container yard expansion, particularly regarding site grading and storm drainage, will consider two climate change related phenomenon, storm surge and "microburst" rainfall events. Surface elevations will be raised to the maximum extent practical given perimeter tie-in and equipment constraints. All electrical infrastructure will be elevated at least 2 feet above FEMA flood elevations.

iv. Environmental or Emissions Mitigation Measures

From a regional and national perspective, emissions benefits are generated due to the savings in truck travel distance and resulting truck ton miles to serve the identified BCO geographic clusters via the expanded Mobile Container Terminal. Emissions of air pollutants are generated per million ton-miles, and the metrics used to estimate the volume of emissions per truck million ton-

⁵ [2019 Master Plan Update](#)



miles are shown in **Error! Reference source not found.** These emission rates are measured in terms of short tons emitted per million ton-miles.

Table 3: Short Tons of Emissions per Million Ton-Miles by Truck

Emissions	Tons Emitted Per Million Ton Miles
Nitrogen Oxides (NOx)	3.0193
Volatile Organic Compounds (VOC)	0.11
Fine Particle (PM)	0.1191
Sulfur Dioxide (SO2)	0.0055
Carbon Dioxide	229.8

Source: 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 2011⁶

The costs per metric ton of the emissions by type of emission were developed from Benefit Cost Analysis Guidance for Discretionary Grant Programs, Office of the Secretary, U.S. Department of Transportation, March 2022 (Revised), Table A-6. The ton-miles saved (in terms of million-ton miles saved) were multiplied by the short tons emitted per million ton-miles, by emissions type, to estimate short tons of emissions that would be saved with the expansion MCT. The short tons emitted were multiplied by the cost per short ton (after conversion from cost per metric ton to cost per short ton) of each emission type was then multiplied by the corresponding level of short tons emitted that would be saved by the additional containers using the expanded MCT.

The annual benefits were projected through 2038, using the growth projections developed by the Port of Mobile, and assuming a 1 million TEU capacity constraint is reached in 2038. According to the Benefit Cost guidelines outlined by the U.S. Department of Transportation, the net benefits were discounted over the 20-year period using a 7% discount rate (3% discount was used for CO₂ emissions benefits). Net benefits are calculated to be \$327.153M.

From a terminal operational perspective, the terminal operator is planning on deploying electrified rubber-tired gantry cranes (eRTG's) on the expanded parcel in lieu of the diesel-powered RTG's currently utilized on the terminal. Research has shown that the implementation of eRTG's can reduce energy costs by 85% and CO₂ emissions by 60%-80% as compared to conventional diesel-powered RTG's.

B. SUPPORTING ECONOMIC VITALITY AT THE NATIONAL AND REGIONAL LEVEL

i. Benefit-Cost Analysis Summary

⁶ *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*



The Mobile Container Terminal - Phase 4 Project has a very significant Benefit-Cost Ratio (BCR), reflecting the strong merits 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 infrastructure benefits, and economic competitive benefits. Using a 7% percent discount rate, **the Benefit-Cost Ratio is 15.47⁷**. The annual benefits and project costs are presented in the attached excel spreadsheet model file, as are all sources and assumptions and calculations. Since the Phase 4 Project is projected to reach capacity by 2038, the annual benefit calculations only extend to 2038.

The Benefit-Cost Analysis is based on a \$69.3 million project cost inclusive of annual maintenance costs and capital expenditures over the 20-year project period. The schedule of these costs over the 20-year life cycle period are shown in the accompanying Excel BCA spreadsheet model for the Project, including scheduled maintenance costs and capital expenditures over the life of the Project. The life cycle costs are discounted over the 20-year period using a 7% discount rate, again using 2020 as year 0, which equates to a present value of costs in 2020 dollars of \$52.5 million. A full BCA Report is attached to this grant application⁸.

Table 4: Benefit Cost Ratios

BENEFIT COST RATIO	
PRESENT VALUE OF BENEFITS @7%	\$812,254,338
PRESENT VALUE OF PROJECT COSTS @7%	\$52,511,138
BENEFIT COST RATIO	15.47

Without Project Scenario

Based on container projections developed by the ASPA and its terminal operator, in the absence of the Phase 4 terminal expansion, the Port will reach capacity in 2023 and begin losing cargo to Savannah. By 2038, TEU projections would exceed the 1 million TEU terminal capacity with the Phase 4 Container Terminal Expansion Project.

With Project Scenario

With the Phase 4 Expansion of the Mobile Container Yard - With Project Scenario, the Port of Mobile will be able to handle the additional container throughput demand through 2038, resulting in a savings of 169.8 truck miles per container move.

ii. Summary of Project Benefits

Environmental Benefits

Definition: Environmental benefits are generated due to the savings in truck travel distance and resulting truck ton miles to serve the identified BCO geographic clusters via the expanded Mobile Container Terminal.

⁷ [Benefit Assessment Model](#)

⁸ [Benefit Cost Report](#)



Methodology: Emissions of air pollutants are generated per million ton-miles, and the metrics used to estimate the volume of emissions per truck million ton-miles are shown in Tables 3 and 5. These emission rates are measured in terms of short tons emitted per million ton-miles.

Table 5: Short Tons of Emissions per Million Ton-Miles by Truck

Emissions	TONS EMITTED PER MILLION TON MILES
Nitrogen Oxides (NOx)	3.0193
Volatile Organic Compounds (VOC)	0.11
Fine Particulate (PM)	0.1191
Sulfur Dioxide (SO2)	0.0055
Carbon Dioxide	229.8

Source: *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 2011⁶

The costs per metric ton of the emissions by type of emission were developed from Benefit Cost Analysis Guidance for Discretionary Grant Programs, Office of the Secretary, U.S. Department of Transportation, March 2022 (Revised), Table A-6. The ton-miles saved (in terms of million-ton miles saved) were multiplied by the short tons emitted per million ton-miles, by emissions type, to estimate short tons of emissions that would be saved with the expansion of the Mobile Container Terminal. The short tons emitted were multiplied by the cost per short ton (after conversion from cost per metric ton to cost per short ton) of each emission type was then multiplied by the corresponding level of short tons emitted that would be saved by the additional containers using the expanded Mobile Container Terminal.

Safety Costs

Definition: Safety benefits are defined in terms of reduced accidents and associated injuries as the result of the savings in truck travel distance and resulting vehicle miles traveled to serve the identified BCO geographic clusters via the expanded Mobile Container Terminal.

Methodology: Accidents per 100 million vehicle miles traveled 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. 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*, March 2022, Table A-1.

Table 6: Accidents per 100 million VMT by Truck

	Accident Probability/ 100 million VMT	Value per Accident, 2020\$
Fatal Accident Cost (K)	1.13369	\$11,600,000
Severe Injury Accident Cost (A)	78.92426	\$302,600
PDO Accident Cost (no injury)	203.40039	\$4,600



Source: *Traffic accident incidents 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, March 2022, Table A-1: Value of Reduced Fatalities and Injuries*

The accident rates per 100 million VMT by type of accident were multiplied by the vehicle miles traveled annually to estimate the number of accidents by type (due to the VMT). The estimated number of annual accidents by type were then multiplied by the value of accidents (by type) to estimate the total annual value of accidents that would be saved by using the additional terminal capacity provided by the expanded Mobile Container Terminal.

Infrastructure and External Truck Costs

Definition: Infrastructure and External truck costs consist of costs of highway/pavement repair, highway congestion, and noise pollution, due to the savings in truck travel distance and resulting vehicle miles traveled to serve the identified BCO geographic clusters via the additional terminal capacity at the expanded Mobile Container Terminal.

Methodology: Metrics that measure highway/pavement degradation costs per vehicle mile traveled, noise pollution costs per vehicle mile traveled and highway congestion per vehicle mile are published in the *1997 Federal Highway Cost Allocation Study, Final Report, USDOT, Federal Highway Administration, May 2000, Table 13⁹*.

The external cost per vehicle mile traveled metrics shown in Exhibit 5 were multiplied by the annual vehicle mile savings provided by the use of the Inland Intermodal Facility to estimate the external truck cost savings. The reduction in truck miles traveled under the use of the expanded Mobile Container Terminal results in a loss in federal gasoline tax revenues. Therefore, it is necessary to subtract the reduced federal fuel tax from the pavement degradation costs by using the Inland Intermodal Facility, as these tax revenues are used in interstate highway maintenance and repair. The federal fuel tax on diesel fuel, \$0.244 per gallon, was used to estimate the lost federal fuel tax revenue from the vehicle miles savings. The gallons saved were estimated by dividing the vehicle miles traveled savings by 6.4 miles per gallon. The lost federal tax revenue is estimated by multiplying the gallons of diesel saved multiplied by the \$0.244 federal fuel tax per gallon. This lost federal fuel tax revenue was subtracted from the pavement degradation benefits to compute the benefits of the use of the additional capacity resulting from the expanded Mobile Container Terminal on pavement damage. These cost metrics are shown in Exhibit 5.

Table 7: External Truck Cost Metrics

Combination Truck 4 Axle	Cost/VMT 2020\$
Congestion	\$0.3100
Noise	\$0.0393
Pavement (Urban Interstate)	\$0.2698

Source: *1997 Federal Highway Cost Allocation Study, Final Report, USDOT, Federal Highway Administration, May 2000⁹*.

These metrics are applied to the VMT that would be incurred should the Mobile Container Terminal not be expanded.

⁹ [Federal Highway Cost Allocation Study](#)



Economic Competitiveness Benefits

Definition: The economic competitiveness benefits resulting from the Phase 4 Mobile Container Terminal Expansion Project consists of the transportation cost savings to the state and nation's importers and exporters as the result of lower truck costs due to the savings in vehicle miles traveled that would result with the expanded container terminal (rather than using the Port of Savannah in the absence of the expansion. The truck cost savings, or the Economic Competitiveness Benefits of the project, consists of the savings in operating costs of the truck (excluding the driver time) plus the savings in the value of time of the truck driver.

Methodology: To estimate the transportation cost savings, the operating cost per mile for a truck of \$0.94 per mile, was obtained from the Benefit Cost Analysis Guidance for Discretionary Grant Programs, Office of the Secretary, U.S. Department of Transportation, March 2022 (Revised); Table A.5 Vehicle Operating Costs. The cost per mile was then multiplied by the vehicle miles traveled savings each year to estimate the cost savings in truck operating costs.

To estimate the value of time saved for the truck driver, the hours saved with the Phase 4 Mobile Container Terminal Expansion Project was calculated by dividing the vehicle mileage saved by 40 miles per hour. The savings in hours was multiplied by average hourly value of a truck driver, \$32.00 per hour to calculate savings in trucker time. (Benefit Cost Analysis Guidance for Discretionary Grant Programs, Office of the Secretary, U.S. Department of Transportation March 2022 (Revised); Table A-3 Value of Travel Time Savings).

The value of time savings for a truck driver, plus the savings in truck operating costs provides an estimate of the transportation cost savings resulting from the completion of the Mobile Container Terminal Expansion.

Summary of Benefit Cost Analysis

The annual benefits were projected through 2042, using the growth projections developed by the Port of Mobile, and assuming a 1 million TEU capacity constraint is reached in 2038. According to the Benefit Cost guidelines outlined by the U.S. Department of Transportation, the net benefits were discounted over the 20-year period using a 7% discount rate. As stipulated by the U.S. Department of Transportation, 2020 is the base year used in discounting.

Based on this analysis, the Phase 4 Expansion of the Mobile Container Terminal is estimated to generate \$812.3 million of benefits under a 7% discount rate in terms of environmental emissions, safety, external infrastructure, and economic competitiveness benefits.

Table 8: Environmental, Safety, and External Truck Infrastructure Benefits of the Proposed Phase 4 Expansion of the Mobile Container Terminal

BENEFIT CATEGORIES	7% DISCOUNT
EMISSIONS	\$327,152,713
SAFETY	\$68,199,898
EXTERNAL TRUCK	\$104,362,608
ECONOMIC COMPETITIVENESS	\$312,539,119
TOTAL BENEFITS	\$812,254,338

**Totals may not add due to rounding*



C. ADDRESSING CLIMATE CHANGE AND ENVIRONMENTAL JUSTICE IMPACTS

The expansion of the terminal will produce outcomes that reduce greenhouse gas emissions, promote energy efficiency, and increase climate resilience. The number of truck miles needed to serve the beneficial cargo owners in the Port's hinterland will be significantly less than if this cargo is served by Savannah. This will result in a decrease in emissions as discussed in the preceding section and in the Benefit Cost Analysis. Electrification of the container handling equipment within the terminal including the new expansion area will also reduce emissions. The design of the civil infrastructure will consider storm surge and microburst rainfall events.

D. ADVANCING EQUITY AND OPPORTUNITY FOR ALL

The Port of Mobile is a significant employment generator, including a substantial number of minority-held jobs. Over the last decade, Black employee hours for direct ASPA employees have averaged approximately 30% of total employee hours, compared with a Mobile County population that is approximately 36% Black. Black International Longshoremen's Association (ILA) employment on the container terminal or the rail intermodal facility is even stronger. Black employee hours in the container terminal and rail intermodal facilities averaged 41% of total employee hours, compared with a Mobile County population that is approximately 36% Black.

Work within the Port of Mobile is attractive due to its competitive compensation and benefits. The International Longshoremen's Association (ILA Local 1410, 1985, and 1459) represents all skilled labor in the container terminal and the rail intermodal facility. Many direct ASPA employees also choose to join the ILA Local 1984 for their representation. Under Alabama law, public agencies cannot directly enter into project labor agreements, but many private contractors choose to work with and through labor-affiliated subcontractors.

The expanded capacity of the facility is key to providing greater opportunities for employment to the local population base and the underemployed. The potential annual economic impacts generated by the added volume post terminal expansion are shown in 9. Benefits in terms of jobs, personal income, revenue, and taxes are presented for the first year of the completed project (2026), as well as in 2030, and in the 2038 when the terminal reaches the 1 million TEU capacity constraint. The expansion will create 392 direct jobs when this facility comes online and will ultimately grow to 772 direct jobs by 2038.

Table 9: Potential Economic Impacts of the Phase 4 Mobile Container Terminal Expansion

	Annual Impact 2026	Annual Impact 2030	Annual Impact 2038
JOBS			
Direct	392	590	772
Induced	361	544	710
Indirect	215	323	423
Total	967	1,458	1,905



	Annual Impact 2026	Annual Impact 2030	Annual Impact 2038
PERSONAL INCOME (\$1,000)			
Direct	\$18,281	\$27,507	\$35,931
Re-spending/Local Consumption	\$33,343	\$50,170	\$65,534
Indirect	\$9,548	\$14,395	\$18,820
Total	\$61,172	\$92,072	\$120,285
Business Revenue (\$1,000)	\$144,897	\$224,581	\$297,347
State and Local Taxes (\$1,000)	\$5,077	\$7,642	\$9,984
Local Purchases (\$1,000)	\$16,786	\$25,307	\$33,087

**Totals may not add due to rounding*

An estimate of the short-term economic impacts generated by the construction activity are presented in Table 10. ASPA has a robust Disadvantaged Business Enterprise (DBE) program and has consistently met and exceeded its DBE goals, which currently stand at 8.8%.

Table 10: Construction Impacts

Expanded Container Terminal Construction One Time Impact	
JOBS	
Direct	304
Induced	177
Indirect	167
Total	648
PERSONAL INCOME (\$1,000)	
Direct	\$15,552
Re-spending/Local Consumption	\$12,890
Indirect	\$7,419
Total	\$35,861
Business Revenue (\$1,000)	\$69,300
State and Local Taxes (\$1,000)	\$2,976
Local Purchases (\$1,000)	\$13,043

ASPA is in the process of adopting official organization policies and procedures regarding Diversity, Equity and Inclusion for full implementation in FY 22.



E. LEVERAGING FEDERAL FUNDING TO ATTRACT NON-FEDERAL SOURCES OF INVESTMENT

Non-federal funding accounts for 65% of the future eligible Project cost. The non-federal funding will be provided by ASPA.

V. PROJECT READINESS

A. TECHNICAL CAPACITY

i. Experience Working with Federal Agencies

ASPA has extensive experience in partnering with Federal agencies including USACE, Department of Homeland Security, US Coast Guard, and MARAD from both a permitting and a funding perspective. ASPA is the project sponsor working with USACE on the \$365.7 Mobile Ship Channel Deepening and Widening project that will provide -50+ ft. draft for New Panamax ships to call on Mobile Container Terminal.

ii. Experience with BUILD, INFRA and PIDP Awards

ASPA has been the recipient of two TIGER grant awards, one for the Garrows Bend Rail Bridge project and one for the development of a Ro-Ro Terminal at the Main Docks. Both projects were completed successfully. ASPA is familiar with MARAD protocols regarding NEPA approval, progress reporting, invoicing, and project close-out.

iii. Technical Experience and Resources

ASPA has an in-house engineering department that procures and manages capital projects from planning through final design, then through construction. This project will be procured using the established ASPA Design-Bid-Build delivery method. ASPA has several professional consultant firms under contract which offer a wide range of expertise under an on-call basis. The intent is to designate the consultant firm that has been involved with this project from the concept stage up to this point in time as Engineer of Record for final design and construction support services.

The Gulf Coast area is served by multiple heavy construction contractors that are experienced in marine construction. Previous contracts, similar in scope, have attracted heavy bidder interest by qualified contractors.

iv. Feasibility / Constructability

The proposed improvements consist of infrastructure components that have been successfully constructed in previous phases of terminal development. These include the bulkhead structure, land reclamation, site stabilization, utilities, and Roller-Compacted Concrete (RCC) pavement. The only exception is infrastructure for implementing eRTG's and there are design precedents from other terminals.

The design of the Bulkhead Extension/Land Reclamation package has been advanced to 35% complete while design progress on the Container Yard Improvements package is about 15%



complete¹⁰. The designs have been advanced to the point where reliable quantity take-offs can be obtained. Lessons learned from previous construction projects will be incorporated into the design. It is not anticipated that there will be either unusual coastal or subsurface conditions that constrain the contractor's ability to execute the work.

Construction Cost estimates used for project budgeting were prepared using a combination of supplier quotes and unit item bid prices from previous terminal projects of similar scope. All pricing was updated using cost checks from recently bid projects and pricing obtained from marine contractors. Construction cost estimates are attached separately to this application¹¹.

v. Schedule¹²

The development schedule is shown in Table 11 and assumes a total construction duration of 34 months from the date that the grant agreement is finalized. The target date for bringing the new area online is February 2026. Demolition of the existing finger pier will be complete by start of construction and the bulkhead extension/land reclamation project(s) will be "shovel ready".

Table 11: Development Schedule

	2022						2023						2024						2025						2026															
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
Grant																																								
Application																																								
Award																																								
Agreement																																								
Duration																																								
Engineering / Permitting																																								
USACE/ADRM																																								
NEPA																																								
Final Design/CSS																																								
Construction																																								
Procurement																																								
Bulkhead Extension																																								
Land Reclamation																																								
Container Yard																																								

B. ENVIRONMENTAL RISK

i. NEPA Status

ASPAs The Choctaw Point Complex, which includes Mobile Container Terminal, the Container Intermodal Transfer Facility and Logistics Park, concluded all required NEPA assessments under

¹⁰ [Project Drawings](#)

¹¹ [Cost Estimate](#)

¹² [Project Schedule](#)



the USACE Choctaw Point Terminal Final EIS and Record of Decision¹³. These documents were completed by the USACE Mobile District on August 2004 and March 2005, respectively. The Phase 4 Terminal Expansion project received a permit modification from USACE, dated August 8, 2021. Studies and data from this permit modification will form the basis for preparation of the NEPA submittal to the MARAD should a grant be awarded. The Port has worked with MARAD on previous NEPA documents linked to grant awards and believes the above schedule can be achieved or revised to meet MARAD environmental constraints. The Lead Agency for the NEPA Environmental Impact Statement and Record of Decision for this project was the United States Army Corps of Engineers, Mobile District. Other cooperating agencies included in the development and review of the planning of this project included:

- Federal: Environmental Protection Agency, United States Coast Guard, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Mobile Bay National Estuary Program (MBNEP), Federal Aviation Administration, and the Federal Emergency Management Agency
- State: Alabama State Port Authority, Alabama Department of Transportation, Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, Alabama Historical Commission
- Local: City of Mobile, Mobile County, and the South Alabama Regional Planning Commission

ii. Environmental Permits and Reviews

The Tidal Wetlands Permit to extend the bulkhead and fill the slip has been obtained from USACE/Alabama Department of Environmental Management (ADEM). The permit number is *SAM 2017 00189 JEB*, dated August 18, 2021¹⁴. Obtaining NEPA approval from MARAD should be straightforward.

iii. State and Local Approvals

The stormwater management approval for the new container yard area will be submitted to ADEM as a modification to the existing storm water management permit. Approvals from ADEM for sediment and erosion control measures are obtained by the contractors before start of construction. No City of Mobile approvals are needed for this project.

iv. Environmental Studies

All studies required to obtain the Tidal Wetlands permit have been completed. It is not anticipated that any further environmental studies will be required.

C. RISK MITIGATION

¹³[Choctaw Point Terminal FEIS and ROD](#)

¹⁴[Permit Modification Letter](#)



Table 12: Project Risks and Mitigation Strategies

Risk	Description	Impact / Probability	Mitigation
Construction of Foundation Elements	Encountering either buried obstacles or bearing layer being deeper than anticipated requiring longer sheet piles and piles	Medium / Low	Both a geophysical (sonar) and subsurface investigations will be performed to inform the design
Contaminated Soils or Groundwater	Encountering contaminated soils or groundwater during excavation	Low / Low	Environmental studies do not indicate contaminated soils or groundwater. Excavation on this project is limited since project involves reclamations and filling.
Material Price Escalation	Volatility regarding pricing of construction materials will continue, driving up the cost of construction.	Medium / Medium	Project budget does include 15% contingency. Escalation in material pricing expected to moderate after 2022.

VI. DOMESTIC PREFERENCE

ASPA is aware of the April domestic preference guidance from Office of Management & Budget (OMB) and will follow those policies and procedures. Both the construction bid and contract documents issued by ASPA will stipulate that materials and manufactured products shall be produced in the United States. Contractor submittals and material deliveries will be monitored to assure compliance.



VII. DETERMINATIONS

Project Determination	Guidance
<i>1. The project improves the safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.</i>	Efficiency: The Project involves expansion of the container yard which is the limiting constraint to terminal throughput. Expanding yard capacity will optimize the throughput of the two existing berths and container cranes. Safety: The Project will reduce highway truck miles by 169.8 miles for every container moved. Reliability: The Project is designed to address both sea level rise/storm surge, as well as intense, microburst rainfall events.
<i>2. The project is cost effective.</i>	The Project has a very significant Benefit-Cost Ratio (BCR), reflecting the strong merits 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 infrastructure benefits, and economic competitive benefits. Using a 7% percent discount rate, the Benefit-Cost Ratio is 15.47. The Project is very cost effective since it optimizes throughput of existing terminal assets and reduces highway truck travel by 169.8 miles for every container moved beyond terminal capacity.
<i>3. The eligible applicant has the authority to carry out the project.</i>	Authority: The Alabama State Port Authority (ASPA), pursuant to Alabama Code Title 33-1-12, has the power to engage in improvement, promotion, development, construction, maintenance and operations of the harbors, terminal railways, seaports and riverports within the State of Alabama and its jurisdiction. ASPA owns or operates 35 marine terminals, an intermodal container rail yard, and is developing a Logistics Park on ASPA property. Ownership: ASPA owns Mobile Container Terminal, the project site for this grant application.
<i>4. The eligible applicant has sufficient funding available to meet the matching requirements.</i>	See "Letter of Funding Commitment" Attachment on Grants.gov. ³



<p><i>5. The project will be completed without unreasonable delay.</i></p>	<p>Obligation: ASPA has worked successfully with MARAD and USDOT on previous grant projects and is aware of grant agreement and NEPA requirements and timelines. The ASPA schedule shows both the NEPA and the grant agreement processes beginning in October 2022 and concluding by April 1, 2023. Obligation can occur in April 2023, and well before the obligation deadline of September 2025.</p> <p>Construction Start: ASPA has advanced engineering for the land reclamation portion of the project (65%) and the container terminal improvements (15%). All permitting for the Project is either underway or completed. Construction award can occur in April 2023, with Notice to Proceed shortly thereafter. Construction completion is anticipated in early 2026.</p> <p>Federal Decisions: Delays in grant award or grant agreement dates will delay the Project. However, obligation and construction award dates will be well within PIDP deadlines.</p>
<p><i>6. The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.</i></p>	<p>This is an urgent project. ASPA will exhaust its container current terminal capacity by 2023. ASPA has numerous long term financial commitments and is unable to fund the Project for the foreseeable future. Without Federal funding, the Project will be delayed indefinitely, and its costs will increase due to commodity and wage inflation.</p>