



2022 Port Infrastructure Development Program Application



PORT OF
BEAUMONT

PORT OF BEAUMONT
BeauHou Container on
Barge Infrastructure
Project

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**U.S. Department of Transportation
Port Infrastructure Development Program 2022**

GRANT APPLICATION

| FIELD NAME | GUIDANCE |
|--|--|
| Name of applicant | Port of Beaumont Navigation District of Jefferson County, Texas |
| Type of applicant | Lead applicant No private entity partners or joint applicants |
| What is the project name? | BeauHou Container on Barge Infrastructure Project |
| Project description | The BeauHou Container on Barge Infrastructure Project will fund two Port infrastructure improvement components: the Lot 6 Barge Dock Strengthening Project and the Lot 14 Multi-purpose Container Marshalling Yard, both of which will aid in bringing the Port of Beaumont's container on barge service into operation, increase outdoor storage capacity, alleviate current capacity constraints, and support future growth. The Lot 6 component includes construction of a relieving platform to strengthen an existing barge dock at the Port of Beaumont, which will provide the infrastructure needed to move containers via barge. The Lot 14 component includes strengthening and hard surfacing an existing 26.14-acre dirt lot. The two projects will serve to move the Port of Beaumont container on barge service forward and will double as general-purpose laydown area that facilitate the timely movement of cargo into, out of, and through the Port of Beaumont. |
| Is this a planning project? | No |
| Type of port? | Coastal Seaport |
| GIS Coordinates | Lot 6 Barge Dock Strengthening: Latitude: 30.075269 Longitude: -94.087727 Lot 14 Multi-purpose Container Marshalling Yard: Latitude: 30.070634 Longitude: -94.081442 |
| Urban or Rural Area | Urban |
| Project zip code | 77701 |
| Is the project located in a Historically Disadvantaged Community or a CDZ? | Historically Disadvantaged Community 1,000 feet from an Opportunity Zone |
| Has the same project been previously submitted for PIDP funding? | Yes, PIDP 2021 (smaller scope) |

| | |
|---|--|
| Is the applicant applying for other discretionary grant programs in 2022 for the same work or related scopes of work? | Yes, this project will be included as part of a collaborative 2022 MEGA project. |
| Has the applicant previously received a TIGER, BUILD, RAISE, FASTLANE, INFRA or PIDP funding? | BUILD 2019 |
| PIDP amount requested | \$26,440,500 |
| Total project cost | \$35,254,000 |
| Total federal funding | \$26,440,500 |
| Total non-federal funding | \$8,813,500 |
| Total future eligible costs | \$26,440,500 |
| Will RRIF or TIFIA funds be used as part of the project financing? | No |

I. Project Description



The BeauHou Container on Barge Infrastructure Project is comprised of two components: the Lot 6 Barge Dock Strengthening component (Lot 6 Project) and the Lot 14 Multi-purpose Container Marshalling Yard component (Lot 14 Project). Completed together, these two components will provide the infrastructure needed to bring the Port of Beaumont

to Port Houston Marine Highway Designated Container on Barge Service into operation and will alleviate current capacity constraints. The project has a Benefit-Cost Ratio of 3.23 with over \$114 million in present value benefits. **See Attachment 10- Benefit Cost Analysis Narrative.**

Completion of the BeauHou project will result in:

- environmental benefits as a result of emissions reductions associated with removing more than 17,472 commercial vehicles from the I-10 corridor from Beaumont to Houston;
- a significant reduction in emissions and improvement in safety as a result of shifting more than 17,472 containers annually from landside transportation to barge, resulting in the reduction of vehicles miles traveled by approximately 3,083,520 each year.
- air quality improvements as a result hard surfacing a 26.14-acre dirt lot that will be used as a container marshalling yard and general-purpose laydown area;
- additional business opportunities for local, minority, veteran and woman-owned businesses in a Historically Disadvantaged Community;
- resiliency and redundancy in the freight movement system via utilization of Marine Highways 69 and 10;
- job creation in the form of at least 11 full-time ILA Union positions associated with the new container handling service at the Port of Beaumont, located in a Historically Disadvantaged Community;
- development of new public-private partnerships, expected to result in more than \$50 million in additional investment.

The proposed projects will provide the infrastructure needed to operate a new intermodal container handling facility that will allow manufacturers in Southeast Texas, and the United States, to use the marine highway system as an alternative to existing truck and rail infrastructure for the transport of containers. Currently, the Port of Beaumont handles fewer than 3,000 TEUs annually. With the completion of the two proposed components, the Port of Beaumont will have the ability to handle more than 17,472 Forty Foot Equivalent Units (FEUs) annually, to start, removing more than 17,472 vehicles from the I-10 corridor from Beaumont to Houston each year. This project will reduce barriers for domestic producers to ship products abroad, decrease emissions associated with trucking product to Houston, and provide safety and maintenance

benefits by reducing vehicle miles traveled by approximately 3,083,520 per year, or 61,670,400 over 20 years.

The two project components have independent utility, but when completed together, the benefit to the community, customers, and port partners will be maximized.

Barge Dock Strengthening Project (Lot 6 Relieving Platform)

As a continuation of the 2014 Port of Beaumont Master Plan, the Port of Beaumont (Port) is planning for the design and installation of **\$8,799,000** Lot 6 Relieving Platform Project. The project will allow the Port to use existing infrastructure to support the unloading/loading of containers to barges. Specifically, this project strengthens a 400’ section of dock area at the waterfront to support heavy loads. As part of this project, a 400’ x 100’ pile-supported relieving platform and four monopiles for breasting barges will be constructed. Currently, a 50-foot offset is required for any storage on or near the barge dock, **meaning the space is essentially unusable due to unstable land surrounding the current structure.** Upon completion of this component, the barge dock is expected to handle an average of 336 containers per week or 17,520 containers per year. This component is located in a Historically Disadvantaged Community that would benefit from the additional union jobs that would be created as a result of the container on barge service that would come to fruition as a result of these projects being completed. **Without federal funds, the current barge dock lot will be unable to support container movements and the project will not be completed.**

Challenges the project is intended to address:

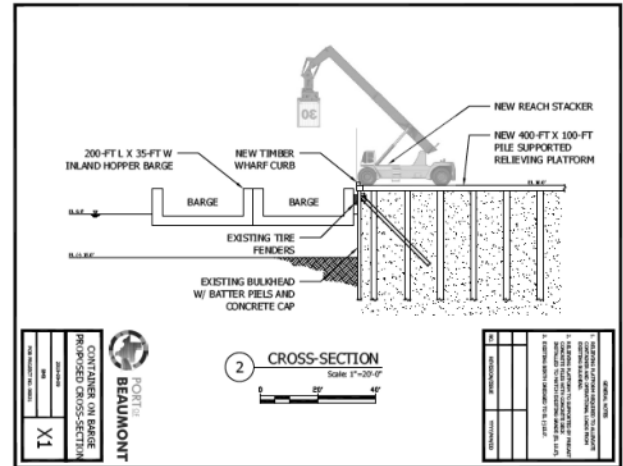
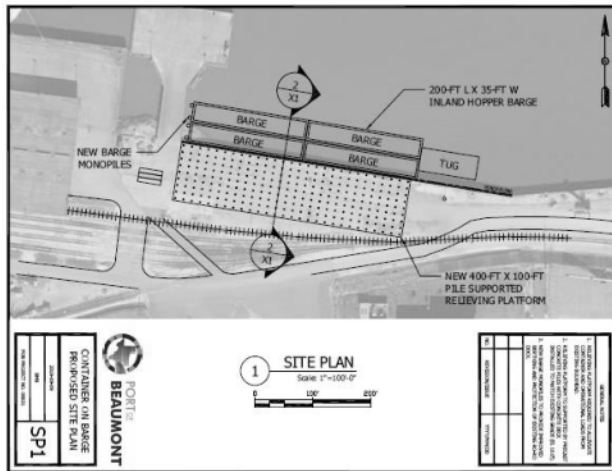
1. Lack of container handling facilities at the Port of Beaumont.
2. Limited redundancies in freight movement services from Southeast Texas to international markets.
3. Congestion along the I-10 corridor from Beaumont to Houston.

How the project addresses the challenges:

1. The project will upgrade existing infrastructure to support the unloading/loading of containers onto barges at the Port of Beaumont, to be sent to and shipped from Port Houston. A 400’x100’ pile-supported relieving platform and four monopiles for breasting barges will be constructed as part of this project. Structural work will include the addition of piles, cast-in-place concrete, pre-cast concrete panels, and steel pipe piles for monopiles. The relieving platform will strengthen the 400’ section of dock area at the waterfront to support heavy loads, up to 4,000 psf. Construction of this project will provide shippers with an option that is not currently offered in Southeast Texas. This will provide local manufacturers with a more cost-effective method of shipping product internationally, while providing positive economic benefits to a Historically Disadvantaged Community.
2. Southeast Texas has been struck by two devastating hurricanes over the last five years including Hurricane Harvey (2017), which produced more than 50 inches of rain, making the connecting highway network impassable, and Tropical Storm Imelda (2019), which produced 43 inches of rain, damaging critical infrastructure. The highway network was

not accessible, putting a stall to trade relying on the interstate to move freight. The container on barge operation will allow for redundancies in service, allowing for commerce to continue when the Gulf Coast is hit by a significant weather event. Construction of the proposed project is needed for the container on barge service to be offered.

3. The I-10 corridor from Beaumont to Houston will be relieved with the reduction of more than 3 million vehicle miles traveled each year once the container on barge operation is fully operational.

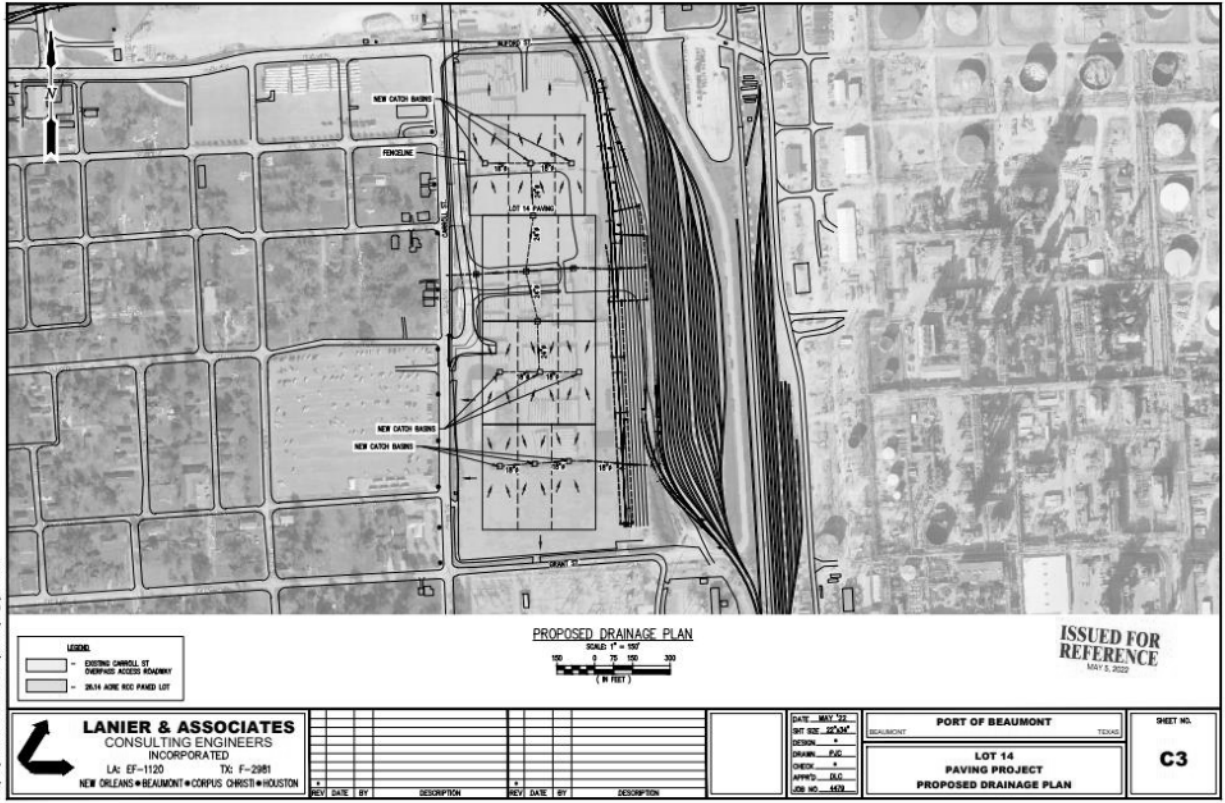


Multi-purpose Container Marshalling Yard (Lot 14B Paving Project)

As a continuation of the 2014 Port of Beaumont Master Plan, the Port of Beaumont is planning for the design and installation of the \$26,455,000 Lot 14 Multi-purpose Container Marshalling Yard. The 26.14-acre lot will be used as a container marshalling yard and hard-surfaced laydown area for special and general cargoes. When not in use as a container marshalling yard, the lot will meet the specifications of the U.S. 842nd Transportation Battalion, 597th Transportation Brigade, for the storage of military equipment. As the largest Strategic Military port in the United States, ample space for military exercises is critical to national security. From January 2022-May 2022, four ships carrying military cargo have been diverted due to lack of hard-surfaced laydown area. **This project is located in a Historically Disadvantaged Community and cannot be funded without federal assistance.**

Challenges the project is intended to address:

1. Lack of container marshalling area at the Port of Beaumont
2. Lack of outside storage capacity at the Port of Beaumont, constricting the Port of Beaumont's ability to respond to customer needs.
3. The current Lot 14, a dirt lot, is prone to erosion and requires constant maintenance. The proximity to a residential neighborhood makes dust control a top priority.
4. Existing bottlenecks at the Port Houston Bayport Terminal increases truck dwell times.



How the project addresses the challenges:

1. The proposed project will allow the Port to utilize existing infrastructure by providing a staging area for containers before they are loaded to barge. The proximity of the container marshalling yard to the Port’s new overpass will allow for the efficient movement of containers to the barge dock, without interrupting other port operations. Civil work will include clearing and grubbing, subgrade improvements, drainage improvements and installation of an 18” thick RCC pavement. The new multipurpose lot will provide the Port of Beaumont with space to handles containers as well as general cargo that has been diverted over the last several years due to lack of space.
2. The 26.14-acre hard-surfaced lot will provide the Port of Beaumont with an additional option for the U.S. military. Due to requirements for certain exported equipment, the US Military requires storage lots to be hard surfaced. The Port of Beaumont is at capacity and has diverted four military ships in the first quarter of 2022, due to lack of space. Hard surfacing of Lot 14 would have prevented the diversions and resulted in additional business opportunities.
3. Hard surfacing of Lot 14 will improve air quality in the surrounding residential neighborhood, by acting as a dust control solution. The material being used to hard-surface the lot- Roller compacted concrete- is a more sustainable, durable material that will decrease maintenance costs and prevent rapid lot deterioration.
4. The modal shift from trucking containers to Houston to barging containers from Beaumont to Houston will result in a significant decrease in emissions and truck idle times associated with the current route. The proposed modal shift will result in 17,520

trucks being removed from the I-10 corridor, which equates to a reduction in CO2 emissions of 4,829 metric tons per year.

In addition to commercial partners, the project will be marketed to small, local manufacturers who are currently trucking their product to a packaging facility near Houston, where it is packaged then trucked to Port Houston to be shipped internationally. As a result of the Project, redundancies in services will be created, making for a more resilient supply chain. The new service that will be possible as a result of completing the proposed project, in line with the **Rural Opportunities to Use Transportation for Economic Success (ROUTES)** initiative, will provide an additional option to current and potential manufacturers in the area to increase the amount of product they move while also providing a safety benefit, a reduction in emissions, and a decrease on wear and tear on the interstate system. Ultimately, this project serves to provide a safe, efficient, reliable option for the movement of goods to and from the Port of Beaumont, at a price comparable to the current “truck-only” model.

II. Project Location

- | | |
|--------------------------------|-----|
| A) Located in rural area: | No |
| B) Great Lakes port project: | No |
| C) Coastal seaport: | Yes |
| D) Small port project: | No |
| E) Community Development Zone: | Yes |

The Port of Beaumont **Channel** is a 20-mile section of the Sabine-Neches Waterway and includes private facilities, as well as the public facilities of the Port of Beaumont Navigation **District** of Jefferson County, Texas (Port of Beaumont). The Port of Beaumont is a coastal seaport that is accessible from the Gulf of Mexico and Gulf Intracoastal Waterway via the federally maintained Sabine-Neches Waterway, 42 miles inland from the Gulf of Mexico. The Sabine-Neches Waterway, currently being deepened from 40 to 48 feet, is the third-busiest ship channel in the nation in terms of cargo volume handled.

The Port of Beaumont Navigation District is a public port facility located in Beaumont, Texas, that operates in two Texas counties (Jefferson and Orange), separated by the Neches River. The Port’s properties include approximately 450 acres of channel front property, with approximately 9,600 feet of waterfront in Orange County, Texas on the north bank of the Sabine-Neches Waterway. The total landside perimeter of the Port’s properties and facilities is over 26,000 linear feet, or approximately five miles. The total waterside perimeter of the Port’s properties and facilities is approximately 18,600 linear feet, or 3.5 miles. Total tonnage handled through the Port of Beaumont Channel, including all public and private terminals, is more than 101 million tons annually. The Port has linkage to the region’s Primary Freight Network which includes I-10 and US Highway 69. The Port of Beaumont is also served by U.S. Highway 96 and US Highway 287. Additionally, the regional freight network is served by a system of Texas State Highways that include 73, 82, 87, 90 and 105; Spurs 380, 347, 366, 215, 136, 124 and Farm to Market Roads 326, 327, 418 and 421. The Port of Beaumont is served by three Class I Railroads (BNSF, KCS, and UP), and has access to extensive rail and pipeline networks.

- Burlington Northern Santa Fe - connects the Port with the U.S. mostly west of the Mississippi River.
- Kansas City Southern - links the Port with the American Midwest and Mexico.
- Union Pacific - offers rail links through the Mississippi Valley, Great Plains and western U.S.



The Lot 6 Barge Dock Strengthening Project and the Lot 14 Multi-Purpose Container Marshalling Yard are located within the boundaries of the Port of Beaumont District, in Jefferson County, Texas and are owned by the Port of Beaumont. The Port of Beaumont Navigation District of Jefferson County, Texas covers an area of approximately 150 square miles, including the City of Beaumont, and is

considered an urban area.



The proposed components of the BeauHou Container on Barge Infrastructure Project are located in a Historically Disadvantaged Community, less than 1,000 feet from Opportunity Zone for Census Block Group 482450117002152. Located in Census Tract 17, Jefferson County,

Texas, the project site has seven disadvantage indicators: Historically Disadvantaged Community, Resilience Indicator, Environmental Indicator, Equity Indicator, Economy Indicator, Health Indicator and Transportation Indicator. The racial makeup of Census Tract 17

is 82.8% African American, 10.7% Hispanic or Latino, 5.6% white, 0.2% American Indian, 0.2% Asian, and 0.1% Pacific Islander. Approximately 19% of the City of Beaumont lives in poverty and the Beaumont-Port Arthur Metropolitan Statistical Area, in which the project is located, has one of the highest unemployment rates in the United States, ranking 375 out of 389, according to Bureau of Labor Statistics data.

As the region hardest hit by Tropical Storms Harvey and Imelda, which together inundated Beaumont and the surrounding area with more than 80 inches of rain over several days, economic development efforts such as the development of a container on barge operation that will give local producers, labor unions, and other disadvantaged groups an opportunity to expand their operations, are imperative to growth and recovery efforts.

Additional information on how the project addresses job creation advancing racial equity is included in the merit criteria (D – Advancing Racial Equity and Reducing Barriers to Opportunity).

III. Grant Funds, Sources and Uses of all Project funding

| | | |
|---------------------------------|---------------|--------|
| Port Match: | \$ 8,813,500 | (25%) |
| Federal Funds Requested (PIDP): | \$ 26,440,500 | (75%) |
| Total Project Costs: | \$ 35,354,000 | (100%) |

Source of Local Match – The Port of Beaumont is providing the local match of \$8,813,500. Refer to Port Commitment Letter – Attachment 4. Funds are provided through port operating revenues dedicated to the BeauHou Container on Barge Infrastructure Project. Cost data included in the budget was updated in 2022 for components that have not entered the detailed engineering phase.

The Port of Beaumont has been awarded several federal grants over the last twelve years, demonstrating the entity’s ability to successfully bring grant-funded projects to fruition:

- U.S. Department of Transportation BUILD Grant
- U.S. Department of Commerce EDA Grants
- Congestion Mitigation Air Quality (CMAQ) Funds
- Department of Homeland Security (DHS) - Port Security Grants

MULTI-PURPOSE CONTAINER MARSHALLING YARD BUDGET

Lot 14 Paving Project

| ITEM | DESCRIPTION | TOTAL |
|-------------|-----------------------------|--------------|
| 1 | MOBILIZATION/DEMobilIZATION | \$400,000 |
| 2 | GRADING & GRUBBING | \$250,000 |
| 3 | 12” CEMENT TREATED SUBGRADE | \$1,708,000 |
| 4 | 6” STABILIZED LIMESTONE | \$1,792,000 |
| 5 | 18” RCC PAVEMENT | \$17,080,000 |
| 6 | DRAINAGE | \$600,000 |
| 7 | SWPP | \$20,000 |

| | | |
|---|------------------------------|---------------------|
| 8 | PAYMENT AND PERFORMANCE BOND | 175,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | \$22,025,000 |
| CONSTRUCTION CONTINGENCY (15%) | | 3,300,000 |
| CONSTRUCTION MANAGEMENT, ENGINEERING + GEOTECHNICAL | | 1,130,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | \$26,455,000 |

BARGE DOCK STRENGTHENING PROJECT BUDGET
Lot 6 Relieving Platform

| ITEM | DESCRIPTION | TOTAL |
|--|--|--------------------|
| 1 | MOBILIZATION/DEMobilIZATION | \$250,000 |
| 2 | RELIEVING PLATFORM PILES | \$2,671,000 |
| 3 | RELIEVING PLATFORM CONCRETE FOUNDATION | \$3,533,000 |
| 4 | BARGE BREASTING DOLPHIN | \$500,000 |
| 5 | SWPP | 20,000 |
| 6 | PAYMENT AND PERFORMANCE BOND | \$61,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | \$7,035,000 |
| CONSTRUCTION CONTINGENCY (15%) | | \$1,060,000 |
| CONSTRUCTION MANAGEMENT (10%) | | \$704,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | \$8,799,000 |

Port Commitment Letter: Attachment 4, Port of Beaumont Commitment Letter

Previously incurred expenses: \$0.00

Future Eligible Costs: \$26,440,500

Budget Information:

- Attachment 3, SF 424C Construction Budget Form
- Attachment 5, Multi-purpose Container Marshalling Yard (Lot 14B) Engineering Report
- Attachment 6, Barge Dock Strengthening (Lot 6) Engineering Report

IV. Merit Criteria

A. Achieving Safety, Efficiency, or Reliability Improvements

The proposed container on barge operation will upgrade infrastructure at the Port of Beaumont, which will allow for the effective movement of goods via container on barge from the Port of Beaumont to Port Houston. It is a critical network that offers “just in time” delivery for manufacturers that currently rely on the unpredictable I-10 corridor for trucking. Expanding services offered by the Port of Beaumont will meet the growing need for sustainable transportation options while reducing emissions, providing safety benefits, and reducing barriers for local manufacturers in an economically disadvantaged metropolitan statistical area and designated Historically Disadvantaged Community.

Safety

Based on the reduction in vehicle miles traveled by three million miles annually as a result of the proposed project and U.S. DOT statistics, the implementation of this proposal would reduce fatalities by one over 20 years. The total benefits in savings due to the reduction of trucks on the

road is \$33.3 million with a present value of \$12.9 million. **See Attachment 10- Benefit-Cost Analysis Narrative.**

Safety is not only measured in terms of injuries or loss of life, but also in safety of the infrastructure that is depended upon for the free flow of commerce. Trucks represent a much larger disruption cost. The FMCSA estimates the average cost of a commercial truck accident where one person was injured at \$148,279. A trucking accident involving a fatality is substantially more expensive at \$7.2 million. These costs include property damage, infrastructure damage, and lost productivity.

Efficiency

For the computation of cost efficiency of every year, the savings in costs by reducing truck trips is considered a benefit, and the costs associated with transportation using barges is considered a disbenefit. It is assumed, for cost estimation, that the average payload of an FEU is 26 tons. The revenue per ton-mile of trucks (\$0.202 per ton-mile) and water transportation (\$0.0322 per ton-mile) from the Bureau of Transportation Statistics were used to make an adequate comparison. The total cost of transportation per truck was estimated at 75% of the cost since the trucks on the return on the round trip are empty. The total cost per round trip for one FEU is approximated to \$693, for a total of \$12.15 million the first year. By the 10th year, savings due to reduction of truck operations per year are over \$22.77 million. The total cost of transporting by barge is estimated at 100% round trip since the weight has negligible impact operational cost of the round trip on both directions. Barges are not loaded a full weight capacity because stacking a 4th level would make the trip unstable. Additional to the barge operations there are cost at the port for managing the cargo. It is estimated that the port operation cost is \$15.29 per ton or \$6.95 million on the first year. By the 10th year savings are \$ 20.21 million due to incremental increase in cargo handled. The total cost for the first year of using barges is \$10.78 million. Using the BCA Guidelines, the total benefits are estimated as ½ of the difference vs. the baseline project, for yearly equivalent benefits of \$0.68 million the first year, and \$1.28 million per year by the 10th year. The total benefits in efficiencies over 30 years are \$36 million and \$13.9 million in present value.

The Port of Beaumont currently handles fewer than 3,000 containers annually. With the construction of the Lot 6 project and the Lot 14 project, that number has the potential to quintuple, exceeding 17,000 FEUs annually. The Port's capacity and ability to load and unload goods will not only increase, it will create an additional option for shippers moving product via container from Beaumont to Houston.

The primary commodity that will be handled via container on barge will be polyethylene pellets. The Golden Triangle (Beaumont, Port Arthur and Orange) have projects in development that would triple the current production level of plastics. Plastics, when produced, are initially inventoried in rail cars, and then transloaded to containers or trucks to containers for export. Currently, the Golden Triangle produces approximately 65 rail cars of plastics daily. As the additional projects come online, this production is expected to triple to 200+ rail cars per day. The current process for export of these products is to transport the product by rail car and truck from the Golden Triangle to the Houston area for packaging then via truck to Port Houston for export. Due to the limited ability of expansion of the rail infrastructure from Beaumont to

Houston, it is anticipated that trucks will act as the relief valve for movement of product from the point of origin to the location for export. If 1/3 of the Golden Triangle Production was to be loaded on standard over-the-road tractor trailers this would represent 266 trucks per day one way, or 532 daily trips, in addition to the trips that are currently made. This would result in a significant increase in congestion over time.

Operational improvements

Currently, the Port of Beaumont is at capacity with regard to outdoor storage space and does not have adequate freight movement redundancies in place to respond to severe weather events. Construction of the Lot 6 Barge Dock Strengthening project and the Lot 14 Multi-purpose Container Marshalling Yard will address both of these challenges.

As a result of this project being completed, the Port of Beaumont will have an additional 26 acres of laydown space and a barge dock capable of moving heavy loads, including containers. The 26 acres lot will be used to accommodate container marshalling and will also serve as a general-purpose laydown yard and a priority area for the U.S. Military, thus elevating critical port infrastructure. This area of the Port is frequently used by first responders in the event of severe weather and in a part of the community that is prone to flooding, the hard surfacing of this lot will aid in resiliency and recovery efforts, post-storm. In the first four months of 2022, the Port of Beaumont diverted five ships due to lack of capacity. Operationally, the proposed project will provide the capacity needed to respond to customer needs.

Environmental and emissions mitigation measures

The modal shift from truck-only transport to a hybrid of truck-barge transport will mitigate environmental issues associated with trucks utilizing the I-10 corridor, resulting in the reduction of emissions of NOx, HC, PM and CO2 with a present value of \$41 million.

Table 1 Comparative emissions and savings - Trucks vs Barges - years 1st vs 10th

| Year | Product | Trucks | Barges | Savings per year |
|------------------|-------------|----------|--------|------------------|
| 1st | Tons of NOx | 28.34 | 0.0823 | \$ 452,132 |
| | Tons of HC | 1.42 | 0.0116 | \$ 60,765 |
| | Tons of PM | 1.38 | 0.0089 | \$ 1,063,247 |
| | Tons of CO2 | 4829.27 | 2.24 | \$ 241,531 |
| 10 th | Tons of NOx | 53.14 | 0.154 | \$ 959,014 |
| | Tons of HC | 2.67 | 0.022 | \$ 129,795 |
| | Tons of PM | 2.59 | 0.017 | \$ 2,232,653 |
| | Tons of CO2 | 9,054.88 | 4.20 | \$ 533,990 |

B. Supporting Economic Vitality at the National and Regional Level

The container on barge service, as an option for shippers, reduces the barriers to entry for small local companies that have historically been unable to justify the costs associated with moving product through a seaport. The new marine highway service will not only remove 17,520 trucks from the congested I-10 corridor by rerouting existing business to container on barge, it will also open up new business opportunities that have not been viable up until this point, which will lead

to the creation of jobs in a multitude of support industries. This new service has the potential to be a resource for smaller local companies interested in exporting goods in relatively small quantities. From a community standpoint, the reduction in truck-traffic will provide quality of life benefits, noise benefits, emissions benefits, as well as safety benefits. Beaumont Rice Mills, Goodyear Chemical, and several other producers have expressed interest in utilizing the service. **The project has a Benefit-Cost Ratio of 3.23 with over \$114 million in present value benefits.**

The BeauHou Container on Barge Infrastructure Project will create a new business line for the Port of Beaumont, which will require approximately **22,880 labor hours per year** to operate efficiently. This equates to 11 new full-time jobs, and opportunities for public-private partnerships that are expected to result in more than \$50 million in additional private investment. Letters of interest from private partners have been executed and the business potential represented in this application is less than 10% of expressed interest.

Yearly benefits of the project, discounted at 7% per year are categorized as follows:

Efficiencies in operation: Due to the cost-effective nature of barge operation, users can gain savings by allowing their products to be transported by barge. The first user of the service is a plastic pellets producer in Beaumont. Currently, the product is shipped to Houston for packaging, transported to Port Houston and exported at that point. The present value of efficiencies of operations is \$13.9 million.

Emissions reduction: Barges are highly efficient in part because of their low fuel consumption and, thus, low emissions. The present value of the reduction of emissions of NOx, HC, PM and CO2 is \$41.3 million.

Improved road safety: By reducing the number of trucks on the road, the expected number of fatalities is reduced, thereby reducing the associated social costs. The present value of the benefit of improved road safety is near \$12.9 million.

Congestion and noise reduction: As there are fewer trucks on the roads, there is a reduction in the noise and the negative effects of traffic congestion. The present value of the improved congestion and noise is \$4.4 million.

Pavement costs: As fewer trucks are expected to use the roads, its cost to re-build the road will be lower due to reduced usage. The present value of the benefits of reduced need in pavement of roads is nearly \$41.5 million.

See Attachment 11, Benefit-Cost Analysis

It is worthwhile to mention several non-quantified benefits. **Table 5** illustrates how these benefits relate to the PIDP merit criteria. This table includes:

National Interest: *Economic competitiveness of the USA*- The use of barges will facilitate the process of exporting plastic pellets from the USA at a lower cost.

National Interest: Port resiliency- In addition to having the capacity to load and unload containers, the Port will also be able to move containerized cargo, thus not relying exclusively on rail or truck transportation.

National Interest: Military operational support- Some military operations require the loading and unloading of military equipment from or onto a concrete paved yard. In recent months, four ships were diverted to other ports, causing delays and additional costs since the Port is unable to accommodate the associated military cargo because there is insufficient space on a concrete paved yard.

Economic vitality: Employment- The unemployment rate in the Beaumont-Port Arthur MSA is the second highest in the State of Texas, and ranks 377 out of 389 in employment growth nationwide, according to the Bureau of Labor Statistics. The project, located in a Historically Disadvantaged Community, is expected to create 11 full-time union positions. This number is expected to rise as the service becomes fully operational.

Advancing equality and opportunity for all: Approximately 11 full-time local jobs will be created through this project. Located in Census Tract 17, Jefferson County, Texas, the project site has seven disadvantage indicators: Historically Disadvantaged Community, Resilience Indicator, Environmental Indicator, Equity Indicator, Economy Indicator, Health Indicator and Transportation Indicator. The racial makeup of Census Tract 17 is 82.8% African American, 10.7% Hispanic or Latino, 5.6% white, 0.2% American Indian, 0.2% Asian, and 0.1% Pacific Islander.

Table 4. PIDP Merit Criteria Alignment included in the BC ratio

| | Benefits (000s) | Efficiency | Emissions | Safety | Congestion and Noise | Pavement costs |
|---------------------|--|------------|-----------|-----------|----------------------|----------------|
| | | \$ 13,942 | \$ 41,307 | \$ 12,873 | \$ 4,420 | \$ 41,498 |
| PIDP Merit Criteria | Safety, Efficiency and Reliability | ✓ | | ✓ | | |
| | Climate Change and Environmental Justice | | ✓ | | | |
| | Advancing equality and opportunity for all | | | | | |
| | Port Resilience | ✓ | | | | |
| | Economic Vitality | ✓ | | | | |
| | Leverage Federal Funding | ✓ | ✓ | ✓ | ✓ | ✓ |

Table 5 PIDP Merit Criteria Not Included in the BC ratio

| | Benefits | Economic competitiveness of US Exports | Port Resiliency | Military Operational Support |
|----------------------------|--|--|-----------------|------------------------------|
| PIDP Merit Criteria | Safety, Efficiency and Reliability | ✓ | | ✓ |
| | Climate Change and Environmental Justice | | | |
| | Advancing equality and opportunity for all | ✓ | ✓ | |
| | Port Resilience | | ✓ | |
| | Economic Vitality | ✓ | | |
| | Leverage Federal Funding | ✓ | ✓ | ✓ |

Table 6. Benefit to Cost Ratio

| | |
|--|---------------|
| Term (years) as per DOT BCA guidelines | 30 |
| Discount rate | 7% |
| Investment needed | \$ 35,254,000 |

Transportation of goods and commodities will be improved with the completion of the BeauHou Container on Barge Infrastructure Project. The process of moving cargo from the Southeast Texas region to Port Houston for export will be more economical, more predictable and more environmentally friendly. A 6-barge tow has a total cargo capacity of 9,000 tons. It would require a fleet of 348 53-foot dry vans to haul the same quantity of freight.

The Port of Beaumont Container on Barge Project has broad regional support, noting both the economic impact to the region and nation as well as the opportunity it provides to local manufacturers to ship their products internationally, while reducing their carbon footprint. Due to containers not being moved through the Port of Beaumont in significant numbers, this new line of business will also serve as an additional line of business for local union labor, which is comprised of two longshore local unions- ILA 21 and ILA 1924.

Letters of support are included in Attachment 7.

Included are letters from:

- U.S. Representative Randy Weber (R, 14th District, TX)
- State Senator Brandon Creighton (R, 4th District, TX)
- Speaker of the Texas House Dade Phelan
- State Representative Joe Deshotel (D, 22nd District, TX)
- Jefferson County Judge, Jeff R. Branick
- City of Beaumont
- Texas Department of Transportation-Maritime Division
- South East Texas Regional Planning Commission (MPO)
- Southeast Texas Economic Development Foundation
- Sabine Neches Navigation District
- Greater Beaumont Chamber of Commerce
- Golden Triangle Business Roundtable
- Cooper-Ports America
- SSA Gulf
- West Gulf Maritime Association

- Workforce Solutions of Southeast Texas
- Sabine Pilots
- Drainage District 6
- Beaumont Main Street
- Nance International (Letter of Interest)
- Honeywell (Letter of Interest)
- Iron Horse Terminals

C. Addressing Climate Change and Environmental Justice Impacts

The BeauHou Container on Barge Infrastructure project was designed with the sole goal of encouraging a modal shift from truck to barge, to reduce emissions and provide safety benefits along the I-10 corridor from Beaumont to Houston.

For the computation of emissions, we included benefits of reduced of truck milage and disbenefits in the emissions of barges. The cost of emissions by ton change year by year as per the scheduled presented in the DOT BCA Guidelines 2022. The total emissions also change as a function of the overall volume of FEUs per year. The emissions for trucks are estimated using the EPA average in-use Emissions from Heavy-Duty-Trucks and are given as grams per mile, except for CO₂, which are computed based on gallons diesel. For the computation of the emissions of barges, emissions depend on the energy (grams per KWh), and the energy in one gallon of diesel. For each year these values are computed in range B33 to I64 for NO_x, HC, PM and CO₂. The total value of 30 years of benefits is \$218.21 million and the present value is \$41.3 million.

Emissions Benefits:

Through an established partnership with Iron Horse Terminals, a rail transload facility located approximately 18 miles away from the Port of Beaumont, it is estimated that approximately 50% of the facility's current transload quantities can make the modal shift to container on barge. Using current Iron Horse transload quantities of 96 truckloads per day, on average, and the estimate that half of these loads can be displaced with this project, 48 loads per day will utilize the BeauHou Container on Barge operation. This represents 48 trips, or 48 Forty Foot Equivalent Units (FEUs), eliminating 176 miles for each roundtrip made, the majority of which is on Interstate 10 or US Highway 90. This represents 8,448 miles per day of tractor trailer traffic, or the reduction of 3,083,520 vehicle miles traveled annually. **This results in the annual emissions reduction of 28.26 metric tons of Nitrogen Oxides (NO_x), 1.4 metric tons of Hydrocarbons (HC), 1.37 metric tons of particulate matter (PM), and 4,827.03 metric tons of Carbon Dioxide (CO₂). See Attachment 11, Benefit-Cost Analysis.**

Planning and Project Development

Lot 14 is currently a dirt lot adjacent to a residential neighborhood. While the issues with air quality relating to this lot are not common, hard surfacing the lot is a top priority to ensure the continued growth of the surrounding neighborhood. The Charlton Pollard Historical Neighborhood, as well as the proposed project, is located in a Historically Disadvantaged Community.

The Lot 14 Project will hard-surface a 26.14-acre lot using roller compacted concrete. This decision was made during the project planning process to build a project that would be more

resilient long-term. Roller Compacted Concrete (RCC) has the same basic ingredients as conventional reinforced cement concrete (cement, water, and aggregates such as gravel or crushed stone). Unlike conventional concrete, RCC is a drier mix- stiff enough to be compacted by vibratory rollers. Typically, RCC is constructed without joints, meaning it does not require forms or finishing and it does not contain dowels or steel reinforcing. This results in a long service life, minimal maintenance, and minimal operational downtime, as the product dries more quickly than traditional concrete. RCC lots can be constructed quickly, they are economical, have an early load carrying capacity, can support heavy loads, require little to no maintenance, are durable, and due to the light surface, urban heat island effects are reduced.

Energy Savings

Barges are the second most energy efficient form of transportation, second only to large container ships. Dager (2013) reports inland barge towing energy consumption at 196 Btu/ton-mile. The Transportation Research Record 824 states trucks consume 343 Btu/ton-mile. With the Marine Highway route being 45% further, the net energy savings is 4,615 Btu/ton.

Construction and Expansion Costs

New four-lane highways in 2020 dollars for urban areas are estimated to cost \$11 million per mile⁽³⁾. Duplicating the above route would cost \$864,000,000. To assure resiliency of the transportation route between the petrochemical complex in the Golden Triangle and the Port of Houston an alternative to the current highway-based infrastructure should be considered. The Marine Highway which currently exists is by far the lowest cost alternative, but pieces of the infrastructure puzzle remain undeveloped. This proposal is a critical component required to make the Marine Highway system more functional

Dager, C.A. 2013. *Fuel Tax Report, 2011*. Center for Transportation Research University of Tennessee, Knoxville.

D. Advancing Racial Equity and Reducing Barriers to Opportunity

The Beaumont-Port Arthur Metropolitan Statistical Area is defined by the United States Census Bureau as a four-county region in Southeast Texas, east of the Houston- Sugarland-Baytown metropolitan area and has the second highest unemployment rate in the state of Texas and the lowest population growth rate in Texas. Unemployment for Beaumont-Port Arthur MSA, according to the Texas Workforce Commission, was 6.6% in March 2022, the second highest rate in the state. For annual job growth, the Beaumont-Port Arthur MSA is one of the lowest in Texas, ranking 24 out of 25 MSAs.

The proposed components of the BeauHou Container on Barge Infrastructure Project are located in a Historically Disadvantaged Community, less than 1,000 feet from Opportunity Zone for Census Block Group 482450117002152. Located in Census Tract 17, Jefferson County, Texas, the project site has seven disadvantage indicators: Historically Disadvantaged Community, Resilience Indicator, Environmental Indicator, Equity Indicator, Economy Indicator, Health Indicator and Transportation Indicator. The racial makeup of Census Tract 17 is 82.8% African American, 10.7% Hispanic or Latino, 5.6% white, 0.2% American Indian, 0.2% Asian, and 0.1% Pacific Islander. Approximately 19% of the City of Beaumont lives in poverty and the

Beaumont-Port Arthur Metropolitan Statistical Area, in which the project is located, has one of the highest unemployment rates in the United States, ranking 375 out of 389, according to Bureau of Labor Statistics data.

The project and planning process advance racial equity and reduce barriers to entry in the following ways:

Reduce Barriers to Opportunity

The Census Tract in which the projects are located (Census Tract 17, Jefferson County, Texas) is a Historically Disadvantaged Community. The Port of Beaumont Container on Barge Project will reduce barriers to entry for local producers interested in exporting goods and products from Port Houston. The Port of Beaumont's business classification process provides contractors with the option to identify their business type as minority-owned, woman-owned, veteran-owned, or locally owned, which provides the Port with a database of interested contractors and their business status. As a result of administering grant-funded projects, the Port of Beaumont has adopted and included the following verbiage into all requests for bids, which proactively addresses potential challenges minority contractors may face:

“The Recipient, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4), hereby notifies all bidders that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.”

As well as:

“The contractor, regarding the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices.”

It is the policy of the Port to ensure competitive business opportunities for minority, veteran and woman-owned business enterprises in the award and performance of contracts and doing business with the Port and to ensure that there are no barriers to full participation in doing business with the Port Authority by all persons, regardless of race, ethnicity, or sex.

This Port's policy is intended to place a fair share of purchases from MVWBE's/DBEs in pursuit of the DBE Goal. In pursuit of the DBE Goal and fairness in contracting, affirmative steps to assure that MVWBE's, shall be used when possible. These steps include but are not limited the following procedures.

1. Proactively identify and reach out to MVWBE's in the Port's community and area of influence.
2. Place MVWBE's on solicitation lists for participation in future projects when possible.

3. Assure that MVWBE's are solicited whenever they are potential sources of services, materials, supplies or labor.
4. Divide total requirements and/or establish delivery schedules when economically feasible, into smaller projects or quantities to promoted maximum participation by MVWBE's.
5. Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce to promote contracting with MVWBE's.
6. Encourage large project contractors to utilize MVWBE's as subcontractors when possible (See Section 5.2)
7. Maintain a database of firms/companies (MVWBE/non-MVWBE), type of work, service, materials or supplies provided and cost thereof to assist in tracking the level of achieving the Goal and to analyze the effectiveness of the Policy.

Community Outreach

The Port of Beaumont works closely with the Charlton-Pollard Historical Neighborhood Association to ensure community members are informed and educated on Port Capital Improvement plans, participating in monthly Neighborhood Association meetings where briefings are provided the second Tuesday of each month, as well as bi-monthly Community Advisory Panel meetings with surrounding industrial groups and community members.

The Port of Beaumont provides 3-5 interviews and presentations per month, on varying local media outlets and with civic/community organizations including 12NewsNow, KFDM Channel 6, the Beaumont Enterprise (daily publication), The Examiner (weekly publication), The Roy West Show (radio show), Sunday Morning Drum with Contessa Dickson (radio show), the Golden Triangle Industrial Group, Golden Triangle Business Roundtable, the International Club of Beaumont, Greater Beaumont Chamber of Commerce Government & Public Relations Committee, Charlton Pollard Historical Neighborhood Association, Port-owned web-based platforms, and other outlets. The primary goal is to ensure community members have an opportunity to ask questions and be engaged in Port-related project development.

Procurement

The project reduces barriers to entry for minority, women-owned and local businesses by providing an opportunity to smaller manufacturers to export products internationally. With the relatively small scale the Port will be operating on, manufacturers will have the option to move single containers or larger quantities, depending on the need. This flexibility makes it a more attractive option for smaller businesses. The Port of Beaumont reaches historically underutilized businesses for the construction of the proposed projects through the utilization of **The Blue Book**, which sends Port bid packages specifically to Historically Underutilized Businesses. All Port of Beaumont bid packages include Exhibit X- The Small and Disadvantage Business Requirements of Port of Beaumont contractors, per 2 C.F.R. 200.321 and 49 C.F.R. Part 26 compliance, which ensures opportunities are presented to a wide variety of contractors, including minority, women, and veteran-owned groups. Exhibit X is now required by all bidders, on all project bids. **See Attachment 12- Exhibit X.** The Port of Beaumont is in the process of implementing an anti-discrimination in contracting policy that will support these efforts.

Job Creation

Upon completion of the project, which will aid in bringing the Container on Barge Service to life, the operation will require the use of International Longshoremen Association (ILA) Union Labor, supporting the creation of good-paying jobs with the free and fair choice to join a union. This new service will require approximately one seven-man gang per week, one Clerk in Charge, One Walking Foreman, one Assistant Clerk, and one Gang Foreman, working 40+ hours each. This equates to 11 new full-time positions and an average increase of 22,880 man-hours annually. In addition to supporting ILA growth, the operation will require the Port of Beaumont to contract with a barge operating company, which is projected to employ 2-10 additional operators.

Workforce Development and Community Outreach

To address workforce gaps in Southeast Texas, the Port of Beaumont has developed several key partnerships and educational opportunities over the last two years including:

- Partnership with Beaumont Independent School District on the development of the new High School Maritime Program (new as of 2020). Students complete the program with a TWIC Card, NCCER Certificate and Forklift Certification.
- Support of the Southeast Texas Workforce Solutions Maritime Teacher Externship, resulting in the development of a maritime curriculum that is shared cross-district. This program reaches teachers who represent at-risk schools in Southeast Texas.
- Collaboration with Lamar Institute of Technology on the Development of the Logistics & Supply Chain Degree Program, Security Program, and the CDL Program.
- Collaboration with Lamar State College Orange on expansion and marketing of the Ordinary Seaman Program and the Logistics and Transportation Program.
- Collaboration with Lamar University on the sustainability and growth of the Center for Advances in Port Management (advisory role).
- Planning, development and execution of Southeast Texas Transportation Week, which included 22 groups and organizations that planned more than 30 free, community events to raise awareness of the important role transportation plays in Southeast Texas.
- Development of career flow charts for the maritime transportation network that can be accessed at any degree level.
- Development of one-page overviews for high-demand positions in Southeast Texas, as determined by Southeast Texas Workforce Solutions.
- Charter of Sea Scout Ship 1916, a branch of Boy Scouts America that arms participants with the skills and certifications to enter the maritime industry upon completing high school. To date, the 12 high-school aged Sea Scout participants have learned how to sail, are PADI certified, have participated in a blacksmith program to create maritime tools, are in the process of restoring three sailboats, earned marksmanship credentials, and are in the process of completing several other programs.

The Port of Beaumont is in the conceptual design phase for a Workforce Development and Transportation Center that will serve as a collaborative hub for the transportation industry, educational institutions in Southeast Texas, and state and federal agencies that support workforce development efforts, such as the Texas Workforce Commission. The property, owned by the Port of Beaumont, is the future site of a truck queuing area and a space that will accommodate groups

from the Charlton Pollard Neighborhood and surrounding area to develop professional skills (Census Tracts 117 and 17, Jefferson County, Texas), serve as a satellite location for educational workshops and programs offered by area higher learning institutions, serve as a location for community transportation-related job fairs, among other things. This space will be a multi-use facility that will focus on providing the resources needed for area residents to access opportunities that exist at the Port of Beaumont and in the maritime industry.



Community Improvement

Currently, Lot 14 is a dirt lot. With the proposed hard surfacing of this 26.14-acre area, there will be a reduction in dust that has potential to affect the surrounding neighborhood. The Lot upgrades will include a substantial drainage system, which will mitigate flooding in an area of the city that is prone to water collection during heavy rain events. This lot will make the community more resilient in the event of a natural disaster.

E. Leveraging Federal Funding to Attract Non-Federal Sources of Infrastructure Investment

Historically, the Port of Beaumont has provided matching funds well above the required 20%. The most recent grant awarded to the Port of Beaumont by the Department of Transportation was an \$18,000,000 BUILD Grant in 2019 for a \$101,000,000 million project. The required match was 20%, but the Port of Beaumont matched 75% of the project.

For the Port of Beaumont Container on Barge Service, the Port of Beaumont proposes a match of 25%, which equates to \$8,813,500.

V. Project Readiness (Engineering Report – Attachment 5 & 6)

A. Technical Capacity

The Port of Beaumont has been awarded several federal grants over the last ten years, demonstrating the entity’s ability to successfully bring grant-funded projects to fruition:

- U.S. Department of Transportation BUILD Grant
- U.S. Department of Commerce EDA Grants
- Congestion Mitigation Air Quality (CMAQ) Funds

- Department of Homeland Security (DHS) - Port Security Grants

Multi-purpose Container Marshalling Yard (Lot 14B)

As a continuation of the 2014 Port of Beaumont Master Plan, the Port of Beaumont (Port) is planning for the design and installation of Lot 14B Paving Project, also referred to as the Multi-purpose Container Marshalling Yard. Preliminary engineering for this project components is complete. The Multi-purpose Container Marshalling Yard will help the Port utilize existing infrastructure by providing a staging area for containers that will be transported to Port Houston via barge. Specifically, this project provides for 26.14 acres of roller compacted concrete (RCC) pavement and associated drainage improvements. Civil work will include the clearing and grubbing, subgrade improvements, drainage improvements and installation of an 18” thick RCC pavement. The project is not expected to require any permits.

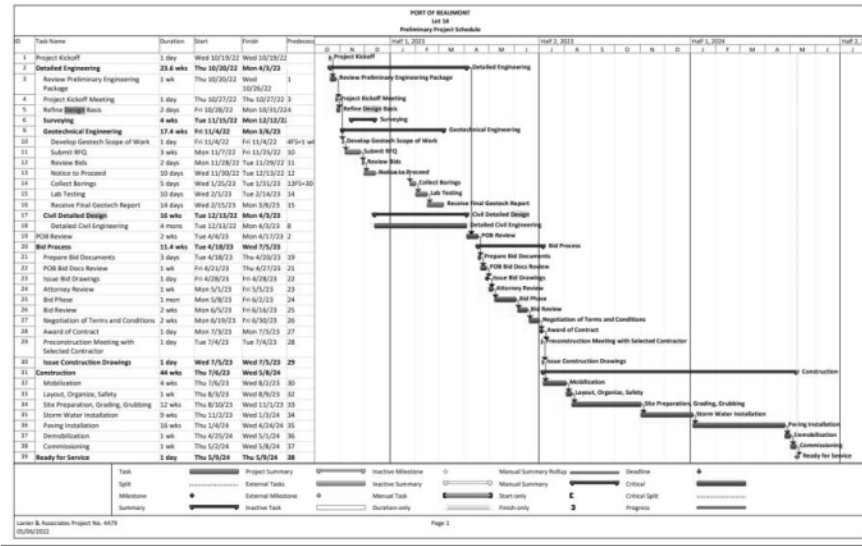
The preliminary construction cost estimate and the recommended project budget are based on the project components and scope outlined in **Attachment 5, Multi-Purpose Container Marshalling Yard Engineering Report.**

| Port of Beaumont | | Preliminary - for review | 6-May-22 | |
|--|--|-----------------------------------|--------------|---------------------|
| Lot 14 Development | | DLC | L&A Job 4479 | |
| OPINION OF PROBABLE COST | | | | |
| General Scope: Civil improvements associated with construction of the roller compacted concrete pavement at Lot 14 and associated subsurface drainage. | | | | |
| <u>Lot 14 Paving and Drainage Improvements</u> | | | | |
| Install approx. 1,138,659 SF (26.14 AC.) of Roller Compacted Concrete and drainage features. | | | | |
| Lump sum budgetary line items have been included for Mobilization & Demobilization and SWPPP due to the uncertainty in the quantity and/or scope. | | | | |
| Utility relocations are not included: | | | | |
| Item | Unit Cost | Quantity | Total | |
| 1 | Lot 14 Paving - Drainage Improvements | | | |
| 2 | | | | |
| 3 | Mobilization and Demobilization | \$400,000 | 1 | \$400,000 |
| 4 | Grading and grubbing | \$250,000 /each | 1 | \$250,000 |
| 5 | 12" Cement Treated Subgrade | \$1.5 /square foot | 1,138,659 | \$1,708,000 |
| 6 | 6" Crushed Limestone | \$85 /cubic yard | 21,086 | \$1,792,000 |
| 7 | 18" RCC Pavement | \$15. /square foot | 1,138,659 | \$17,080,000 |
| 8 | Drainage | \$600,000 | 1 | \$600,000 |
| 9 | SWPPP | \$20,000 | 1 | \$20,000 |
| 10 | Payment and Performance Bond | \$175,000 | 1 | \$175,000 |
| 11 | | Construction Sub-Total | | \$22,025,000 |
| 12 | | | | |
| 13 | | Engineering and CM | | \$1,100,000 |
| 14 | | Geotechnical | | \$30,000 |
| 15 | | 15% Contingency | | \$3,300,000 |
| 16 | | | | |
| 17 | | Recommended Project Budget | | \$26,455,000 |

Project Schedule/Milestones

Detailed engineering has not commenced for the Lot 14 Multi-purpose Container Marshalling Yard. The Project kick-off date is assumed for the purpose of schedule development. The assumed project kick-off date is October 19, 2022. The anticipated completion date is May 9, 2024.

The bid process will take approximately three months, including review of the bids and recommendation for award. Solicitation of bids is anticipated to begin in or around April 2023. The construction period for the project is projected to be 44 weeks. Completion of the project is expected in mid-2024. A detailed project schedule can be found below and in **Attachment 5.**



Barge Dock Strengthening Project (Lot 6)

As a continuation of the 2014 Port of Beaumont Master Plan, the Port of Beaumont (Port) is planning for the design and installation of Lot 6 Relieving Platform Project, referred to as the Barge Dock Strengthening Project. Preliminary engineering for this project components is complete. The Barge Dock Strengthening Project will help the Port utilize existing infrastructure to support the unloading/loading of containers onto barges at the Port of Beaumont to then be sent to Port Houston. Specifically, this project serves to strengthen a 400’ section of dock area at the waterfront to support heavy loads. This project will construct a 400’ x 100’ pile-supported relieving platform and four monopiles for breasting barges. U.S. Army Corps of Engineers permitting will be required for the four monopiles for breasting barges.

The preliminary construction cost estimate and the recommended project budget are based on the project components and scope outlined in **Attachment 6**.

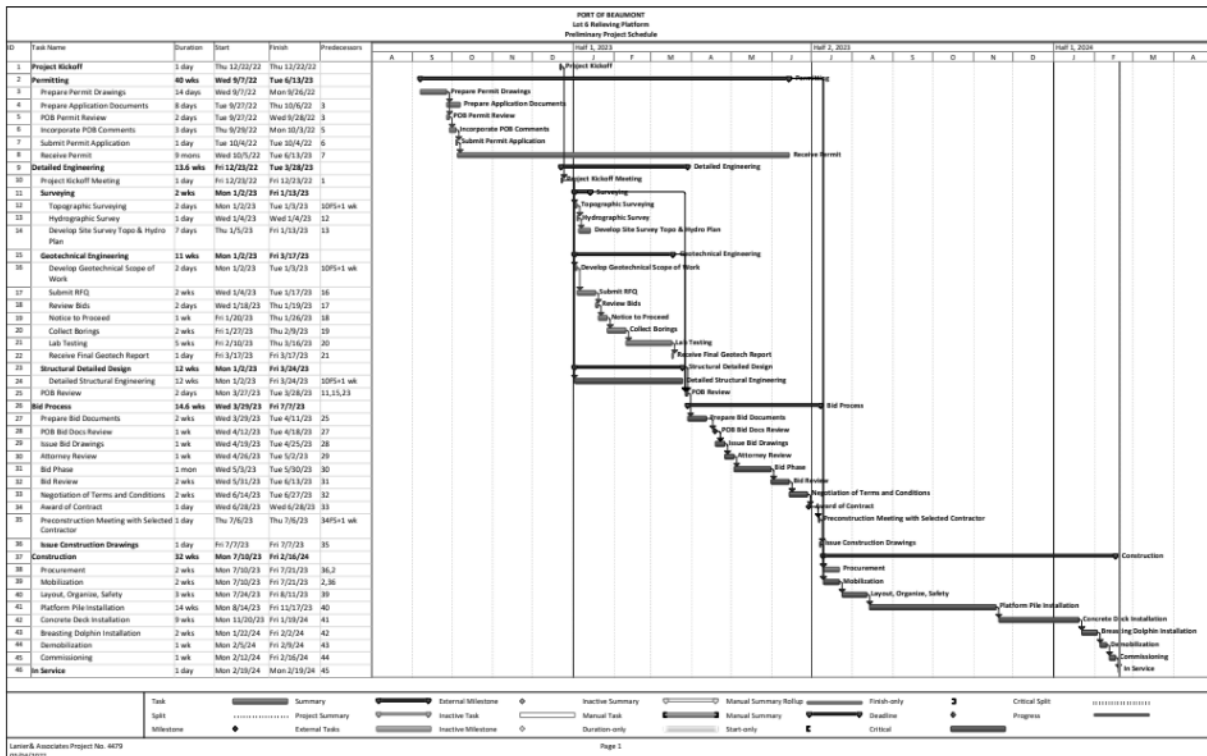
| Port of Beaumont | | Preliminary - for review | 4-May-22 |
|---|-----------|--------------------------|--------------|
| Lot 6 Relieving Platform | | DLC | L&A Job 4479 |
| OPINION OF PROBABLE COST | | | |
| General Scope: Installation of new pile supported platform to stage containers that will be loaded to barge and sent to Port Houston to be shipped internationally. Scope also includes installation of mooring monopiles for barges to breast against on the upstream end. These piles will also protect the RORO ramp approach. | | | |
| Lot 6 Relieving Platform Install approx. 252 - 24" concrete piles and pour 4500 cubic yard relieving platform foundation. | | | |
| Item | Unit Cost | Quantity | Total |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |

Project Schedule/Milestones

Detailed engineering has not commenced for the Barge Dock Strengthening Project. The Project kick-off date is assumed for the purpose of schedule development. The assumed project kick-off date is December 22, 2022. The anticipated completion date is February 19, 2024.

The bid process will take approximately three months including review of bids and recommendation for award. Solicitation of bids is anticipated to begin in or around January 2023.

The construction period for the project is projected to be eight months. A detailed project schedule can be found below and in **Attachment 5**.



B. Environmental Approvals:
NEPA Review- No NEPA review has been conducted to date, but will be, as needed. Due to both projects being minimally invasive and constructed within the existing footprint of the Port, no new environmental impacts are anticipated. The Project calls for the hard-surfacing of an existing lay-down yard and the strengthening of an existing barge dock.

Environmental Permits/Reviews- The only permit the engineering team anticipates needing is a U.S. Army Corps of Engineers permit for the installation of monopiles, a component of the Barge Strengthening Project. The permitting process has not started, as of May 9, 2022.

C. Risk Mitigation
 The overall risk rating for the project is very low due to both facilities on which the projects will be constructed already being in use. The proposed upgrades will allow for a new Container on

Barge Service to be offered and will relieve current capacity constraints, for a reasonably low investment.

| Item No. | Type of Risk | Mitigation Strategy | Prob. Rating, w/ Mitigation | Consequence Rating & Type, w/ Mitigation |
|----------|--|--|-----------------------------|--|
| 1 | Scope- Barge Dock Strengthening | | | |
| | a. Failure to construct relieving platform within defined scope of project | There is near-zero percent chance this project will not be completed within the defined scope and timeline. The Port of Beaumont is motivated to bring the Container on Barge Service to fruition. The project is relatively simple in scope compared to past port projects that have been completed. This project has been fully vetted by the Port’s project management and construction management team. | Very low | Low / Scope, Schedule, Budget |
| | b. Difficulties with construction | Due to the project taking place within an actively used site, the risks for potential unknowns has been mitigated. The engineering and design team is confident no impediments to construction exist. | Low | Low / Scope, Schedule, Budget |
| | c. Discovery of historical artifacts | The project is being constructed within the footprint of the current barge dock, located over land. The Port of Beaumont is confident the risk of discovering historical artifacts is near 0%. | Very low | Low / Scope, Schedule, Budget |
| 2 | Scope- Multi-Purpose Container Marshalling Yard | | | |
| | a. Failure to complete Multi-Purpose Container Marshalling Yard | There is near-zero percent chance this project will not be completed within the defined scope and timeline. This project included the paving of a lot that is currently used by the Port of Beaumont. No land outside the current footprint of the lot will be disturbed. The use of Roller Compacted Concrete will expedite the process. This project has been fully vetted by the Port’s project management and construction management team. The funds have been secured and the project is shovel-ready. | Very low | Low / Scope, Schedule, Budget |
| | b. Discovery of historical artifacts | The footprint of the new Container Marshalling Yard will be in an area that has already been developed. There is no record of historical artifacts being in the area where the project will be constructed. | Very low | Low / Scope, Schedule, Budget |

| | | | | |
|---|---|---|----------|-----------------------------------|
| 4 | Failure to comply with the Buy American Act for project components | | | |
| | a. Failure to comply with Buy American Act provisions | The Port of Beaumont provides guidelines and requirements for Buy American Act provisions within the bid package documents contractors are required to submit, including a Buy American Certification, signed by the Contractor. As part of the bid package, the Port has developed a checklist to facilitate requests for foreign construction materials, if needed. The Port and the Port's contracted engineering team have measures in place to hold contractors accountable and to ensure said contractors comply with Buy American Act provisions. Through the recent administration of an EDA grant, the Port of Beaumont has experience with ensuring contractors comply with Buy American Act provisions. | Very low | Low / Scope, Quality |
| 8 | Inability to pay Port share of each component. | | | |
| | a. Risk of being unable to pay the Port's share of the project cost. | The Port of Beaumont has revenue bonding capacity of approximately \$40 million in addition to the funds that have been allocated to the project, which can be accessed as needed. This ensures any excess project costs can and will be paid for by the Port of Beaumont. | Very Low | Low / Budget |
| 8 | Failure to meet project timeline, as established | | | |
| | a. Risk of being unable to complete each component of the project within the established timeframe. | Per port planning guidelines, the timelines established for each component are very conservative and with the additional year being added to the critical timeline milestone, there is a very low chance the Port will not complete the projects in the given timeframe. | Low | Low / Schedule, Budget |
| | b. Risk of severe weather impacting project site | Contractors are required to submit their severe weather response plans to the Port of Beaumont in advance of a storm event to ensure the project area does not experience significant delays as a result of severe weather, the following mitigative efforts will be taken by the contractor, among others: <ul style="list-style-type: none"> - heavy equipment is secured; - loose materials are secured; - equipment and materials that are unable to be secured are demobilized; | Low | Medium / Schedule, Scope, Budget, |

| | | | | |
|---|--|---|----------|--|
| | | <ul style="list-style-type: none"> - pumps are provided for managing water in excavations; - marine barges and equipment are demobilized, away from the construction area. | | |
| 9 | Quality of Work | | | |
| | a. Risk of poor-quality work that results in less than expected services life and full function of the improvements. | <p>The Port of Beaumont provides a bid package that is fully vetted and ensures only qualified contractors meet the requirements to bid on the project. Proof of comparable work completed is required in addition to an extensive review process. A list of items required to be provided by the Contractor is included.</p> <p>The Port of Beaumont has mitigated the risk of sub-par work being performed by enlisting our engineering consultant, responsible for the detailed design of the project, and for providing construction support services for the duration of the project’s construction. The consultant will act on the Port’s behalf day-to-day throughout the construction effort to maintain a level of quality assurance and quality control by ensuring that the contractor meets the contractual conditions and technical specifications set forth in the Port’s Contract Documents. Port representatives will oversee the Consultant’s activities and work alongside when necessary, to make decisions. Construction support services performed by Port consultant will include:</p> <ul style="list-style-type: none"> - Conducting a project kickoff meeting with the contractor, subcontractors, and Port representatives to discuss the project requirements, safety, schedule, and other site information. - Coordinate the review of submittals and assistance on technical issues as they arise during the construction. - Perform site visits to fabricator’s yards to review any off-site fabrication efforts and verify that the components are in general conformance with the design documents. - Provide daily on-site construction observations services for the duration of the construction. - Provide weekly construction progress reports documenting the day-to-day activities of the construction. | Very low | Low / Scope, schedule, budget |

| | | | | |
|----|--|---|----------|---------------------------|
| | | - Participate in a final inspection to provide a recommendation for final acceptance of the work. | | |
| 10 | Loss of life or injury to persons. | | | |
| | a. Risk of serious injury or loss of life from a project-related incident. | <p>To mitigate risks associated with safety, the Port has included extensive safety requirements in the General Conditions of the bid packages, which holds contractors and subcontractors responsible for compliance with safety policies and procedures.</p> <p>Per the General Conditions, if at any time the contractor's methods, materials, or equipment appear to the owner to be unsafe, inefficient, or inadequate for securing the safety of the workmen or the public, the quality of work or the rate of progress required, the owner may order the contractor to increase their safety, efficiency and adequacy, and the Contractor shall comply with such orders.</p> <p>The Contractor agrees that with respect to his furnishing the materials, equipment, and labor under the contract, all work performed by the contractor will be in accordance with applicable federal, state, local occupational safety laws and regulations.</p> <p>The contractor agrees to follow all site-specific safety rules including, but not limited to those pertaining to hot work, confined space entry, lock out / tag out, and work permits.</p> <p>In addition to these provisions, the Contractor will provide a project specific safety plan to the Port's designated representative at the time of mobilization.</p> <p>For the duration of the project, the Contractor will be under the supervision of the Port's engineering consultant, Lanier & Associates.</p> | Low | Low / Loss of Life |
| 11 | Risk of Port Income loss. | | | |
| | a. Risk of Port of an incident that affects operations or the ability to substantially complete and open a | Income loss has occurred as a result of the facilities not being constructed, specifically Lot 14. The risk of additional port income loss is low. | Very low | Low / Loss of Port income |

| | | | | |
|--|---|--|--|--|
| | port facility can lead to significant loss of income. | | | |
|--|---|--|--|--|

OVERALL RISK RATING: Low

VI. Domestic Preference

The Port of Beaumont commits to demonstrating preference for the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel and manufactured goods, in compliance with the Buy American Act. **Refer to Attachment 8, Letter of Intent to Buy American.**

VII. Determinations

| Project Determination | Guidance |
|---|--|
| <p>1. The project improves the safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.</p> | <p>Based on the reduction in vehicle miles traveled by three million miles annually as a result of the proposed project and U.S. DOT statistics, the implementation of this proposal would reduce fatalities by one over 20 years. The total benefits in savings due to the reduction of trucks on the road is \$33.3 million with a present value of \$12.9 million. See Attachment 10- Benefit-Cost Analysis Narrative.</p> <p>Safety is not only measured in terms of injuries or loss of life, but also in safety of the infrastructure that is depended upon for the free flow of commerce. Trucks represent a much larger disruption cost. The FMCSA estimates the average cost of a commercial truck accident where one person was injured at \$148,279. A trucking accident involving a fatality is substantially more expensive at \$7.2 million. These costs include property damage, infrastructure damage, and lost productivity.</p> <p>For the computation of cost efficiency of every year, the savings in costs by reducing truck trips is considered a benefit, and the costs associated with transportation using barges is considered a disbenefit. It is assumed, for cost estimation, that the average payload of FEU is 26 tons. The revenue per ton-mile of trucks (\$0.202 per ton-mile) and water transportation (\$0.0322 per ton-mile) from the Bureau of Transportation Statistics were used to make an adequate comparison. The total cost of transportation per truck was estimated at 75% of the cost since the trucks on the return on the round trip are empty. The total cost per round trip for one FEU is approximated to \$693, for a total of \$12.15 million the first year. By the 10th year, savings due to reduction of truck operations per year are over \$22.77 million. The total cost of transporting by barge is estimated at 100% round trip since the weight has negligible impact operational cost of the round</p> |

| | |
|--|---|
| | <p>trip on both directions. Barges are not loaded a full weight capacity because stacking a 4th level would make the trip unstable. Additional to the barge operations there are cost at the port for managing the cargo. It is estimated that the port operation cost is \$15.29 per ton or \$6.95 million on the first year. By the 10th year savings are \$ 20.21 million due to incremental increase in cargo handled. The total cost for the first year of using barges is \$10.78 million. Using the BCA Guidelines, the total benefits are estimated as ½ of the difference vs. the baseline project, for yearly equivalent benefits of \$0.68 million the first year, and \$1.28 million per year by the 10th year. The total benefits in efficiencies over 30 years are \$36 million and \$13.9 million in present value.</p> <p>The Port of Beaumont currently handles fewer than 3,00 containers. With the construction of the Lot 6 project and the Lot 14 project, that number has the potential to quintuple, exceeding 17,000 FEUs annually. The Port’s capacity and ability to load and unload goods will not only increase, it will create an additional option for shippers moving product via container from Beaumont to Houston.</p> <p>The Benefit-Cost Ratio of the BeauHou Container on Barge Infrastructure Project is 3.23.</p> |
| <p>2. The project is cost effective.</p> | <p>For a federal investment of \$26,440,500, the project will result in significant emissions reduction and an opportunity for expanded use of the Marine Highway System.</p> |
| <p>3. The eligible applicant has the authority to carry out the project.</p> | <p>The Port of Beaumont Navigation District of Jefferson County, Texas is the sole owner of the property on which the projects will be constructed. The sites of the proposed projects are currently being used as open lots.</p> |
| <p>4. The eligible applicant has sufficient funding available to meet the matching requirements.</p> | <p>The Port of Beaumont has revenue bonding capacity of approximately \$40 million in addition to the funds that have been allocated to the project, which can be accessed as needed. This ensures any excess project costs can and will be paid for by the Port of Beaumont.</p> |
| <p>5. The project will be completed without unreasonable delay.</p> | <p>The two projects have not yet entered the detailed design phase, but due to the relative simplicity in scope, it is not anticipated to take more than three months to complete detailed engineering. The Lot 14 B project will take approximately 19 months to complete and The Lot 6 project is expected to take approximately 17 months to complete.</p> |

| | |
|--|---|
| | <p>Due to the conservative estimates the Port of Beaumont develops budgets and schedules around, the proposed schedule accounts for any unforeseen challenges that may arise.</p> |
| <p>6. The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.</p> | <p>The Port of Beaumont Container on Barge Service is a vital project as it relates to building out the Marine Highway Network, creating efficiencies at the Port of Beaumont, and increasing capacity. The Service will provide opportunities to small local shippers as well as well-established shippers and will result in improved quality of life and environmental benefits along the supply chain.</p> <p>Without federal funds, the current infrastructure where the proposed projects will be located, will remain as-is. The lots are currently underutilized, but without federal funding, the upgrades needed to make the sites suitable for handling containers will not be possible, which will prevent the Container on Barge Service from coming to fruition.</p> <p>If PIDP funds are not received for the two components of the Port of Beaumont container on Barge Service, the projects will not be constructed.</p> |

Application for Federal Assistance SF-424

*** 1. Type of Submission:**

- Preapplication
 Application
 Changed/Corrected Application

*** 2. Type of Application:**

- New
 Continuation
 Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

Completed by Grants.gov upon submission.

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Port of Beaumont Navigation District of Jefferson County, Texas

* b. Employer/Taxpayer Identification Number (EIN/TIN):

(b)(4)

* c. Organizational DUNS:

(b)(4)

d. Address:

* Street1:

1225 Main Street

Street2:

* City:

Beaumont

County/Parish:

* State:

Texas

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

77701-3648

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

David

Middle Name:

* Last Name:

Fisher

Suffix:

Title:

Port Director & CEO

Organizational Affiliation:

Port of Beaumont

* Telephone Number:

409-299-4249

Fax Number:

409-835-0512

* Email:

dcf@pobtx.com

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

D: Special District Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Transportation- Maritime Administration

11. Catalog of Federal Domestic Assistance Number:

20.823

CFDA Title:

Port Infrastructure Development Program

*** 12. Funding Opportunity Number:**

MA-PID-22-001

* Title:

Dept. of Transportation- Port Infrastructure Development Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

BeauHou Container on Barge

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

| | |
|---------------------|---|
| * a. Federal | <input type="text" value="\$26,440,500"/> |
| * b. Applicant | <input type="text" value="\$8,813,500"/> |
| * c. State | <input type="text" value="N/A"/> |
| * d. Local | <input type="text" value="N/A"/> |
| * e. Other | <input type="text" value="N/A"/> |
| * f. Program Income | <input type="text"/> |
| * g. TOTAL | <input type="text" value="\$35,354,000"/> |

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative:

* Date Signed:

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

| COST CLASSIFICATION | a. Total Cost | b. Costs Not Allowable for Participation | c. Total Allowable Costs (Columns a-b) |
|---|--|--|--|
| 1. Administrative and legal expenses | \$ 0.00 | \$.00 | \$.00 |
| 2. Land, structures, rights-of-way, appraisals, etc. | \$ 0.00 | \$.00 | \$.00 |
| 3. Relocation expenses and payments | \$ 0.00 | \$.00 | \$.00 |
| 4. Architectural and engineering fees | \$ 1,834,000 .00 | \$.00 | \$ 1,834,000 .00 |
| 5. Other architectural and engineering fees | \$ 0 .00 | \$.00 | \$.00 |
| 6. Project inspection fees | \$ 0.00 | \$.00 | \$.00 |
| 7. Site work | \$ 250,000 .00 | \$.00 | \$ 250,000 .00 |
| 8. Demolition and removal | \$.00 | \$.00 | \$.00 |
| 9. Construction | \$ 28,810,000 .00 | \$.00 | \$ 28,810,000.00 |
| 10. Equipment | \$.00 | \$.00 | \$.00 |
| 11. Miscellaneous | \$.00 | \$.00 | \$.00 |
| 12. SUBTOTAL (sum of lines 1-11) | \$ 30,894,000 .00 | \$ 0 .00 | \$ 30,894,000 .00 |
| 13. Contingencies | \$ 4,360,000 .00 | \$.00 | \$ 4,360,000 .00 |
| 14. SUBTOTAL | \$ 35,254,000 .00 | \$ 0.00 | \$ 35,254,000 .00 |
| 15. Project (program) income | \$.00 | \$.00 | \$.00 |
| 16. TOTAL PROJECT COSTS (subtract #15 from #14) | \$ 35,254,000 .00 | \$.00 | \$ 35,254,000 .00 |
| FEDERAL FUNDING | | | |
| 17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share. | Enter eligible costs from line 16c Multiply X <u>75.00</u> % | | \$ 26,440,500.00 |

INSTRUCTIONS FOR THE SF-424C

Public reporting burden for this collection of information is estimated to average 180 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0041), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

This sheet is to be used for the following types of applications: (1) "New" (means a new [previously unfunded] assistance award); (2) "Continuation" (means funding in a succeeding budget period which stemmed from a prior agreement to fund); and (3) "Revised" (means any changes in the Federal Government's financial obligations or contingent liability from an existing obligation). If there is no change in the award amount, there is no need to complete this form. Certain Federal agencies may require only an explanatory letter to effect minor (no cost) changes. If you have questions, please contact the Federal agency.

Column a. - If this is an application for a "New" project, enter the total estimated cost of each of the items listed on lines 1 through 16 (as applicable) under "COST CLASSIFICATION."

If this application entails a change to an existing award, enter the eligible amounts *approved under the previous award* for the items under "COST CLASSIFICATION."

Column b. - If this is an application for a "New" project, enter that portion of the cost of each item in Column a. which is *not* allowable for Federal assistance. Contact the Federal agency for assistance in determining the allowability of specific costs.

If this application entails a change to an existing award, enter the adjustment [+ or (-)] to the previously approved costs (from column a.) reflected in this application.

Column. - This is the net of lines 1 through 16 in columns "a." and "b."

Line 1 - Enter estimated amounts needed to cover administrative expenses. Do not include costs which are related to the normal functions of government. Allowable legal costs are generally only those associated with the purchases of land which is allowable for Federal participation and certain services in support of construction of the project.

Line 2 - Enter estimated site and right(s)-of-way acquisition costs (this includes purchase, lease, and/or easements).

Line 3 - Enter estimated costs related to relocation advisory assistance, replacement housing, relocation payments to displaced persons and businesses, etc.

Line 4 - Enter estimated basic engineering fees related to construction (this includes start-up services and preparation of project performance work plan).

Line 5 - Enter estimated engineering costs, such as surveys, tests, soil borings, etc.

Line 6 - Enter estimated engineering inspection costs.

Line 7 - Enter estimated costs of site preparation and restoration which are not included in the basic construction contract.

Line 9 - Enter estimated cost of the construction contract.

Line 10 - Enter estimated cost of office, shop, laboratory, safety equipment, etc. to be used at the facility, if such costs are not included in the construction contract.

Line 11 - Enter estimated miscellaneous costs.

Line 12 - Total of items 1 through 11.

Line 13 - Enter estimated contingency costs. (Consult the Federal agency for the percentage of the estimated construction cost to use.)

Line 14 - Enter the total of lines 12 and 13.

Line 15 - Enter estimated program income to be earned during the grant period, e.g., salvaged materials, etc.

Line 16 - Subtract line 15 from line 14.

Line 17 - This block is for the computation of the Federal share. Multiply the total allowable project costs from line 16, column "c." by the Federal percentage share (this may be up to 100 percent; consult Federal agency for Federal percentage share) and enter the product on line 17.



May 11, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

SUBJECT: Port of Beaumont BeauHou Container on Barge Infrastructure Project | PIDP 2022

Dear Secretary Buttigieg:

On behalf of the Port of Beaumont, I am writing in support of the BeauHou Container on Barge Project Infrastructure Project for the 2022 Port Infrastructure Development Program.

The Multi-purpose Container Marshalling Yard project and the Barge Dock Strengthening Project, submitted as part of the Port Infrastructure Development Program application, are located in Beaumont, Texas on property wholly owned by the Port of Beaumont.

As the project applicant, I offer the following statement of commitment for your consideration:

1. The Port of Beaumont will commit \$8,813,500 as part of the overall non-federal match, which constitutes 25% of the total project cost.
2. Funds will be provided from the Port of Beaumont's operating revenues. Said funds will be dedicated to Port of Beaumont Container on Barge Service - Phase I-B Project.

Thank you for your consideration of this nationally significant project. If you have any questions, please contact me directly at dcf@pobtx.com.

Sincerely,

David C. Fisher
Port Director & CEO

PROJECT ENGINEER'S REPORT
PROJECT DESCRIPTION AND COST ESTIMATE

May 2022

1. Description of Project Components:

BACKGROUND

As a continuation of the 2014 Port of Beaumont Master Plan, the Port of Beaumont (Port) is planning for the design and installation of Lot 6 Relieving Platform Project. The project will help the Port to utilize existing infrastructure to support the unloading/loading of containers on barges. Specifically, this project strengthens a 400' section of dock area at the waterfront to support heavy loads. This project will construct a 400' x 100' pile-supported relieving platform and four monopiles for breasting barges.

STRUCTURAL WORK

Structural work will include the addition of piles, cast-in-place concrete, pre-cast concrete panels, and steel pipe piles for monopiles.

CONSTRUCTION OF THE LOT 6 RELIEVING PLATFORM
SUMMARY OF PROJECT COMPONENTS (with estimated quantities)

| ITEM | DESCRIPTION |
|------|--|
| 1 | MOBILIZATION/DEMOBILIZATION & SWPPP |
| 2 | RELIEVING PLATFORM <ul style="list-style-type: none">• 24" Square Concrete Piles (252 qty)• Reinforced Concrete Foundation (4,500 cy) |
| 3 | BARGE BREASTING DOLPHINS <ul style="list-style-type: none">• Steel Pipe Pile Monopiles (4 qty) |

Note: The quantities listed above are estimates and subject to change.

2. Drawings:

The general layout, location of the existing site conditions and components of the project are shown in the drawings. General arrangement drawings of the new relieving platform on the existing site are included with this report, and include the following:

- i. SP1 – Container On Barge Proposed Site Plan
- ii. X1 – Container On Barge Proposed Cross-Section

3. Feasibility Analysis:

The project has been developed with construction feasibility as a primary consideration.

4. Proposed Method of Construction:

The construction project will be competitively bid in accordance with the Port's public bid procedures. This includes but is not limited to taking the terms and conditions required by state law and additional terms required for agencies participating in the project funding into account. The project will be one general contract and will be bid with the traditional process of design/bid/build, with sealed competitive bid. Construction observation and testing services will be provided through direct contract with the Port and independent of the construction contractor.

5. Number of Construction Contracts:

The Lot 6 Relieving Platform Project will be let as one contract.

6. Detailed Construction Cost Estimate:

This preliminary construction cost estimate and the recommended project budget are based on the project components and scope outlined above. The professional engineer's opinion of probable costs, based on the current construction drawings is depicted below:

CONSTRUCTION OF THE LOT 6 RELIEVING PLATFORM OPINION OF PROBABLE COST

| ITEM | DESCRIPTION | TOTAL |
|---|--|------------------|
| 1 | MOBILIZATION/DEMOBILIZATION | 250,000 |
| 2 | RELIEVING PLATFORM PILES | 2,671,000 |
| 3 | RELIEVING PLATFORM CONCRETE FOUNDATION | 3,533,000 |
| 4 | BARGE BREASTING DOLPHIN | 500,000 |
| 5 | SWPPP | 20,000 |
| 6 | PAYMENT AND PERFORMANCE BOND | 61,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | 7,035,000 |
| CONSTRUCTION CONTINGENCY - 15% | | 1,060,000 |
| ENGINEERING & CONSTRUCTION MANAGEMENT - 10% | | 704,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | 8,799,000 |

Note: All figures rounded to the nearest \$1,000. Mobilization costs are based on Lanier's professional opinion and recent similar projects completed for the Port and local area. No cost for land acquisition is included in the above.

7. Acquisition of Property:

The project is located on Port of Beaumont property. No land acquisitions are required.

8. Project Permits:

The project will require United States Army Corps of Engineers permits.

9. Overall Project Schedule:

A bar chart schedule is provided with this report.

- i. Detailed engineering has not commenced. The project kickoff date is assumed for the purpose of schedule development.
- ii. The bid process will take approximately three months including review of bids and recommendation for award. Solicitation of bids is anticipated to begin in or around May 2023.
- iii. The construction period for the project is projected to be 8 months. Completion of the project is expected in 1st qtr. 2024.

Report prepared by Nathan M. Braud, P.E.

Texas Registration No. 131948

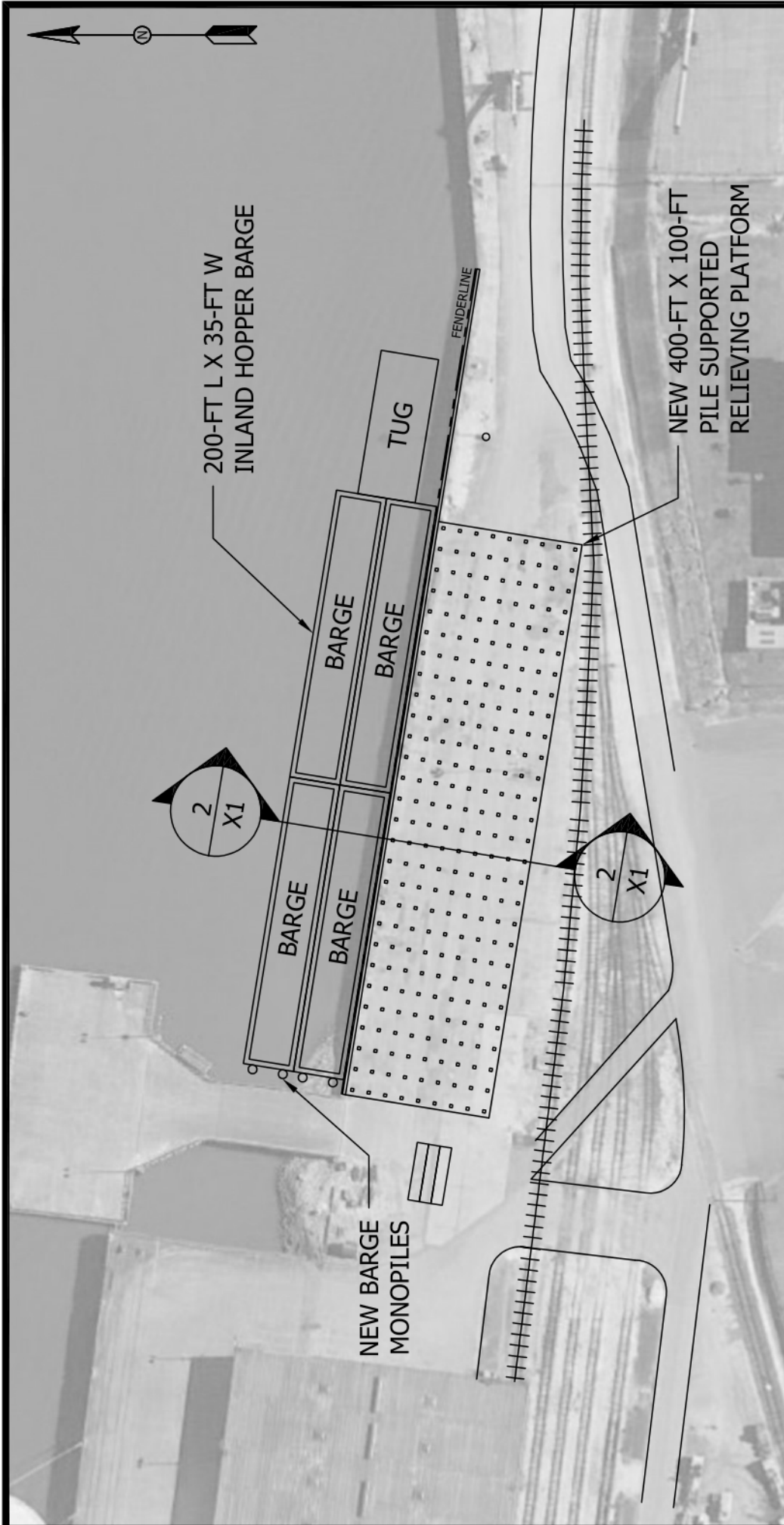
OPINION OF PROBABLE COST

General Scope: Installation of new pile supported platform to stage containers that will be loaded to barge and sent to Port Houston to be shipped internationally. Scope also includes intallation of mooring monopiles for barges to breast against on the upstream end. These piles will also protect the RORO ramp approach.

Lot 6 Relieving Platform

Install approx. 252 - 24" concrete piles and pour 4500 cubic yard relieving platform foundation.

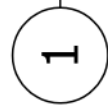
| | Item | Unit Cost | Quantity | Total |
|----|--|---|-----------------|--------------------|
| 1 | | | | |
| 2 | <u>Lot 6 Relieving Platform</u> | | | |
| 3 | | | | |
| 4 | Mobilization and Demobilization | \$250,000 | 1 | \$250,000 |
| 5 | Relieving Platform Piles | \$10,600 /each | 252 | \$2,671,000 |
| 6 | Relieving Platform Concrete foundation | \$785.0 /cubic yard | 4,500 | \$3,533,000 |
| 7 | Barge Breasting Dolphin | \$125,000 /each | 4 | \$500,000 |
| 8 | SWPPP | \$20,000 /each | 1 | \$20,000 |
| 9 | Payment and Performace Bond | \$60,650 /each | 1 | \$61,000 |
| 10 | | Construction Sub-Total | | \$7,035,000 |
| 11 | | | | |
| 12 | | Engineering & Construction Management - 10% | | \$704,000 |
| 13 | | Contingency - 15% | | \$1,060,000 |
| 14 | | | | |
| 15 | | <u>Recommended Project Budget</u> | | \$8,799,000 |



| GENERAL NOTES | | |
|---|----------------|------------|
| 1. RELIEVING PLATFORM REQUIRED TO ALLEVIATE CONTAINER AND OPERATIONAL LOADS FROM EXISTING BULKHEAD. | | |
| 2. RELIEVING PLATFORM TO SUPPORTED BY PRECAST CONCRETE PILES WITH CONCRETE DECK INSTALLED TO MATCH EXISTING GRADE (EL 10.0'). | | |
| 3. NEW BARGE MONOPILES TO PROVIDE IMPROVED BERTHING AND PROTECTION OF EXISTING RO-RO DOCK. | | |
| | | |
| | | |
| NO. | REVISION/ISSUE | YYYY/MM/DD |

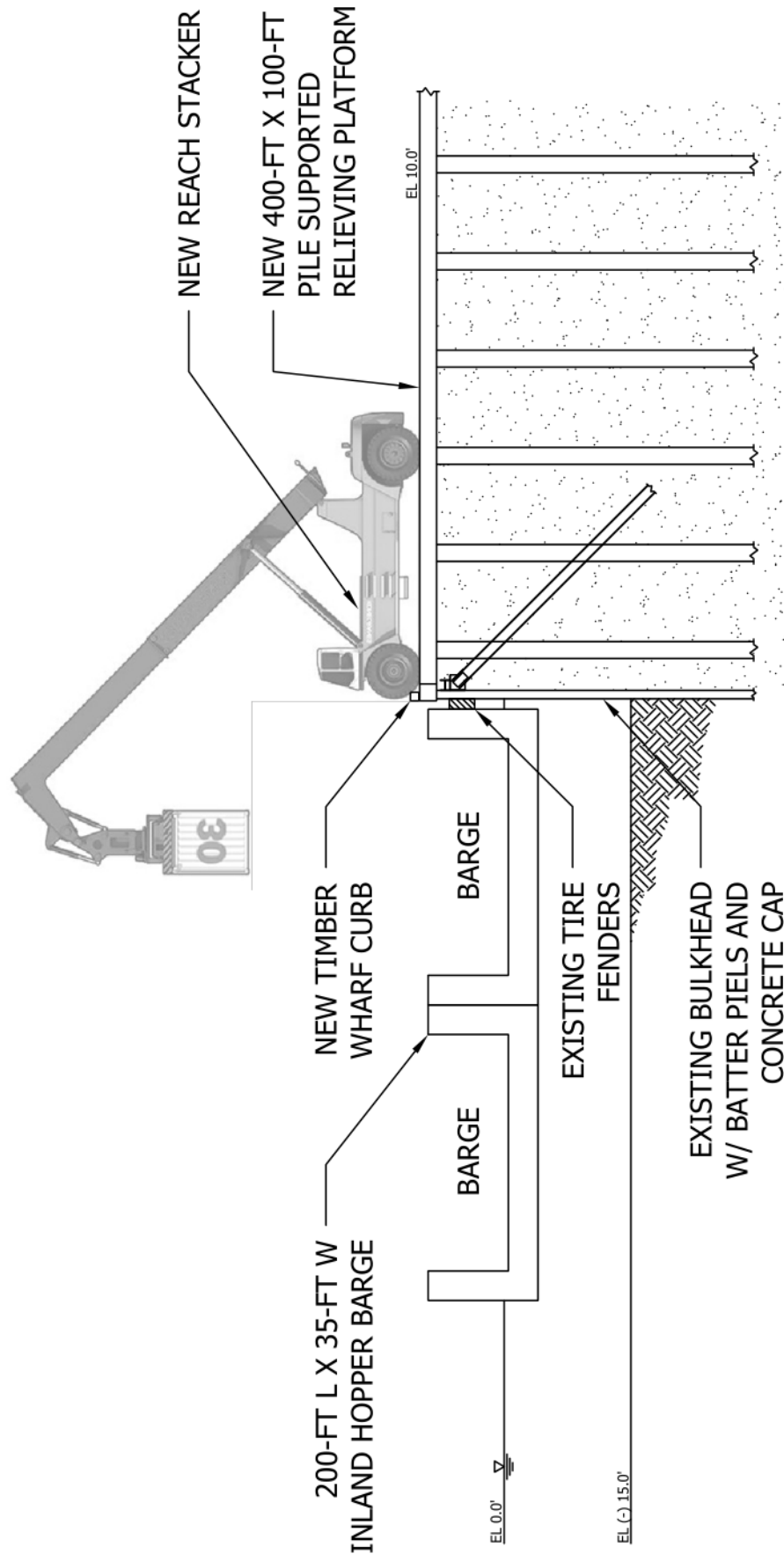
1 SITE PLAN

Scale: 1" = 100'-0"

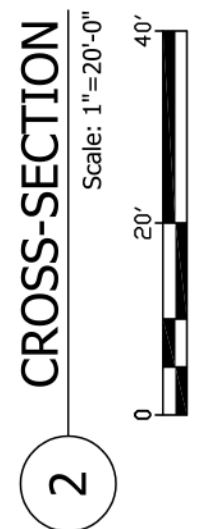


**PORT OF
BEAUMONT**

| | |
|--|------------|
| CONTAINER ON BARGE PROPOSED SITE PLAN | |
| 2019-09-09 | SP1 |
| BMB | |
| POB PROJECT NO. 00031 | |

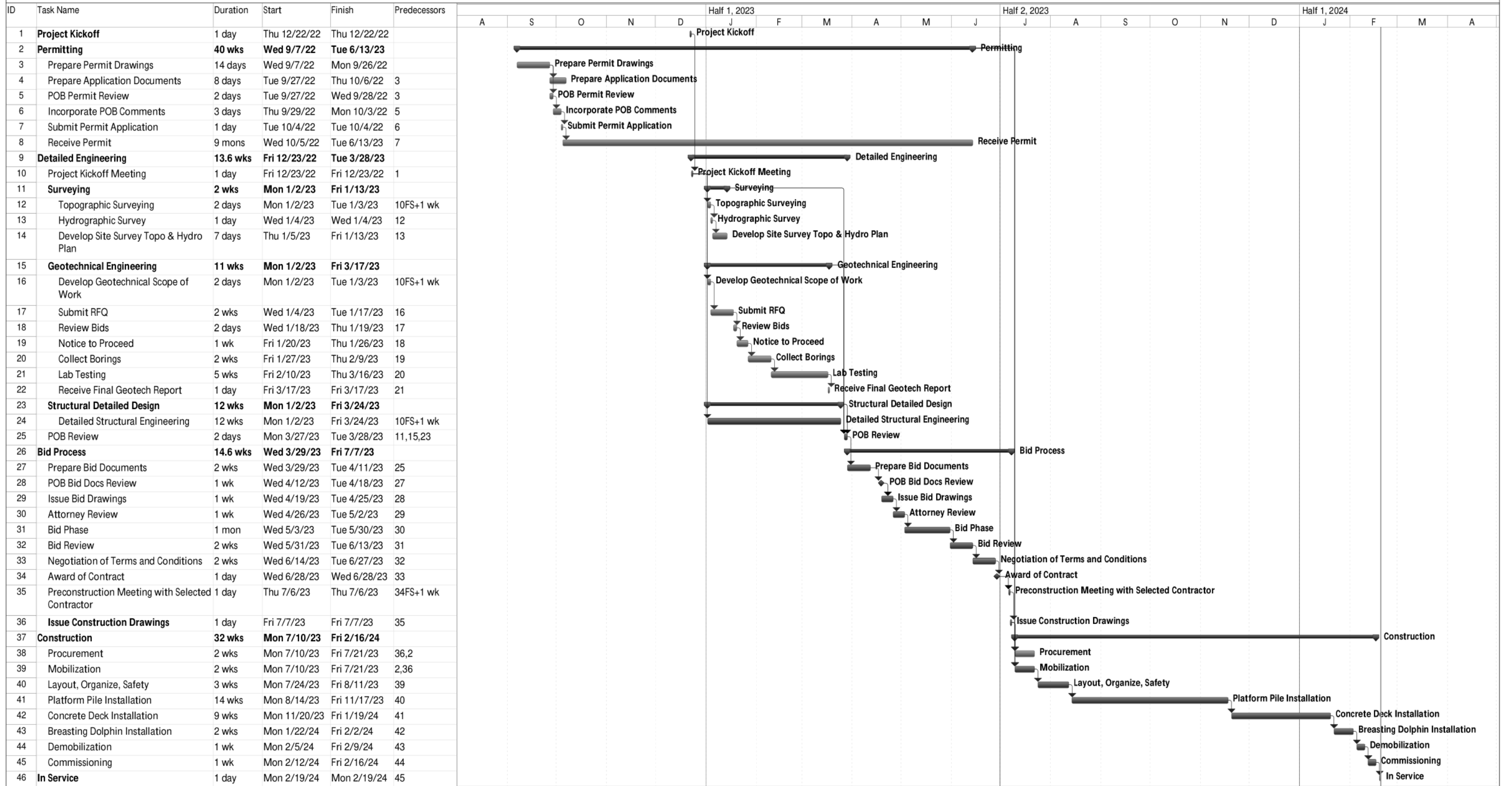


| GENERAL NOTES | | |
|---|----------------|------------|
| 1. RELIEVING PLATFORM REQUIRED TO ALLEVIATE CONTAINER AND OPERATIONAL LOADS FROM EXISTING BULKHEAD. | | |
| 2. RELIEVING PLATFORM TO SUPPORTED BY PRECAST CONCRETE PILES WITH CONCRETE DECK INSTALLED TO MATCH EXISTING GRADE (EL 10.0'). | | |
| 3. EXISTING BERTH DREDGED TO EL (-)15.0'. | | |
| NO. | REVISION/ISSUE | YYYY/MM/DD |



| CONTAINER ON BARGE PROPOSED CROSS-SECTION | |
|---|-----------|
| 2019-09-09 | X1 |
| BMB | |
| POB PROJECT NO. 00031 | |

PORT OF BEAUMONT
Lot 6 Relieving Platform
Preliminary Project Schedule





RANDY WEBER
MEMBER OF CONGRESS
FOURTEENTH DISTRICT, TEXAS

May 10, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

RANDY K. WEBER
Member of Congress
TEXAS

RKW\bh



BRANDON CREIGHTON

STATE SENATOR
DISTRICT 4

May 10, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

I respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink that reads "Brandon Creighton".

Brandon Creighton
Texas State Senator
District 4

BEAUMONT OFFICE:
350 PINE STREET, STE. 1450
BEAUMONT, TEXAS 77701
(409) 838-9861

CAPITOL OFFICE:
P.O. Box 12068
AUSTIN, TEXAS 78711
(512) 463-0104 • Fax (512) 463-6373

THE WOODLANDS OFFICE:
2829 TECHNOLOGY FOREST, STE. 240
THE WOODLANDS, TEXAS 77381
(281) 292-4128

E-MAIL: BRANDON.CREIGHTON@SENATE.TEXAS.GOV

COMMITTEES:

HIGHER EDUCATION, CHAIR • SELECT COMMITTEE ON PORTS, CHAIR • BUSINESS & COMMERCE
FINANCE • JURISPRUDENCE • WATER, AGRICULTURE & RURAL AFFAIRS



DADE PHELAN



SPEAKER OF THE HOUSE

May 9, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am writing in support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

I respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink that reads "Dade Phelan".

Dade Phelan



STATE of TEXAS
HOUSE of REPRESENTATIVES

JOE DESHOTEL

Texas State Representative
22nd Legislative District

May 5, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

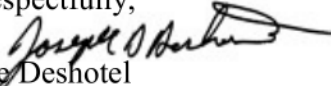
Dear Secretary Buttigieg:

I am pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2021 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2021 Port Infrastructure Development Program.

Respectfully,


Joe Deshotel
Texas State Representative
22nd Legislative District

COMMITTEES:

LAND & RESOURCE MANAGEMENT, CHAIR
· STATE AFFAIRS, MEMBER

CAPITOL OFFICE: GW.12 · P. O. BOX 2910 · AUSTIN, TEXAS 78768 · PHONE (512) 463-0662 · FAX (512) 463-8381
DISTRICT OFFICE: 1 PLAZA SQUARE, STE. 203 · PORT ARTHUR, TEXAS 77642 · PHONE (409) 724-0788 · FAX (409) 724-0750
DISTRICT22.DESHOTEL@HOUSE.TEXAS.GOV

Jefferson County Courthouse
P.O. Box 4025
Beaumont, Texas 77704



Beaumont (409) 835-8466
Pt. Arthur (409) 727-2191 Ext. 8466
Facsimile (409) 839-2311

JEFF R. BRANICK
County Judge

May 3, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

As the County Judge of Jefferson County, Texas I am pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff R. Branick", is written over the word "Sincerely,".

Jeff R. Branick, County Judge



125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

May 6, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Port of Beaumont's Port Infrastructure Development Program (PIDP) Grant Application

Dear Secretary Buttigieg:

The Texas Department of Transportation (TxDOT) is pleased to support the Port of Beaumont's 2022 Port Infrastructure Development Program (PIDP) grant application to support the port's container on barge service.

The project, which carries Marine Highway Project designations, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project will allow the Port of Beaumont to strengthen the existing barge dock, enable the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

TxDOT appreciates the opportunity to support the Port of Beaumont's PIDP grant application, and we thank you for your consideration. If you have any questions, please call me at (512) 305-9515 or you or your staff may contact Melanie Alvord, Director, Federal Affairs, at Melanie.Alvord@txdot.gov or at (512) 944-5135.

Sincerely,

Marc D. Williams, P.E.
Executive Director

cc: David C. Fisher, Port Director and CEO, Port of Beaumont
GeirEilif Kalhagen, Director, Maritime Division, TxDOT
Melanie A. Alvord, Director, Federal Affairs, TxDOT



May 9, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary, Buttigieg:

The South East Texas Planning Commission is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Thank you for your consideration of this nationally-impactful project, If you have any questions on our commitment to this important initiative, feel free to contact me at 409-899-8444 x7520.

Sincerely,

A handwritten signature in black ink that reads "Bob Dickinson".

Bob Dickinson
Director, Transportation & Environmental Resources
Southeast Texas Regional Planning Commission

President – Terri Gauthier, Bridge City | 1st VP – Michael Sinegal, Jefferson County | 2nd VP – Wayne McDaniel, Hardin County
3rd VP – Johnny Trahan, Orange County | 4th VP – Mark Allen, Jasper County | 5th VP – Glenn Johnson, Port Neches
Treasurer – Kimberly Cline, Lumberton | Secretary – Amanda Gates, Kirbyville

Executive Director – Shanna Burke
2210 Eastex Freeway Beaumont, Texas 77703-4929
(409) 899-8444 | (409) 347-0138 fax
setrpc@setrpc.org | <http://www.setrpc.org>



May 3, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

On behalf of the Southeast Texas Economic Development Foundation. I am pleased to offer this letter of support for the Port of Beaumont's proposed container on barge operation from the Port of Beaumont to the Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has a Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to the Port Houston's Bayport and Barbour's Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

James Rich
Executive Director

5/4/2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

Sabine Neches Navigation District is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,



Randall Reese, CEO
Sabine-Neches Navigation District



May 10, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

The Greater Beaumont Chamber of Commerce is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink that reads "Kristie Young". The signature is written in a cursive, flowing style.

Kristie Young
Vice President of Economic Development



May 3, 2022

Katie Celli
Executive Director

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dan Misko
ExxonMobil
Chair

Port of Beaumont Container on Barge Service

Drake Thibodaux
Valero
Secretary/Treasurer

Dear Secretary Buttigieg:

Alena Savoie
ExxonMobil
Safety Chair

The Golden Triangle Business Roundtable (GTBR) is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

Claire Jackson
Motiva
Communications Chair

Eric Miller
TotalEnergies
Environmental Chair

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

John Durkay
ISTC
Legal Counsel

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Kevin Benefield
BASF
Turnaround Chair

Sincerely,

Katie Celli
Executive Director





May 4, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

Cooper/Ports America is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbour's Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink, appearing to be 'Chris Lewis', is written over a light gray circular stamp.

Chris Lewis
Vice President



May 4, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

SSA GULF, INC. is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink, appearing to read "Evan Sham", with a stylized flourish at the end.

WEST GULF MARITIME ASSOCIATION

1717 Turning Basin Drive, Suite 200 • Houston, Texas 77029-4060 • www.wgma.org

713.715.6430

shareen@wgma.org

May 4, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: PIDP Application

Dear Secretary Buttigieg:

The West Gulf Maritime Association (WGMA) is a maritime trade association representing the interests of over two hundred maritime stakeholders in all ports in Texas. As President of WGMA, I am pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 Port Infrastructure Development Program (PIDP) application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbour's Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,



Shareen Larmond



May 4, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

Workforce Solutions Southeast Texas is pleased to support the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

As the Workforce Development Board for our area, we would welcome not only enhancing our marine infrastructure, but the project will also provide more jobs for our area and strengthen our economy.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

Mary Hammon
Executive Director



2605 Jimmy Johnson Blvd., Port Arthur, Texas 77640

Phone: (409) 722-1141

www.sabinepilots.com

May 9, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

The Sabine Pilots are pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbour's Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in cursive script that reads "Andrew Guidry".

Andrew Guidry
President, Sabine Pilots

Jefferson County
Drainage District No. 6
6550 Walden Rd. • Beaumont, Texas 77707
Telephone (409) 842-1818
Fax (409) 842-2729
Established in 1920

Board of Directors:

Joshua W. Allen, Sr.
Charles "Chuck" Guillory
Bernie Daleo
Anthony Malley, III
Charles "Chuck" Kiker, III

Dr. Joseph G. Majdalani, PE
General Manager
Doug S. Canant, Jr., PE, RPLS, CFM
District Engineer
Chuck Oakley, CPA
Chief Financial Officer
Karen J. Stewart, MBA, CTP
Chief Business Officer

May 5, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

Jefferson County Drainage District No. 6 is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Yours truly,



Dr. Joseph G. Majdalani, PE, CFM
General Manager
Jefferson County Drainage District No. 6

JM/pk/winword/reading



A *Build* INC. PROJECT

505 ORLEANS, STE. 103
BEAUMONT, TEXAS 77701
(409) 838-2202
www.beaumontmainstreet.org
email: director
@beaumontmainstreet.org

BOARD OF DIRECTORS

Ricky Scarborough
President
Robin Troy
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EX-OFFICIOS

Robin Mouton
Chris Boone
Guy Goodson
Kyle Hayes

STAFF

Tom Bell
Executive Director
Carol Gary
Director of Development

LIFETIME MEMBERS

Associated General
Contractors of Southeast Texas
Walter Umphrey
Bessie Chisum

Beaumont Main Street,
a project of the 501(c)(3) organization
BUILD, Inc., has established a
partnership between the public and
private sectors that is dedicated
to the revitalization of Beaumont's
Historic Central Business District.

May 9, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

Beaumont Main Street is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

Tom Bell
Executive Director

Ricky Scarborough
Board President

A National Main Street Community celebrating 30 years of downtown revitalization.

In association with the
National Trust for Historic Preservation • National Main Street Center
Texas Historical Commission • Texas Main Street Center



5/3/2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg,

Nance International is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbour's Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

Jacquetta Walker

Director of Marketing & Training

Honeywell

Curtis Williams
Global Manager
Transportation Logistics

Honeywell Performance Materials and Technologies
115 Tabor Rd.
Morris Plains, NJ 07950

phone: +1-973-455-2661
email: curtis.williams3@honeywell.com
www.honeywell.com

August 19, 2020

Mr. Fred Jones
Office of Marine Highway and Passenger Services
US DOT/Maritime Administration
1200 New Jersey Avenue, SE
Washington, DC 20590


Dear Mr. Jones:

Honeywell International, Inc. is pleased to submit the following letter of interest for the Port of Beaumont's proposed container on barge service along the M-69 corridor. The project will enable the Port of Beaumont to create a new marine highway service along the M-69 Marine Highway, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

If the Port of Beaumont is able to establish the proposed Container on Barge Service and the service proves to be a beneficial and cost effective option for Honeywell, we would be interested in further exploring the opportunity to collaborate with the Port of Beaumont.

We respectfully request your consideration of the application for a Project Designation for the proposed Port of Beaumont Container on Barge Service.

Sincerely,



Honeywell
THE POWER OF **CONNECTED**

Curtis Williams
Global Transportation and Logistics Lead
Honeywell Performance Materials and Technologies
115 Tabor Road
Morris Plains, NJ 07950
Office: +1-973-455-2661
Mobile: 973-615-3774
[mailto: curtis.williams3@honeywell.com](mailto:curtis.williams3@honeywell.com)

5/5/2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

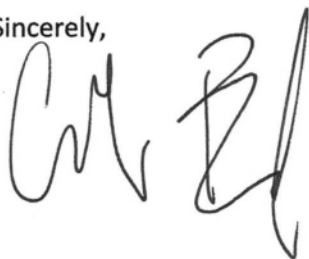
Dear Secretary Buttigieg:

Iron Horse Terminals is pleased to submit the following letter of support for the Port of Beaumont's proposed container on barge operation from Port of Beaumont to Port Houston, and the supporting projects being submitted as part of their 2022 PIDP application. The project, which has Marine Highway Project designation, will enable the Port of Beaumont to create a new marine highway service along the M-69 and M-10 Marine Highways, connecting the Port of Beaumont to Port Houston's Bayport and Barbours Cut Container Terminals.

The proposed project includes the strengthening of the existing barge dock at the Port of Beaumont as well as the hard surfacing of a multipurpose container marshalling yard that will also serve as a truck queuing area, general purpose lot, and open storage for military equipment moved by the 842nd Transportation Battalion.

We respectfully request your consideration of the application for the two projects being submitted by the Port of Beaumont for the 2022 Port Infrastructure Development Program.

Sincerely,

A handwritten signature in black ink, appearing to be "Pete Buttigieg", written in a cursive style.



City of Beaumont

Robin Mouton
Mayor

May 11, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

RE: Port of Houston Authority's Multimodal Project Discretionary (MPDG) Grant Program

Dear Secretary Buttigieg:

This letter is to express the immense support from my office and the Beaumont community, for the application for the US Department of Transportation's MPDG program with the Port of Houston Authority. Partnering with Houston for the Generating Unparalleled Leadership in Freight and Sustainable Transportation for American Resiliency (GULFSTAR) Freight Network will not only impact our communities, but the entire nation. Ports drive economic production for their region and the nation, and GULFSTAR represents critically needed improvements for a nationally significant gateway; which is experiencing outsized growth and will also increase in strategic value for decades to come.

As you review our proposal, we hope that you take into consideration the various areas of impact and strengths that are presented. The collaboration between Port of Houston with Port of Beaumont and Port Arthur, will greatly affect disadvantaged communities both small and large.

This grant, if awarded, will be allocated to the planning, building and development of new facilities and technologies that will provide transformative environmental benefits and social equity improvements. This funding will accelerate plans that would otherwise take decades for the ports to do on their own in response to the massive growth. The GULFSTAR program is necessary to help the Texas region, and ultimately the entire nation, answer supply chain needs of years to come.

Our partnership stands united, ready to participate in this transformational program with full support of your assistance for the GULFSTAR Freight Network.

Thank you for your time and consideration of this nationally impactful proposal.

Sincerely,

A handwritten signature in black ink that reads "Robin Mouton". The signature is written in a cursive, flowing style.

Robin Mouton

Mayor



April 27, 2022

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

SUBJECT: Port of Beaumont Container on Barge Service | Letter of Intent to Buy American

Dear Secretary Buttigieg:

I am writing to express the Port of Beaumont's commitment to demonstrating preference for the purchase or acquisition of goods, products, or materials produced in the United States including iron, steel and manufactured goods, in compliance with the Buy American Act.

Thank you for your consideration of this nationally significant project. If you have any questions, please contact me at directly at 409-299-4249.

Sincerely,

A handwritten signature in black ink, appearing to read "David C. Fisher".

David C. Fisher
Port Director & CEO

| | | | | | |
|--|---|--|---------------------------------------|--|-----------------------|
| Port of Beaumont COB Terminal | Port Houston Bayport Terminal | 8 Hours | Once per week, 6 barges | Barge | 252 40' containers |
| Port Houston Bayport Terminal | Port of Beaumont COB Terminal | 8 Hours | Once per week, 6 barges | Barge | 252 40' containers |
| PORT OF BEAUMONT CONTAINER ON BARGE SERVICE | | | | | |
| Volume | 252 containers per week | | | | |
| SAMPLE BASIC COSTS | | POB COST MODEL | | | |
| Description | Weekly Costs with 1 voyage/ week | Cost/Box based on 200/voyage, 1 voyages/week | Weekly Costs with 2 voyage/week | Cost/Box based on 400/voyage, 2 voyages/week | |
| Origin Drayage | \$18,000.00 | \$90.00 | \$36,000.00 | \$90.00 | |
| Origin Port Gate Charge | \$11,000.00 | \$55.00 | \$22,000.00 | \$55.00 | |
| Line-handling | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Origin Port Loading | \$26,000.00 | \$130.00 | \$52,000.00 | \$130.00 | |
| Vessel Charter per Week | \$22,000.00 | \$110.00 | \$40,000.00 | \$100.00 | |
| Fuel Cost per Voyage | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Destination Port Discharge | \$24,000.00 | \$120.00 | \$48,000.00 | \$120.00 | |
| Destination R/T Drayage | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Destination Port Return Loading | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Destination Port Line-handling | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Origin Port Discharge | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Origin Port Gate Charge | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Destination Drayage | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Insurance | \$1,034.00 | \$5.17 | \$1024.00 | \$2.56 | |
| Overhead | \$7,000.00 | \$35.00 | \$10,000.00 | \$25.00 | |
| Total Service Cost/ box Door to Door | \$109,034.00 | \$545.17 | \$209,024.00 | \$522.56 | |
| R/T Service Rate | | \$550.00 | | \$550.00 | |
| Comparative R/T Truck Rate | | \$600.00 | | \$600.00 | |
| Service vs Truck Difference | | \$50.00 | | \$50.00 | |
| Cost per Freight Ton via Truck (46k capacity dry van) | | \$26.09 | | \$26.09 | |
| Cost per Freight Ton AMH Service (56k capacity dry box) | | \$19.64 | | \$19.64 | |



**PORT OF
BEAUMONT**



2022 Port of Infrastructure Development Program Application
PORT OF BEAUMONT
BeauHou Container on Barge Infrastructure Project
Benefit Cost Analysis

Abstract:

This document explains in detail the Benefit-Cost Analysis of the Port of Beaumont's Container on Barge Project. This project constructs an intermodal container handling facility that includes a barge dock strengthening project and a multi-purpose container marshalling yard for a total of \$35.25 million. The purpose is to create a Marine Highway container on Barge connecting moving cargo from the Port of Beaumont to Port Houston. The Benefit Cost ratio is 3.23 with over \$114 million in present value benefits

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Executive Summary

Summary and BC ratio

The purpose of this document is to present the Benefit Cost Analysis for the Port of Beaumont Container on Barge Project. As a designated Marine Highway Project, this project consists of the construction of an intermodal container handling facility that will enable manufacturers in Southeast Texas and throughout the country to use a marine highway as an alternative to existing truck and rail infrastructure for the transportation of containers. The project entails the strengthening of a dock so that it can handle containers and be used to load them onto barges. In addition, the project involves the development and upgrade of a yard which can house containers as well as military cargo. Total investment is \$35.25 million. Table 1 provides an overview of the component building costs.

The current dock, built in 1994, was not designed to withstand the weight of regular container movements. A relief platform must be installed at the barge dock to handle the volume of containers that the Port of Beaumont (The Port) plans to move via container on barge. This project will strengthen the existing barge dock at the Port of Beaumont, and it is estimated to cost \$8,799,000.

A multi-purpose container marshalling yard is the second project component. This \$26,455,000 project will provide 26.14 acres of space to be used primarily for container marshalling, with a secondary use as a hard-surfaced laydown area for military and other general cargo.

The Port of Beaumont is providing the \$8,813,500 local match. Dedicated funds are provided from port operating revenues for the Container on Barge Project as depicted in Table 2.

Table 1- Project Build and Fund Allocation

| | |
|---|---------------|
| Barge Dock | \$ 8,799,000 |
| Multi-purpose Container Marshaling Yard | \$ 26,455,000 |
| Total | \$ 35,254,000 |

Table 2- Funding Sources

| | | |
|----------------------|---------------|-----|
| Port Match | \$ 8,813,500 | 25% |
| PIDP Grant requested | \$ 26,440,500 | 75% |
| Total project cost | \$ 35,254,000 | |

Table 3- 30-year Total Benefits and Corresponding Total Present Worth (000s)

| | Efficiency | Emissions | Safety | Congestion and Noise | Pavement costs | Total |
|-----------------|------------|------------|-----------|----------------------|----------------|------------|
| Current dollars | \$ 36,067 | \$ 218,207 | \$ 33,301 | \$ 11,435 | \$ 107,353 | \$ 297,259 |
| Present Worth | \$ 13,942 | \$ 41,307 | \$ 12,873 | \$ 4,420 | \$ 4,498 | \$ 114,039 |

Table 3 provides the estimated benefits by category, both in current dollars for 2022 and in present value discounted at 7%.

Yearly benefits discounted at 7% per year are categorized as follows:

- **Efficiencies in operation:** Due to the cost-effective nature of barge operation, users can gain savings by allowing their products to be transported by barge. The first user of the service is a plastic pellets producer in Beaumont. Currently, the product is shipped to Houston for packaging, transported to Port Houston and exported at that point. The present value of efficiencies of operations is \$13.9 million
- **Emissions reduction:** Barges are highly efficient in part because of their low fuel consumption and, thus, low emissions. The present value of the reduction of emissions of NO_x, HC, PM and CO₂ is \$41.3 million.
- **Improved road safety:** By reducing the number of trucks on the roads, the expected number of fatalities is reduced, thereby reducing the associated social costs. The present value of the benefit of improved road safety is near \$12.9 million.
- **Congestion and noise reduction:** As there are fewer trucks on the roads, there is a reduction in the noise and the negative effects of traffic congestion. The present value of the improved congestion and noise is \$4.4 million.
- **Pavement costs:** As fewer trucks are expected to use the roads, its cost to re-build the road will be lower due to reduced usage. The present value of the benefits of reduced need in pavement of roads is nearly \$41.5 million.

BC ratio computation.

These benefits are estimated to be at total of \$114 million in present value. The total investment is \$35.25 million, and the **Benefit-to-Cost Ratio (BC-Ratio) is 3.23**, as shown in Table 6.

Non-quantified benefits

It is worthwhile to mention several non-quantified benefits. **Table 5** illustrates how these benefits relate to the PIDP merit criteria. This table includes:

National Interest:

Economic competitiveness of the USA- The use of barges will facilitate the process of exporting plastic pellets from the USA at a lower cost.

National Interest:

Port resiliency- In addition to having the capacity to load and unload containers, the Port will also be able to move containerized cargo, thus not relying exclusively on rail or truck transportation.

National Interest:

Military operational support- Some military operations require the loading and unloading of military equipment from or onto a concrete paved yard. In recent months, four ships were diverted to other ports, causing delays and additional costs since the Port is unable to accommodate the associated military cargo because there is insufficient space on a concrete paved yard.

Economic vitality:

Employment- The unemployment rate in the Beaumont-Port Arthur MSA is the second highest in the State of Texas, and ranks 377 out of 389 in employment growth nationwide, according to the Bureau of Labor Statistics.

Advancing equality and opportunity for all

Local jobs will be created through this project. In 2010, there were 68.22% of Beaumont-Port Arthur MSA residents who were white, 24.80% African American, 2.09% Native American, 1.56% Asian, 0.03% Pacific Islander, 3.13% from other races, and 1.35% from two or more races. Latinos of any race constituted 8.01% of the population.

PIDP Merit Criteria

Table 4. PIDP Merit Criteria Alignment included in the BC ratio

| | Benefits (000s) | Efficiency | Emissions | Safety | Congestion and Noise | Pavement costs |
|---------------------|--|------------|-----------|-----------|----------------------|----------------|
| | | \$ 13,942 | \$ 41,307 | \$ 12,873 | \$ 4,420 | \$ 41,498 |
| PIDP Merit Criteria | Safety, Efficiency and Reliability | ✓ | | ✓ | | |
| | Climate Change and Environmental Justice | | ✓ | | | |
| | Advancing equality and opportunity for all | | | | | |
| | Port Resilience | ✓ | | | | |
| | Economic Vitality | ✓ | | | | |
| | Leverage Federal Funding | ✓ | ✓ | ✓ | ✓ | ✓ |

Table 5 PIDP Merit Criteria Not Included in the BC ratio

| | Benefits | Economic competitiveness of US Exports | Port Resiliency | Military Operational Support |
|---------------------|--|--|-----------------|------------------------------|
| PIDP Merit Criteria | Safety, Efficiency and Reliability | ✓ | | ✓ |
| | Climate Change and Environmental Justice | | | |
| | Advancing equality and opportunity for all | ✓ | ✓ | |
| | Port Resilience | | ✓ | |
| | Economic Vitality | ✓ | | |
| | Leverage Federal Funding | ✓ | ✓ | ✓ |

Table 6. Benefit to Cost Ratio

| | |
|--|---------------|
| Term (years) as per DOT BCA guidelines | 30 |
| Discount rate | 7% |
| Investment needed | \$ 35,254,000 |

| | |
|-----------------------|----------------|
| PV of Benefits | \$ 114,039,388 |
| Benefit to cost ratio | 3.23 |

Benefit Cost Analysis and Computations

Introduction

This document provides detailed information on the assumptions, inputs, computations, and outputs used in the economic analysis conducted in support of the grant application for the Port of Beaumont. The description of the document is as follows:

The Methodology section introduces the conceptual framework used in the BCA. The Project Overview provides an overall description of the current situation (no build) and explains the contrast with the proposed alternative (build). The Assumptions and Model Parameters describes the current and future conditions expected and used in the analysis of benefits. Project Cost provides a summary of cost estimates.

Estimates of the project’s present value of benefits and the Benefit -Cost ratio (BCR), and other project evaluation metrics are also discussed. Following the DOT BCA Guidelines 2022, the job creation economic impact was not included in the BCA computations.

Finally, the layout of the BCA Excel Worksheet is offered for the reviewers’ convenience.

Methodology

BCAs are forward-looking assessments that attempt to anticipate the welfare impacts of a project over its complete life cycle, which can span several years. Using a present value methodology, the future welfare changes are discounted against the present conditions. It can be seen that society prefers to achieve the greatest benefits in the present over short-term outcomes, and short-term outcomes over long-term outcomes. Furthermore, it accounts for the time value of money, increased risks of future forecasts of costs and benefits, and inflation effects.

Based on the above BCA principles, the methodology developed for this application conforms with the DOT BCA Guidelines 2022 as well as the Notice of Funding Opportunity for the Maritime Administration Port Infrastructure Development Program (PIDP). This methodology includes:

- Identifying current and future conditions under scenarios of construction and non-construction.
- Assessment of benefits in relation to each of the selection criteria outlined in the Notice of Funding Opportunity (NOFO).
- It is important to measure benefits in terms of dollars, whenever possible, and to measure benefits and costs in the same terms.
- Using U.S. Department of Transportation (USDOT) guidelines for the estimation of travel time savings, safety benefits, and reductions in air pollution as well as other reports or relying on industry best practices for estimation of other benefits.
- Discounting future benefits and costs using the real discount rate recommended by the USDOT (7%).

Project Overview



Figure 1- Truck route from Iron Horse Terminals (transload facility for polyethylene pellets) to Port of Houston Base Case



Figure 2- Beaumont-Houston Marine Highway Project. Build alternative

Base Case Scenario. No Build

The Golden Triangle produces approximately 65 rail cars per day of plastics. This production will triple to more than 200 rail cars per day upon completion of the additional plastic producer projects. Presently, this product is transported by rail car and truck from the Golden Triangle to the Houston area for packaging, then by truck to Port Houston for export. This takes a total 108.4 miles for the manufacturing facility to the packaging facility near Houston and then to the Port of Houston for exporting it. Figure 1 depicts the truck distance from Beaumont manufacturing facility to the Port of Houston for illustrative purposes. The Port client prefers the location of the packaging facility not be disclosed. Considering the limited capacity of the rail infrastructure from Beaumont to Houston, trucks are anticipated to serve as the relief valve for transporting product from the point of origin to the port of export.

Build Alternative

Iron Horse Terminals moves 65 rail cars per day of plastics. Upon the completion of the additional plastic producer projects, this production will triple to more than 200 rail cars per day. Currently, this product is transported by rail car and truck from the Golden Triangle to Houston for packaging, then by truck to Port Houston for export.

There is a total distance of 108.4 miles between the manufacturing facility and the packaging facility near Houston, and then to the Port of Houston for exporting. **Figure 1** illustrates the distance from the Beaumont manufacturing facility to the Port of Houston for the purpose of illustration. However, the Port client prefers not to disclose the location of the packaging facility. Due to the limited capacity of the rail infrastructure between Beaumont and Houston, trucks will be used to transport products from the point of origin to the port of export.

The project has two construction components. The Barge Dock Strengthening Project (Lot 6) is an \$8,799,000 million project that will strengthen the existing barge dock at the Port of Beaumont. The current dock, built in 1994, was not constructed to withstand the weight of regular container movements. To handle the volume of containers the Port of Beaumont plans to move via container on barge, the barge dock requires the installation of a relieving platform

The project will help the Port to utilize existing infrastructure to support the unloading/loading of containers onto barges. This project will construct a 400' x 100' pile-supported relieving platform and four monopiles for breasting barges. Structural work will include the addition of piles, cast-in-place concrete, pre-cast concrete panels, and steel pipe piles for monopiles. The relieving platform will strengthen the 400' section of dock area at the waterfront to support heavy loads.

The Multipurpose Container Marshalling Yard (Lot 14) is the second project component. This \$26,455,000 million project will hard-surface 26 acres with Roller Compacted Concrete, which will be used for container marshalling and hard-surfaced laydown areas for U.S. military cargo. During non-container yard use, the lot meets the specifications of U.S. 842nd Transportation Battalion, 597th Transportation Brigade for transportation of military equipment. As the largest Strategic Military Port in the United States, space for military exercises is crucial. Containerized cargo cannot be handled in any areas in the Port currently. Most of the laydown areas and storage locations were designed to accommodate breakbulk cargo. By utilizing existing infrastructure, the Port will be able to prepare

containers for loading before they are barged. Containers can be efficiently moved to the barge dock by the container marshalling yard's proximity to the Port's new overpass. **Figure 2** shows the barge route from the Port of Beaumont to the Port of Houston.

The project will provide 24-hour access to regional manufacturing to an intermodal container marshalling area once both components are complete. Containers handled at this facility will be fully loaded due to its location on port property. The project provides shippers with economies of scale and economic benefits. The facility is estimated that the facility will handle a minimum of 17,000 FEUs of containerized cargo per year, providing weekly service between Beaumont and Houston ports among other things. Port of Beaumont Container on Barge Service is expected to reduce truck miles traveled annually by more than 3.08 million miles per year in the first phase.

In addition to serving local industrial facilities, the project will also serve small, local manufacturers that currently truck their product to packaging facilities near Houston, where it is packaged, then trucked to Port Houston and shipped internationally, and provide them with a more environmentally friendly way of moving their goods. International shipping will be easier for small, independently owned local companies. Beaumont is surrounded by rural communities. This new service, which is being offered as part of the Rural Opportunities to Use Transportation for Economic Success (ROUTES) initiative, will give manufacturers in the area an additional option to move more product, while also providing safety and emissions benefits, and a reduction on wear and tear on the interstate system. The project aims to provide a safe, efficient, and reliable option for moving goods to and from the Port of Beaumont to the Port of Houston to have access to international markets at a cost comparable to the current "truck-only" model. The projected initial service is to server 48 FEU's per day and will escalate to 90 FEU's per day after several years as show in **Table 13**.

Table 7- Construction of Lot 6 Relieving Platform Probable Cost

| ITEM | DESCRIPTION | TOTAL |
|---|--|------------------|
| 1 | MOBILIZATION/DEMOBILIZATION | 250,000 |
| 2 | RELIEVING PLATFORM PILES | 2,671,000 |
| 3 | RELIEVING PLATFORM CONCRETE FOUNDATION | 3,533,000 |
| 4 | BARGE BREASTING DOLPHIN | 500,000 |
| 5 | SWPPP | 20,000 |
| 6 | PAYMENT AND PERFORMANCE BOND | 61,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | 7,035,000 |
| CONSTRUCTION CONTINGENCY - 15% | | 1,060,000 |
| ENGINEERING & CONSTRUCTION MANAGEMENT - 10% | | 704,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | 8,799,000 |

Table 8- Multi-purpose Container Marshalling Yard Budget

| ITEM | DESCRIPTION | TOTAL |
|------|-----------------------------|------------|
| 1 | MOBILIZATION/DEMOBILIZATION | 400,000 |
| 2 | GRADING & GRUBBING | 250,000 |
| 3 | 12" CEMENT TREATED SUBGRADE | 1,708,000 |
| 4 | 6" STABILIZED LIMESTONE | 1,792,000 |
| 5 | 18" RCC PAVEMENT | 17,080,000 |

| | | |
|--|------------------------------|-------------------|
| 6 | DRAINAGE | 600,000 |
| 7 | SWPPP | 20,000 |
| 8 | PAYMENT AND PERFORMANCE BOND | 175,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | 22,025,000 |
| 15% CONSTRUCTION CONTINGENCY | | 3,300,000 |
| ENGINEERING AND CONSTRUCTION MANAGEMENT AND GEOTECHNICAL | | 1,130,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | 26,455,000 |

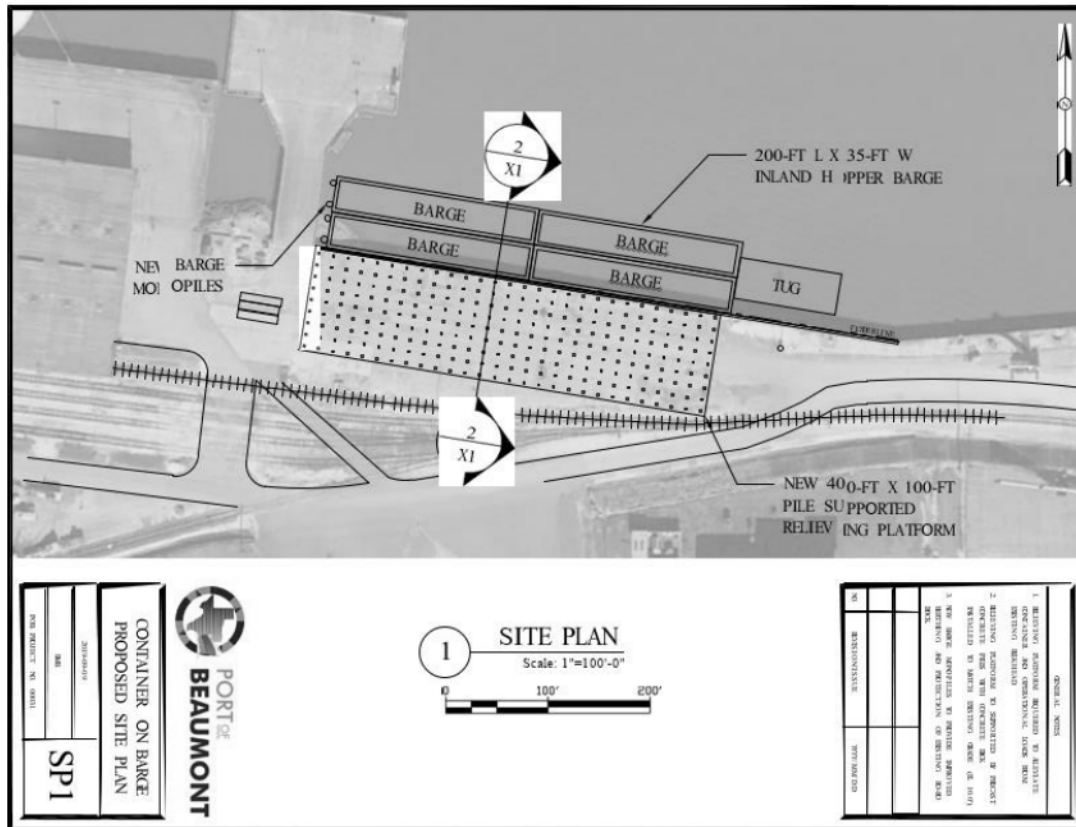


Figure 3- Lot 6 Relieving Platform Site Plan

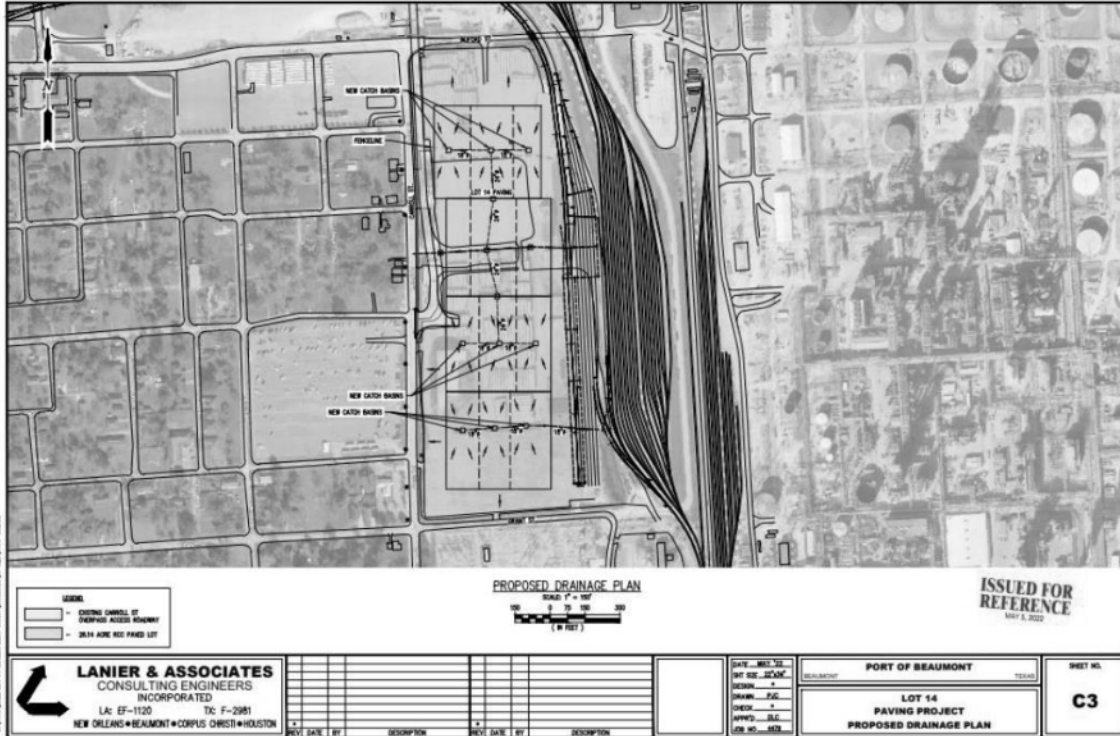


Figure 4- Multipurpose Container Marshalling Yard

Assumptions and Model Parameters

In order to construct the BCA model, two contrasting pieces of information are the basis for the Base Case and the Build Case. The first is the number of trucks and the distance traveled by truck, and the second is the equivalent movement of cargo by barge, which is based on the number of barges and the distance traveled by barge. In **Table 9**, we present the basic assumptions for the first year, in which the project is expected to handle 48 FEU per day. As shown in Table 10, the volume is anticipated to increase gradually over time. Trucks, by changing transportation mode, save $88 \times 2 = 176$ miles per FEU (round trip), while barges travel $130 \times 2 = 260$ miles per round trip. The assumption is that each barge can transport 32 FEUs. On a yearly basis, this volume is equivalent to 17,250 FEU or 548 barges. Both trucks and barges have to travel round trips to maximize efficiency avoiding idle time of locating cargo for the relative short distance of 88 miles.

Benefit computations:

For this section of the BCA, please refer to the accompanying Excel Workbook. This document explains the computations that yield the Benefit Cost Ratio and where to find them in the Excel Workbook. The file contains four spreadsheets.

Project description worksheet includes the investment requirements and funding as previously described.

Ramp up worksheet includes the projected volume increments in FEU's per year and the incremental cost of emissions as indicated in the DOT BCA Guidelines 2022. The initial year the number of FEUs will be 48 per day. We made a modest assumption on the rate volume growth, gradually increasing up to 90 FEUs per day after 7 years and maintaining that level for the remainder of the project.

Port operation cost includes the computation of the total cost of origin and destination port costs of drayage, gate charges, loading and discharges, and insurance per two round trips per week, with 200 FEU each trip. The total service rate per round trip is \$397.56 per FEU and the total per ton is \$15.29.

The *BCA* contains most of the computations required to estimate the benefits and the corresponding BC ratio. Whenever cell ranges are indicated without a specific worksheet, it implies they are in the *BCA* worksheet.

Table 9 Model Parameters – A comparison of years 1st vs 10th

| Concept | Value | | type |
|---|-----------|-----------|--------------|
| Year modeled | 1 | 10 | y=1,2,3...30 |
| FEUs per day | 48 | 90 | Input |
| FEUs per year | 17,520 | 32,850 | Output |
| Round trip miles savings per FEU on truck | 176 | 176 | Input |
| Truck miles saving per year | 3,083,520 | 5,781,600 | Output |
| FEU per barge unit | 32 | 32 | Input |
| Barges per year | 548 | 1,027 | Output |
| Round Trip distance by barge (miles) | 260.0 | 260.0 | Input |
| Total barge miles per year | 142,350 | 266,906 | Output |

The *BCA* worksheet

The *BCA* worksheet contains four ranges. The *BCAMAIN* range where the net benefits of a single year are computed. The *BCATABLES* range, where the summary of all the years of net benefits are integrated into overall reports. An the *BCRATIO* range where the BC ratio is computed. *BCAPARAM* set up the master input for the model, which computes cargo volume, trucks and total miles. The four ranges in this worksheet avoid for the most part having shared columns and rows to avoid format displaying conflicts with other data but are on the same worksheet to facilitate the navigation to the user through the data.

We use a single table (Worksheet *BCA*, ranges B2 to I68) to compute the economic benefits. The range *BCAMAIN* computes the benefits of one year. The year can range from 1 to 30 by entering the value in cell F3. The volume and emissions cost per ton vary from year to year, and the spreadsheet only computes one year, so the summary for all the years is calculated using the What-if capability in Excel. There is no need to change the value of Cell F3. *BCMAIN* displays by column the information source when it is input (in yellow) or output when calculated by the spreadsheet (in green). It displays concepts, amounts, and units. The benefits and equivalent disbenefits of base case and alternative case are compared to obtain the net benefit for each category. Considering the benefits of not using trucks, and the disadvantages of costs associated to using barges in our case, there is a net benefit effect of emissions and transportation.

The summary of benefits year-by-year is presented in the range M75..AH153 (named *BCATABLES*). In the *BCATABLES*, you'll find the current dollar value or present value of benefits in columns M:V, and their equivalent in thousands of dollars in columns Y:AH. Rows 75-108 show the constant dollar value of benefits, and rows 113-146 show the corresponding present value of benefits. For instance, the constant dollar values of each year of net benefits is displayed in the range M75..V108, and their

corresponding present value is in range M113..V146. You can find this information in **Table 14** and **Table 15**. Rows 150 to 153 compute a summary by type of benefit for both current dollar value and present value by category.

BCARATIO (from AK7 to AL11) summarizes the investment, benefits and benefit to cost ratio. This is shown in Table 16

Parameters of the model

The parameters are computed in the Range E3..G11 (named BCAPARAM). The year for the computation of the benefits is indicated in F3. There are four input parameters: FEUs per day, Round trip miles per truck, FEU per barge, and round trip miles per barge. From those parameters, other four very useful parameters are computed: FEUs per year, Total truck miles per year saved, total barges per year, and total barge miles per year. The total number of trucks is the same as the total number of FEUs per year. This information is presented in Table 9.

Benefit computations Efficiency for one year

For the computation of cost efficiency of every year, the savings in costs by reducing truck trips is considered a benefit, and the costs associated with transportation using barges is considered a disbenefit. It is assumed, for cost estimation, that the average payload of FEU is 26 tons. We used the revenue per ton-mile of trucks (\$0.202 per ton-mile) and water transportation (\$0.0322 per ton-mile) from the Bureau of Transportation Statistics to make an adequate comparison. The total cost of transportation per truck was estimated at 75% of the cost since the trucks on the return on the round trip are empty. The total cost per round trip for one FEU is approximated to \$693, for a total of \$12.15 million the first year. By the 10th year, savings due to reduction of truck operations per year are over \$22.77 million. The total cost of transporting by barge is estimated at 100% round trip since the weight has negligible impact operational cost of the round trip on both directions. Barges are not loaded a full weight capacity because stacking a 4th level would make the trip unstable. Additional to the barge operations there are cost at the port for managing the cargo. It is estimated that the port operation cost is \$15.29 per ton or \$6.95 million on the first year. By the 10th year savings are \$ 20.21 million due to incremental cargo. The total cost for the first year of using barges is \$10.78 million. Using the BCA Guidelines, the total benefits are estimated as ½ of the difference vs. the baseline project, for yearly equivalent benefits of \$ 0.68 millions the first year, and \$1.28 million per year by the 10th year. The total benefits in efficiencies over 30 years are \$36 million and \$13.9 million in present value.

Benefit computations Emissions for one year

For the computation of emissions, we included benefits of reduced of truck milage and disbenefits in the emissions of barges. The cost of emissions by ton change year by year as per the scheduled presented in the DOT BCA Guidelines 2022. The total emissions also change as a function of the overall volume of FEUs per year. The emissions for trucks are estimated using the EPA average in-use Emissions from Heavy-Duty-Trucks and are given as grams per mile, except for CO₂, which are computed based on gallons diesel. For the computation of the emissions of barges, emissions depend on the energy (grams per KWh), and the energy in one gallon of diesel. For each year these values are computed in range B33 to I64 for NO_x, HC, PM and CO₂. The total value of 30 years of benefits is \$218.21 million and the present value is \$41.3 million.

Benefit computations Safety for One Year

For the computation of improvement of safety, we estimated the value of reduced fatalities on the road due to mileage of heavy trucks. The value of each fatality was determined using the DOT BCA Guidelines 2022, and the fatalities per 100 million miles was obtained from the Federal Motor Carrier Safety administration report 1975-2018. The value of the benefit changes year by year as the volume of FEU changes year by year. These benefits are computed in the range B65..I69. The total benefits in savings due to reduction of trucks on the road is \$33.3 million with a present value of \$12.9 million.

Benefit computations Congestion and Noise for One Year

For congestion and noise benefits, we used the values in the DOT BCA Guidelines. The total value of these benefits change over time since the volume of FEU's change. These computations can be found in the range B70..I72. The total benefit of 30 years or reduced congestion and noise is estimated at \$11.4 million and a present value of \$ 4.4 million

Benefit computations Pavement Costs for One Year

The benefit of reduced re-building the road is obtained by the USDOT Cost allocation study of 2000 which depicts \$0.66 per heavy truck per mile. The value changes year by year since the amount of cargo changes through time. These computations are in range B73 to I74. The total benefits over 30 years is \$107 million or \$41.5 million.

Table 10 Comparative emissions and savings - Trucks vs Barges - years 1st vs 10th

| Year | Product | Trucks | Barges | Savings per year |
|------------------|-------------|----------|--------|------------------|
| 1st | Tons of NOx | 28.34 | 0.0823 | \$ 452,132 |
| | Tons of HC | 1.42 | 0.0116 | \$ 60,765 |
| | Tons of PM | 1.38 | 0.0089 | \$ 1,063,247 |
| | Tons of CO2 | 4829.27 | 2.24 | \$ 241,531 |
| 10 th | Tons of NOx | 53.14 | 0.154 | \$ 959,014 |
| | Tons of HC | 2.67 | 0.022 | \$ 129,795 |
| | Tons of PM | 2.59 | 0.017 | \$ 2,232,653 |
| | Tons of CO2 | 9,054.88 | 4.20 | \$ 533,990 |

Table 11 Summary of benefits year by year, dollars and present value (\$ 000s)

| | Efficiency | Emissions | Safety | Congestion and Noise | Pavement costs | Total |
|-----------------|------------|------------|-----------|----------------------|----------------|------------|
| Current dollars | \$ 36,067 | \$ 218,207 | \$ 33,301 | \$ 11,435 | \$ 107,353 | \$ 297,259 |
| Present Worth | \$ 13,942 | \$ 41,307 | \$ 12,873 | \$ 4,420 | \$ 4,498 | \$ 114,039 |

Table 12 Port Operations: Weekly cost of 2 trips 200 FEU each

| Description | Amount |
|-------------------------------------|-----------|
| Origin Drayage | \$36,000 |
| Origin Port Gate Charge | \$22,000 |
| Line-handling | |
| Origin Port Loading | \$52,000 |
| Vessel Charter per Week | |
| Fuel Cost per Voyage | |
| Destination Port Discharge | \$48,000 |
| Destination R/T Drayage | |
| Destination Port Return Loading | |
| Destination Port Line-handling | |
| Origin Port Discharge | |
| Origin Port Gate Charge | |
| Destination Drayage | |
| Insurance | \$1,024 |
| Overhead | |
| Total Service Cost/box Door to Door | \$159,024 |
| Round Trip Service Rate per FEU | \$397.56 |
| Cost per Ton | \$15.29 |

Table 13 Projected Emission Costs per Ton and FEU Volumes

| | Year | Cost per Emission type\$/ton | | | | FUE/ day |
|----|------|------------------------------|-----------|------------|------|----------|
| | | NOx | SOx | PM2.5 | CO2 | |
| 0 | 2022 | \$ 15,800 | \$ 42,300 | \$ 761,600 | \$48 | |
| 1 | 2023 | \$ 16,000 | \$ 43,100 | \$ 774,700 | \$50 | 48 |
| 2 | 2024 | \$ 16,200 | \$ 44,000 | \$ 788,100 | \$51 | 54 |
| 3 | 2025 | \$ 16,500 | \$ 44,900 | \$ 801,700 | \$52 | 60 |
| 4 | 2026 | \$ 16,800 | \$ 45,700 | \$ 814,500 | \$53 | 66 |
| 5 | 2027 | \$ 17,100 | \$ 46,500 | \$ 827,400 | \$54 | 72 |
| 6 | 2028 | \$ 17,400 | \$ 47,300 | \$ 840,600 | \$55 | 78 |
| 7 | 2029 | \$ 17,700 | \$ 48,200 | \$ 854,000 | \$55 | 84 |
| 8 | 2030 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$56 | 90 |
| 9 | 2031 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$58 | 90 |
| 10 | 2032 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$59 | 90 |
| 11 | 2033 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$60 | 90 |
| 12 | 2034 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$61 | 90 |
| 13 | 2035 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$62 | 90 |
| 14 | 2036 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$63 | 90 |
| 15 | 2037 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$64 | 90 |
| 16 | 2038 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$65 | 90 |
| 17 | 2039 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$67 | 90 |
| 18 | 2040 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$68 | 90 |
| 19 | 2041 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$69 | 90 |
| 20 | 2042 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$69 | 90 |
| 21 | 2043 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$70 | 90 |
| 22 | 2044 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$71 | 90 |
| 23 | 2045 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$72 | 90 |
| 24 | 2046 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$73 | 90 |
| 25 | 2047 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$74 | 90 |
| 26 | 2048 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$76 | 90 |
| 27 | 2049 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$77 | 90 |
| 28 | 2050 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$78 | 90 |
| 29 | 2051 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$78 | 90 |
| 30 | 2052 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$78 | 90 |

Table 14. Yearly Benefits (Constant dollars 2022, 000s)

| | | Efficiency | NOx | HC | PM | CO2 | Safety | Congestion and Noise | Pavement costs | Total |
|-------|----|------------|-----------|----------|-----------|-----------|-----------|----------------------|----------------|------------|
| 2022 | 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 2023 | 1 | \$ 684 | \$ 452 | \$ 61 | \$ 1,063 | \$ 241 | \$ 631 | \$ 217 | \$ 2,035 | \$ 5,384 |
| 2024 | 2 | \$ 769 | \$ 515 | \$ 70 | \$ 1,217 | \$ 277 | \$ 710 | \$ 244 | \$ 2,290 | \$ 6,091 |
| 2025 | 3 | \$ 855 | \$ 583 | \$ 79 | \$ 1,375 | \$ 314 | \$ 789 | \$ 271 | \$ 2,544 | \$ 6,810 |
| 2026 | 4 | \$ 940 | \$ 653 | \$ 89 | \$ 1,537 | \$ 352 | \$ 868 | \$ 298 | \$ 2,798 | \$ 7,535 |
| 2027 | 5 | \$ 1,026 | \$ 725 | \$ 98 | \$ 1,703 | \$ 391 | \$ 947 | \$ 325 | \$ 3,053 | \$ 8,268 |
| 2028 | 6 | \$ 1,111 | \$ 799 | \$ 108 | \$ 1,875 | \$ 431 | \$ 1,026 | \$ 352 | \$ 3,307 | \$ 9,010 |
| 2029 | 7 | \$ 1,197 | \$ 875 | \$ 119 | \$ 2,051 | \$ 465 | \$ 1,105 | \$ 379 | \$ 3,561 | \$ 9,752 |
| 2030 | 8 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 507 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,516 |
| 2031 | 9 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 525 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,534 |
| 2032 | 10 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 534 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,543 |
| 2033 | 11 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 543 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,552 |
| 2034 | 12 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 552 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,562 |
| 2035 | 13 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 561 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,571 |
| 2036 | 14 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 570 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,580 |
| 2037 | 15 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 579 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,589 |
| 2038 | 16 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 588 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,598 |
| 2039 | 17 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 606 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,616 |
| 2040 | 18 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 615 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,625 |
| 2041 | 19 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 624 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,634 |
| 2042 | 20 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 624 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,634 |
| 2043 | 21 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 634 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,643 |
| 2044 | 22 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 643 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,652 |
| 2045 | 23 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 652 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,661 |
| 2046 | 24 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 661 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,670 |
| 2047 | 25 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 670 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,679 |
| 2048 | 26 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 688 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,697 |
| 2049 | 27 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 697 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,706 |
| 2050 | 28 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 706 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,715 |
| 2051 | 29 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 706 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,715 |
| 2052 | 30 | \$ 1,282 | \$ 959 | \$ 130 | \$ 2,233 | \$ 706 | \$ 1,184 | \$ 406 | \$ 3,816 | \$ 10,715 |
| Total | | \$ 36,067 | \$ 26,659 | \$ 3,609 | \$ 62,173 | \$ 16,662 | \$ 33,301 | \$ 11,435 | \$ 107,353 | \$ 297,259 |

Table 15 Present Value of Benefits (Constant Dollars 2022, 000s)

| | | Efficiency | NOx | HC | PM | CO2 | Safety | Congestion and Noise | Pavement costs | Total |
|--------------|----|------------------|------------------|-----------------|------------------|-----------------|------------------|----------------------|------------------|-------------------|
| 2022 | 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 2023 | 1 | \$ 639 | \$ 423 | \$ 57 | \$ 994 | \$ 226 | \$ 590 | \$ 203 | \$ 1,902 | \$ 5,032 |
| 2024 | 2 | \$ 672 | \$ 450 | \$ 61 | \$ 1,063 | \$ 242 | \$ 620 | \$ 213 | \$ 2,000 | \$ 5,320 |
| 2025 | 3 | \$ 698 | \$ 476 | \$ 65 | \$ 1,123 | \$ 256 | \$ 644 | \$ 221 | \$ 2,077 | \$ 5,559 |
| 2026 | 4 | \$ 717 | \$ 498 | \$ 68 | \$ 1,173 | \$ 268 | \$ 662 | \$ 227 | \$ 2,135 | \$ 5,748 |
| 2027 | 5 | \$ 731 | \$ 517 | \$ 70 | \$ 1,214 | \$ 279 | \$ 675 | \$ 232 | \$ 2,177 | \$ 5,895 |
| 2028 | 6 | \$ 740 | \$ 532 | \$ 72 | \$ 1,249 | \$ 287 | \$ 684 | \$ 235 | \$ 2,204 | \$ 6,004 |
| 2029 | 7 | \$ 745 | \$ 545 | \$ 74 | \$ 1,277 | \$ 289 | \$ 688 | \$ 236 | \$ 2,218 | \$ 6,073 |
| 2030 | 8 | \$ 746 | \$ 558 | \$ 76 | \$ 1,299 | \$ 295 | \$ 689 | \$ 237 | \$ 2,221 | \$ 6,121 |
| 2031 | 9 | \$ 697 | \$ 522 | \$ 71 | \$ 1,214 | \$ 286 | \$ 644 | \$ 221 | \$ 2,076 | \$ 5,730 |
| 2032 | 10 | \$ 652 | \$ 488 | \$ 66 | \$ 1,135 | \$ 271 | \$ 602 | \$ 207 | \$ 1,940 | \$ 5,360 |
| 2033 | 11 | \$ 609 | \$ 456 | \$ 62 | \$ 1,061 | \$ 258 | \$ 562 | \$ 193 | \$ 1,813 | \$ 5,013 |
| 2034 | 12 | \$ 569 | \$ 426 | \$ 58 | \$ 991 | \$ 245 | \$ 526 | \$ 180 | \$ 1,694 | \$ 4,689 |
| 2035 | 13 | \$ 532 | \$ 398 | \$ 54 | \$ 926 | \$ 233 | \$ 491 | \$ 169 | \$ 1,583 | \$ 4,386 |
| 2036 | 14 | \$ 497 | \$ 372 | \$ 50 | \$ 866 | \$ 221 | \$ 459 | \$ 158 | \$ 1,480 | \$ 4,103 |
| 2037 | 15 | \$ 465 | \$ 348 | \$ 47 | \$ 809 | \$ 210 | \$ 429 | \$ 147 | \$ 1,383 | \$ 3,838 |
| 2038 | 16 | \$ 434 | \$ 325 | \$ 44 | \$ 756 | \$ 199 | \$ 401 | \$ 138 | \$ 1,293 | \$ 3,590 |
| 2039 | 17 | \$ 406 | \$ 304 | \$ 41 | \$ 707 | \$ 192 | \$ 375 | \$ 129 | \$ 1,208 | \$ 3,361 |
| 2040 | 18 | \$ 379 | \$ 284 | \$ 38 | \$ 661 | \$ 182 | \$ 350 | \$ 120 | \$ 1,129 | \$ 3,144 |
| 2041 | 19 | \$ 354 | \$ 265 | \$ 36 | \$ 617 | \$ 173 | \$ 327 | \$ 112 | \$ 1,055 | \$ 2,940 |
| 2042 | 20 | \$ 331 | \$ 248 | \$ 34 | \$ 577 | \$ 161 | \$ 306 | \$ 105 | \$ 986 | \$ 2,748 |
| 2043 | 21 | \$ 310 | \$ 232 | \$ 31 | \$ 539 | \$ 153 | \$ 286 | \$ 98 | \$ 922 | \$ 2,570 |
| 2044 | 22 | \$ 289 | \$ 216 | \$ 29 | \$ 504 | \$ 145 | \$ 267 | \$ 92 | \$ 861 | \$ 2,404 |
| 2045 | 23 | \$ 270 | \$ 202 | \$ 27 | \$ 471 | \$ 137 | \$ 250 | \$ 86 | \$ 805 | \$ 2,249 |
| 2046 | 24 | \$ 253 | \$ 189 | \$ 26 | \$ 440 | \$ 130 | \$ 233 | \$ 80 | \$ 752 | \$ 2,104 |
| 2047 | 25 | \$ 236 | \$ 177 | \$ 24 | \$ 411 | \$ 123 | \$ 218 | \$ 75 | \$ 703 | \$ 1,968 |
| 2048 | 26 | \$ 221 | \$ 165 | \$ 22 | \$ 384 | \$ 118 | \$ 204 | \$ 70 | \$ 657 | \$ 1,842 |
| 2049 | 27 | \$ 206 | \$ 154 | \$ 21 | \$ 359 | \$ 112 | \$ 190 | \$ 65 | \$ 614 | \$ 1,723 |
| 2050 | 28 | \$ 193 | \$ 144 | \$ 20 | \$ 336 | \$ 106 | \$ 178 | \$ 61 | \$ 574 | \$ 1,612 |
| 2051 | 29 | \$ 180 | \$ 135 | \$ 18 | \$ 314 | \$ 99 | \$ 166 | \$ 57 | \$ 536 | \$ 1,506 |
| 2052 | 30 | \$ 168 | \$ 126 | \$ 17 | \$ 293 | \$ 93 | \$ 155 | \$ 53 | \$ 501 | \$ 1,408 |
| Total | | \$ 13,942 | \$ 10,172 | \$ 1,377 | \$ 23,766 | \$ 5,992 | \$ 12,873 | \$ 4,420 | \$ 41,498 | \$ 114,039 |

The Benefit Cost Ratio

The computation of the BC ratio is 3.23 considering the present value of the benefits over the present value of the investment.

Table 16. Benefit to Cost Ratio

| | |
|--|----------------|
| Term (years) as per DOT BCA guidelines | 30 |
| Discount rate | 7% |
| Investment needed | \$ 35,254,000 |
| PV of Benefits | \$ 114,039,388 |
| Benefit to cost ratio | 3.23 |

Non-quantified benefits

Union Jobs in a Historically Disadvantaged Community- A new container on barge operation that is dependent upon the successful completion of this project will create additional union jobs within the Historically Disadvantaged Community. In the absence of federal funding, the current barge dock lot will not be capable of supporting Container on Barge and the project will not be completed. BeauHou Container on Barge Infrastructure Project components are located in a Historically Disadvantaged Community, less than 1,000 feet from Opportunity Zone for Census Block Group 482450117002152. Sited in Census Tract 17, Jefferson County, Texas, the project site has seven disadvantage indicators: Historically Disadvantaged Community, Resilience Indicator, Environmental Indicator, Equity Indicator, Economy Indicator, Health Indicator, and Transportation Indicator. In Census Tract 17, 82.8% of the population is African American, 10.7% is Hispanic or Latino, 5.6% is white, 0.2% is American Indian, 0.2% is Asian, and 0.1% is Pacific Islander. About 19% of Beaumont lives in poverty, and the Beaumont-Port Arthur Statistical Area, where the project is located, has one of the highest unemployment rates in the nation, ranking 375 out of 389, according to Bureau of Labor Statistics data.

Improved logistics resiliency- During the past five years, southeast Texas has been devastated by two major hurricanes, including Hurricane Harvey (2017), which resulted in over 50 inches of rain, causing the highway system to become impassible, and Tropical Storm Imelda (2019), which produced 43 inches of rain, causing critical infrastructure damage. There was no access to the highway network, which caused trade that relied on interstate transportation to stall. A container on barge operation will provide a dependable service that will allow trade to proceed when severe weather strikes the Gulf Coast. A container on barge service can only be provided if these two projects are completed.

Dust control- It is anticipated that the hard surfacing of Lot 14 will improve the air quality in the surrounding residential neighborhood by assisting in dust control. Roller compacted concrete, the material used for hard surfacing the lot, is a more lasting, durable material that will reduce maintenance costs and prevent rapid deterioration of the lot.

National Interest: Military operational support- Some military operations require the loading and unloading of military equipment from or onto a concrete paved yard. In recent months, four ships were diverted to other ports, causing delays and additional costs since the Port is unable to accommodate the associated military cargo because there is insufficient space on a concrete paved yard.

Layout of the BCA spreadsheet

The BCA spreadsheet is designed to minimize format conflict while still the computations remain accessible for the analyst by using the same worksheet for most of the computations. This is achieved by organizing the working areas in diagonals that do not match rows nor columns with other areas that need a different format. This is notice in **Figure 5**

The BCAPARAN and BCAMAIN - depicted in Figure 6 - interact with each other to define the computation of one year at a time. This will facilitate the reviewer the computation year by year in detail. There is no need to compute year by year, as the spreadsheet uses the what-if capabilities of excel to update all the 30 years of the project planning horizon. This is done in the range BCATABLES as depicted in Figure 7. There is a row at the top of the top-left summary, just after the column titles. That is the reference that allows the what-if function to know what values to select for each column. Each individual year is presented as a separate row. The information is later use for formatting in thousands of dollars and to compute the present value, needed in the Benefit-Cost ratio.

You will find the BCARATIO in the range AK7, AL10.

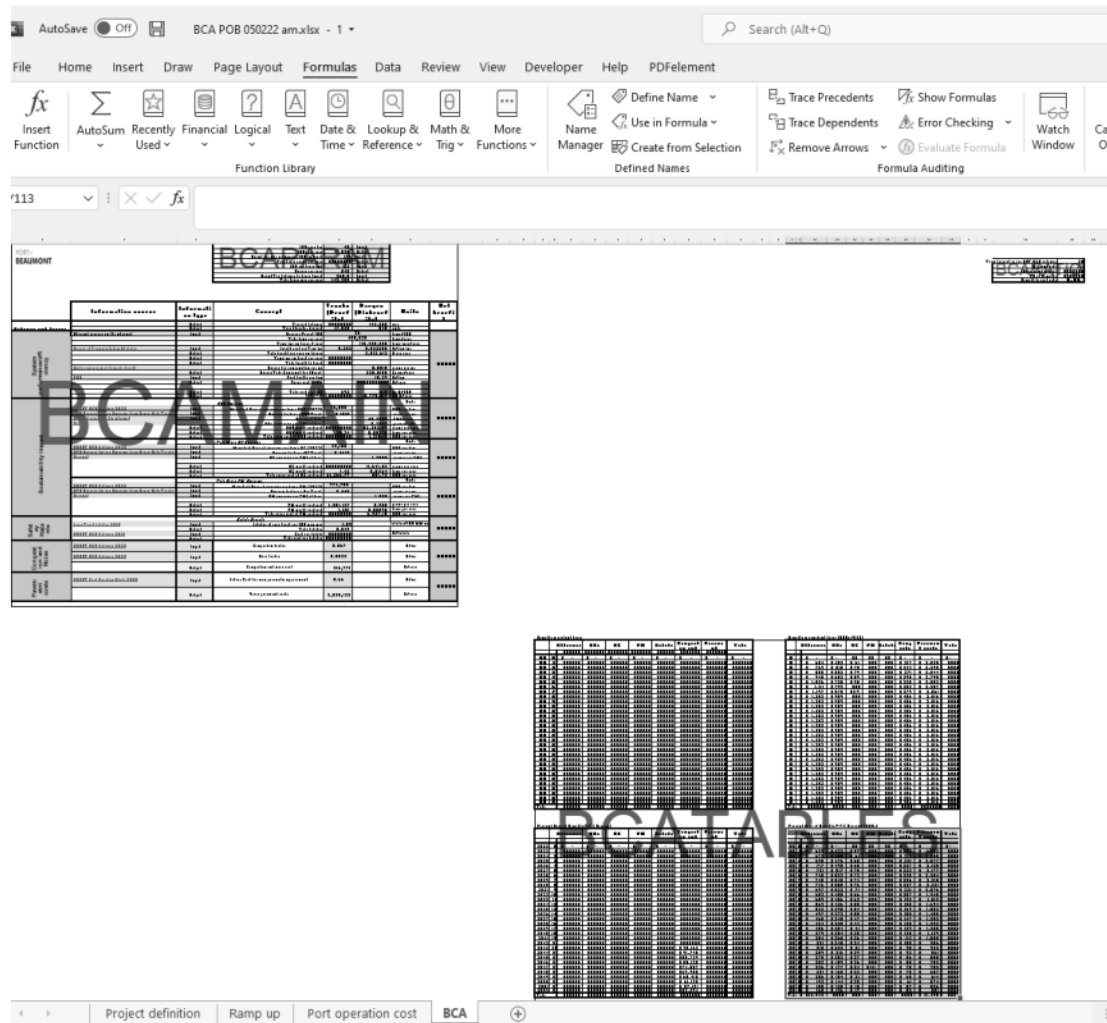


Figure 5 Layout of the BCA Spreadsheet

| IRON HORSE TERMINALS | | Parameters and key computations for the yearly model | | | |
|----------------------|--|--|-----------|--------------|----|
| PORT of BEAUMONT | | Year modeled | 1 | y-1, 2, 3... | 30 |
| | | FEU per day | 40 | Input | |
| | | FEU per year | 17,520 | Output | |
| | | Round trip miles per FEU on truck | 174 | Input | |
| | | Truck miles per year | 3,032,820 | Output | |
| | | FEU per barge unit | 32 | Input | |
| | | Barges per year | 548 | Output | |
| | | Round Trip distance by barge (miles) | 250.0 | Input | |
| | | Total barge miles per year | 142,350 | Output | |

| | Information source | Information type | Concept | Trucks (Benefits) | Barges (Disbenefits) | Units | Net benefit \$/year |
|-------------------------------|--------------------|----------------------|---|-------------------|----------------------|------------------------|---------------------|
| Distance and travel | | Output | Travelled distance | 3,032,820 | 142,350 | miles | |
| | | Output | Trips (truck, barge) | 17,520 | 548 | units | |
| | | Input | Average Payload FEU | 34 | | ton/FEU | |
| | | | Total tons per year | 455,820 | | tons/year | |
| | | Input | Ton-mile on barge/year | | 116,435,200 | ton-mile/year | |
| | | Input | Freight cost per Ton-mile | 0.202 | 0.032200 | \$/ton-mile | |
| | | Output | Total Freight per year on barge | | 3,813,613 | \$/year | |
| | | Output | Ton-mile on truck per year | 80,171,820 | | ton-mile/year | |
| | | Output | Total Freight by truck | 12,145,915 | | \$/year | |
| | | Output | Barge Fuel Consumption per mile | | 0.0015 | gallon per mile | |
| System performance/efficiency | | Output | Barge Total Consumed Fuel (Gallons) | | 320.0155 | Gallons/year | 643,736 |
| | | Input | Port tariff per ton | | 15.29 | \$/ton | |
| | | Output | Yearly port tariff | | 6,964,900.0000 | \$/year | |
| | | Output | Total cost per FEU | 492 | 615 | US \$/FEU | |
| | | Output | Total cost | 12,145,915 | 10,775,514 | US \$/year | |
| | | | NOI Emissions | | | Unit | |
| | | Input | Monetized Value of emissions per ton - NOI (2022) | 16,000 | | USD per ton | |
| | | Input | Emission factor - NOI Truck | 9.1910 | | grams per mile | |
| | | Input | Emission factor - NOI Barge | | 40.7000 | KWh/haallon | |
| | | Output | NOI emissions per KWh of diesel | 9.2000 | | grams/KWh | 452,132 |
| Sustainability impact | | Output | NOI weight produced | 20,340,632.32 | 92,212.59 | grams per year | |
| | | Output | NOI weight produced | 25.34 | 0.03235 | tons per year | |
| | | Output | Total yearly cost of NOI produced | 453,450.12 | 1,318.12 | USD per year | |
| | | | Total Onshore HC Emissions | | | Unit | |
| | | Input | Monetized Value of emissions per ton - HC (2022) | 45,100 | | USD per ton | |
| | | Input | Emission factor - HC Truck | 0.4610 | | grams per mile | |
| | | Input | HC emission factor KWh of diesel | | 1.2000 | grams per KWh | 60,765 |
| | | Output | HC weight produced | 1,421,802.72 | 11,641.02 | grams per year | |
| | | Output | HC weight produced | 1.42 | 0.01164 | tons per year | |
| | | Output | Total yearly cost of HC produced | 61,264.77 | 501.73 | USD per year | |
| Safety Hazards | | | Total Onshore PM Emissions | | | Unit | |
| | | Input | Monetized Value of emissions per ton - PM (2022) | 774,700 | | USD per ton | |
| | | Input | Emission factor - New Truck | 0.4662 | | grams per mile | |
| | | Input | PM emission factor KWh of diesel | | 1.000 | grams per KWh | 1,063,247 |
| | | Output | PM weight produced | 1,381,417 | 8,955 | grams per year | |
| | | Output | PM weight produced | 1.381 | 0.00995 | tons per year | |
| | | Output | Total yearly cost of PM produced | 1,070,102.72 | 6,927.15 | USD per year | |
| | | | Safety Hazards | | | | |
| | | Input | Fatalities of large trucks per 100 million miles | 1.59 | | fatalities/100MM miles | |
| | | Output | Total fatalities | 0.049 | | | 631,295 |
| Congestion and Noise | | Input | Cost per fatality | 12,237,400 | | \$/fatality | |
| | | Output | Total cost per fatality | 631,295.204 | | | |
| | | Input | Congestion factor | 0.067 | | \$/mile | 216,771 |
| Pavement maintenance costs | | Input | Noise factor | 0.0033 | | \$/mile | |
| | | Output | Congestion and noise cost | 216,771 | | \$/year | |
| | | Input | Federal Cost for non-pavement improvement | 0.66 | | \$/mile | 2,035,123 |
| | Output | Yearly pavement cost | 2,035,123 | | \$/year | | |

Figure 6 BCAPARAM and BCAMAIN

| Benefit | constant dollar | | | | | | | |
|---------|-----------------|------------|-----------|--------------|------------|-----------------------|---------------|-------------|
| | Efficiency | MOs | HC | PH | Safety | Conquestion and Nairs | Pevamnt curtr | Total |
| | 483,735.82 | 482,132.00 | 49,748.04 | 1,043,246.57 | 431,249.20 | 116,771.46 | 7,035,122 | |
| 2022 0 | | | | | | | | |
| 2023 1 | 453,734 | 452,132 | 49,748 | 1,043,247 | 431,249 | 116,771 | 7,035,122 | 5,340,069 |
| 2024 2 | 754,206 | 748,007 | 85,710 | 1,246,044 | 716,207 | 242,810 | 2,429,914 | 5,314,420 |
| 2025 3 | 984,644 | 982,824 | 79,824 | 1,378,274 | 789,199 | 279,814 | 2,842,804 | 5,495,990 |
| 2026 4 | 940,036 | 932,764 | 88,592 | 1,537,072 | 845,031 | 293,041 | 2,746,294 | 7,102,952 |
| 2027 5 | 1,025,492 | 1,024,824 | 99,232 | 1,702,242 | 946,942 | 325,957 | 3,052,436 | 7,476,912 |
| 2028 6 | 1,111,070 | 1,109,002 | 109,242 | 1,874,749 | 1,028,955 | 352,254 | 3,267,076 | 8,373,270 |
| 2029 7 | 1,194,572 | 1,192,249 | 119,922 | 2,063,948 | 1,104,742 | 379,250 | 3,484,444 | 9,217,408 |
| 2030 8 | 1,282,004 | 1,279,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2031 9 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2032 10 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2033 11 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2034 12 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2035 13 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2036 14 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2037 15 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2038 16 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2039 17 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2040 18 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2041 19 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2042 20 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2043 21 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2044 22 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2045 23 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2046 24 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2047 25 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2048 26 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2049 27 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2050 28 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2051 29 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2052 30 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| Total | 26,067,046 | 26,059,116 | 3,609,993 | 43,172,410 | 33,308,822 | 11,424,094 | 107,592,749 | 220,596,511 |

| Benefit | constant-dollar (1915) | | | | | | | |
|---------|------------------------|------------|-----------|--------------|------------|-----------------------|---------------|-------------|
| | Efficiency | MOs | HC | PH | Safety | Conquestion and Nairs | Pevamnt curtr | Total |
| | 483,735.82 | 482,132.00 | 49,748.04 | 1,043,246.57 | 431,249.20 | 116,771.46 | 7,035,122 | |
| 2022 0 | | | | | | | | |
| 2023 1 | 453,734 | 452,132 | 49,748 | 1,043,247 | 431,249 | 116,771 | 7,035,122 | 5,340,069 |
| 2024 2 | 754,206 | 748,007 | 85,710 | 1,246,044 | 716,207 | 242,810 | 2,429,914 | 5,314,420 |
| 2025 3 | 984,644 | 982,824 | 79,824 | 1,378,274 | 789,199 | 279,814 | 2,842,804 | 5,495,990 |
| 2026 4 | 940,036 | 932,764 | 88,592 | 1,537,072 | 845,031 | 293,041 | 2,746,294 | 7,102,952 |
| 2027 5 | 1,025,492 | 1,024,824 | 99,232 | 1,702,242 | 946,942 | 325,957 | 3,052,436 | 7,476,912 |
| 2028 6 | 1,111,070 | 1,109,002 | 109,242 | 1,874,749 | 1,028,955 | 352,254 | 3,267,076 | 8,373,270 |
| 2029 7 | 1,194,572 | 1,192,249 | 119,922 | 2,063,948 | 1,104,742 | 379,250 | 3,484,444 | 9,217,408 |
| 2030 8 | 1,282,004 | 1,279,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2031 9 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2032 10 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2033 11 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2034 12 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2035 13 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2036 14 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2037 15 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2038 16 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2039 17 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2040 18 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2041 19 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2042 20 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2043 21 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2044 22 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2045 23 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2046 24 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2047 25 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2048 26 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2049 27 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2050 28 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2051 29 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| 2052 30 | 1,322,004 | 1,319,924 | 129,792 | 2,232,452 | 1,183,679 | 406,446 | 3,715,954 | 10,009,442 |
| Total | 26,067,046 | 26,059,116 | 3,609,993 | 43,172,410 | 33,308,822 | 11,424,094 | 107,592,749 | 220,596,511 |

| Benefit | Percent Value of Benefit @ T=Discount | | | | | | | |
|---------|---------------------------------------|---------|--------|-----------|---------|-----------------------|---------------|-----------|
| | Efficiency | MOs | HC | PH | Safety | Conquestion and Nairs | Pevamnt curtr | Total |
| 2022 0 | | | | | | | | |
| 2023 1 | 539,805 | 452,552 | 56,790 | 992,433 | 539,991 | 202,590 | 1,901,934 | 4,094,407 |
| 2024 2 | 871,091 | 449,327 | 69,994 | 1,062,327 | 620,322 | 213,094 | 1,999,790 | 5,072,847 |
| 2025 3 | 1,197,645 | 478,740 | 84,992 | 1,160,790 | 644,961 | 221,010 | 2,076,923 | 5,706,653 |
| 2026 4 | 717,224 | 497,992 | 67,567 | 1,172,428 | 642,217 | 227,219 | 2,146,045 | 5,479,460 |
| 2027 5 | 773,241 | 576,790 | 70,114 | 1,214,474 | 678,957 | 233,023 | 2,176,922 | 5,616,150 |
| 2028 6 | 746,352 | 532,409 | 72,209 | 1,249,222 | 652,570 | 234,721 | 2,200,144 | 5,776,120 |
| 2029 7 | 745,442 | 545,092 | 74,054 | 1,277,350 | 637,902 | 236,240 | 2,217,902 | 5,722,779 |
| 2030 8 | 746,333 | 551,055 | 75,842 | 1,299,424 | 633,652 | 235,594 | 2,240,162 | 5,825,990 |
| 2031 9 | 697,248 | 524,640 | 70,600 | 1,314,495 | 640,140 | 233,010 | 2,075,972 | 5,444,476 |
| 2032 10 | 695,706 | 493,814 | 68,911 | 1,334,961 | 609,724 | 206,417 | 1,929,718 | 5,005,296 |
| 2033 11 | 699,071 | 495,621 | 61,645 | 1,364,717 | 562,357 | 193,960 | 1,812,034 | 4,739,417 |
| 2034 12 | 695,232 | 465,814 | 57,631 | 1,391,239 | 529,567 | 169,467 | 1,694,234 | 4,444,319 |
| 2035 13 | 523,981 | 397,957 | 52,840 | 1,428,472 | 491,044 | 158,611 | 1,593,465 | 4,053,355 |
| 2036 14 | 497,932 | 371,822 | 50,337 | 1,465,841 | 459,051 | 157,427 | 1,475,955 | 3,881,934 |
| 2037 15 | 464,537 | 347,591 | 47,044 | 1,499,216 | 429,020 | 147,215 | 1,393,042 | 3,622,835 |
| 2038 16 | 434,239 | 324,691 | 45,064 | 1,536,277 | 400,952 | 137,677 | 1,326,954 | 3,390,545 |
| 2039 17 | 408,950 | 303,590 | 41,090 | 1,586,991 | 374,762 | 128,671 | 1,269,902 | 3,165,325 |
| 2040 18 | 378,249 | 282,720 | 38,402 | 1,640,814 | 350,200 | 120,252 | 1,216,914 | 2,941,424 |
| 2041 19 | 354,419 | 265,179 | 36,490 | 1,677,247 | 322,247 | 115,214 | 1,169,916 | 2,742,496 |
| 2042 20 | 333,294 | 247,532 | 33,945 | 1,736,940 | 308,035 | 109,032 | 1,124,990 | 2,561,522 |
| 2043 21 | 309,621 | 231,465 | 31,447 | 1,809,218 | 288,074 | 95,942 | 1,079,979 | 2,407,413 |
| 2044 22 | 299,345 | 216,462 | 29,297 | 1,892,939 | 267,072 | 91,740 | 1,044,964 | 2,289,244 |
| 2045 23 | 276,435 | 202,201 | 27,389 | 1,978,971 | 249,693 | 85,729 | 1,014,943 | 2,191,462 |
| 2046 24 | 262,742 | 189,044 | 25,693 | 2,066,810 | 233,250 | 80,390 | 982,923 | 1,9 |

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PORT OF BEAUMONT

Project required investments

| | |
|---|----------------------|
| Barge Dock | \$ 8,799,000 |
| Multi-purpose Container Marshaling Yard | \$ 26,455,000 |
| Total | \$ 35,254,000 |

Sources of Funding

| | | |
|---------------------------|----------------------|--------|
| Port Match | \$ 8,813,500 | 25.00% |
| PIDP Grant requested | \$ 26,440,500 | 75.00% |
| Total project cost | \$ 35,254,000 | |

Construction of Lot 6 Relieving Platform Probable Cost

| ITEM | DESCRIPTION | TOTAL |
|---|--|------------------|
| 1 | MOBILIZATION/DEMobilIZATION | 250,000 |
| 2 | RELIEVING PLATFORM PILES | 2,671,000 |
| 3 | RELIEVING PLATFORM CONCRETE FOUNDATION | 3,533,000 |
| 4 | BARGE BREASTING DOLPHIN | 500,000 |
| 5 | SWPPP | 20,000 |
| 6 | PAYMENT AND PERFORMANCE BOND | 61,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | 7,035,000 |
| CONSTRUCTION CONTINGENCY - 15% | | 1,060,000 |
| ENGINEERING & CONSTRUCTION MANAGEMENT - 10% | | 704,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | 8,799,000 |

Multi-purpose Container Marshaling Yard Budget

| ITEM | DESCRIPTION | TOTAL |
|--|------------------------------|-------------------|
| 1 | MOBILIZATION/DEMobilIZATION | 400,000 |
| 2 | GRADING & GRUBBING | 250,000 |
| 3 | 12" CEMENT TREATED SUBGRADE | 1,708,000 |
| 4 | 6" STABILIZED LIMESTONE | 1,792,000 |
| 5 | 18" RCC PAVEMENT | 17,080,000 |
| 6 | DRAINAGE | 600,000 |
| 7 | SWPPP | 20,000 |
| 8 | PAYMENT AND PERFORMANCE BOND | 175,000 |
| TOTAL ESTIMATED CONSTRUCTION COST | | 22,025,000 |
| 15% CONSTRUCTION CONTINGENCY | | 3,300,000 |
| ENGINEERING AND CONSTRUCTION MANAGEMENT AND GEOTECHNICAL | | 1,130,000 |
| TOTAL RECOMMENDED PROJECT BUDGET | | 26,455,000 |



PORT OF BEAUMONT

Emissions cost per ton, per year

| | Year | Emission type | | | | Trucks |
|----|------|---------------|-----------|------------|-------|--------|
| | | NOx | SOx | PM2.5 | CO2 | |
| 0 | 2022 | \$ 15,800 | \$ 42,300 | \$ 761,600 | \$ 48 | |
| 1 | 2023 | \$ 16,000 | \$ 43,100 | \$ 774,700 | \$ 50 | 48 |
| 2 | 2024 | \$ 16,200 | \$ 44,000 | \$ 788,100 | \$ 51 | 54 |
| 3 | 2025 | \$ 16,500 | \$ 44,900 | \$ 801,700 | \$ 52 | 60 |
| 4 | 2026 | \$ 16,800 | \$ 45,700 | \$ 814,500 | \$ 53 | 66 |
| 5 | 2027 | \$ 17,100 | \$ 46,500 | \$ 827,400 | \$ 54 | 72 |
| 6 | 2028 | \$ 17,400 | \$ 47,300 | \$ 840,600 | \$ 55 | 78 |
| 7 | 2029 | \$ 17,700 | \$ 48,200 | \$ 854,000 | \$ 55 | 84 |
| 8 | 2030 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 56 | 90 |
| 9 | 2031 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 58 | 90 |
| 10 | 2032 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 59 | 90 |
| 11 | 2033 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 60 | 90 |
| 12 | 2034 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 61 | 90 |
| 13 | 2035 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 62 | 90 |
| 14 | 2036 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 63 | 90 |
| 15 | 2037 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 64 | 90 |
| 16 | 2038 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 65 | 90 |
| 17 | 2039 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 67 | 90 |
| 18 | 2040 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 68 | 90 |
| 19 | 2041 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 69 | 90 |
| 20 | 2042 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 69 | 90 |
| 21 | 2043 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 70 | 90 |
| 22 | 2044 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 71 | 90 |
| 23 | 2045 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 72 | 90 |
| 24 | 2046 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 73 | 90 |
| 25 | 2047 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 74 | 90 |
| 26 | 2048 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 76 | 90 |
| 27 | 2049 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 77 | 90 |
| 28 | 2050 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 78 | 90 |
| 29 | 2051 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 78 | 90 |
| 30 | 2052 | \$ 18,100 | \$ 49,100 | \$ 867,600 | \$ 78 | 90 |



PORT OF BEAUMONT

| | | | | | |
|--|-------------------------------|---------|-------------------------|-------|--------------------|
| Port of Beaumont COB Terminal | Port Houston Bayport Terminal | 8 Hours | Once per week, 6 barges | Barge | 252 40' containers |
| Port Houston Bayport Terminal | Port of Beaumont COB Terminal | 8 Hours | Once per week, 6 barges | Barge | 252 40' containers |
| PORT OF BEAUMONT CONTAINER ON BARGE SERVICE | | | | | |
| Volume | 252 containers per week | | | | |

| SAMPLE BASIC COSTS | POB COST MODEL |
|---|--|
| Description | Weekly Costs with 2 voyage/week 200 FEU per rount trip |
| Origin Drayage | \$36,000.00 |
| Origin Port Gate Charge | \$22,000.00 |
| Line-handling | |
| Origin Port Loading | \$52,000.00 |
| Vessel Charter per Week | |
| Fuel Cost per Voyage | |
| Destination Port Discharge | \$48,000.00 |
| Destination R/T Drayage | |
| Destination Port Return Loading | |
| Destination Port Line-handling | |
| Origin Port Discharge | |
| Origin Port Gate Charge | |
| Destination Drayage | |
| Insurance | \$1,024.00 |
| Overhead | |
| Total Service Cost/box Door to Door | \$159,024.00 |
| R/T Service Rate | \$397.56 |
| Cost per Freight Ton AMH Service (56k capacity dry box) | \$15.29 |



Parameters and key computations for the yearly model

| Year modeled | | 2019-2030 | |
|---|-----------|-----------|--|
| FEUs per day | 48 | Input | |
| FEUs per year | 17,520 | Output | |
| Round trip miles savings per FEU on truck | 1.76 | Input | |
| Trucks miles saved per year | 3,083,520 | Output | |
| FEU per barge unit | 33 | Input | |
| Barges per year | 548 | Output | |
| Round Trip distance by barge (miles) | 2,603 | Input | |
| Total barge miles per year | 142,350 | Output | |

| Term (years) as per DOT BCA guidelines | | 30 |
|--|--|----------------|
| Discount rate | | 7% |
| Investment needed | | \$ 33,294,000 |
| % of benefits | | \$ 116,039,388 |
| Benefit to cost ratio | | 3.23 |

| Information source | Information type | Concept | Trucks (Benefits) | Barges (Disbenefits) | Units | Net benefit \$/year |
|-----------------------|----------------------------------|---|-------------------------|----------------------------|-------------------------|---------------------|
| Distance and travel | Output | Traveled distance | 3,083,520 | 142,350 | miles | |
| | Output | Trips (Trucks/Barges) | 17,520 | 548 | trips | |
| | Input | Average Payload FEU | 26 | tons/FEU | | |
| | Output | Total tons per year | 455,520 | tons/year | | |
| | Input | Trucks miles on barge / year | 118,435,200 | tons-mile/year | | |
| | Output | Freight cost per FEU-mile | 0.202 | \$/ton-mile | | |
| | Output | Total Freight per year on barges | 3,813,613 | \$ per year | | |
| | Output | Tons-mile on truck per year | 80,171,530 | | | |
| | Output | Total freight by truck | 12,145,985 | | | 683,736 |
| | Output | Barges Fuel consumption per mile | 0.0015 | gallons per mile | | |
| | Output | Barges Total Consumed Fuel (Diesel) | 220,035 | gallons/year | | |
| | Input | Port tariffs per ton | 15.29 | \$/ton | | |
| | Output | Yearly port tariffs | 6,964,900.8000 | \$/year | | |
| | Output | Total cost per FEU | 615 | Us \$/FEU | | |
| Output | Total cost | 12,145,985 | 10,778,514 | Us \$/year | | |
| Sustainability impact | Input | NOx Emissions | 693 | Units | | |
| | Output | Monetized Value of emissions per ton - NOx (2022) | 16,000 | USD per ton | | |
| | Input | Emission factors - NOx Truck | 9.1910 | grams per mile | | |
| | Input | EPA Average In-use Emissions from Heavy-Duty Trucks | 40.7000 | grams/mile | | |
| | Input | Distance | 9.2000 | grams/KWh | | |
| | Output | NOx emissions per kWh of diesel | 28,340.632.37 | grams per year | | |
| | Output | NOx weight produced | 0.00238 | tons per year | | |
| | Output | Total yearly cost of NOx produced | 453,450.12 | USD per year | | |
| | Input | Total Dollars Hydro Carbon Emissions | 43.300 | Units | | |
| | Input | Monetized Value of emissions per ton - HC (2022) | 4,300 | USD per ton | | |
| | Input | Emission factors - HC Truck | 0.4610 | grams per mile | | |
| | Input | HC emissions per kWh of diesel | 1.3000 | grams per kWh | | |
| | Output | HC weight produced | 1,421,502.72 | grams per year | | |
| | Output | HC weight produced | 1.42 | tons per year | | |
| Output | Total yearly cost of HC produced | 61,266.72 | USD per year | | | |
| Safety Hazards | Input | Monetized Value of emissions per ton - PM (2022) | 776.700 | USD per ton | | |
| | Input | Emission factors - Non Trucks | 0.448 | grams per mile | | |
| | Input | PM emissions per kWh of diesel | 1.000 | grams per kWh | | |
| | Output | PM weight produced | 1,381,417 | grams per year | | |
| | Output | PM weight produced | 1.381 | tons per year | | |
| | Output | Total yearly cost of PM produced | 1,070,183.72 | USD per year | | |
| | Input | Total Dollars CO2 Emissions | 50.00 | Units | | |
| | Input | Monetized value per ton - CO2 | 30,880.00 | grams per gallon of diesel | | |
| | Input | Emission factors | 3.0000 | miles per gallon diesel | | |
| | Output | Total miles per year | 3,083,520.00 | miles per year | | |
| | Output | Yearly fuel consumption traveling | 478,487.66 | gallons per year | | |
| | Output | Tons of CO2 per year | 4,829.27 | tons per year CO2 | | |
| | Output | Monetized value of CO2 per year | 241,463.34 | Monetized value of CO2 | | |
| | Congestion and Noise | Input | Fatalities/100 MM miles | 1.58 | fatalities/100 MM miles | |
| Output | | Total Fatalities | 0.049 | fatalities | | |
| Input | | Cost per fatality | 12,837,600 | \$/fatality | | |
| Congestion and Noise | Input | Congestion factor | 0.067 | \$/mile | | |
| | Output | Congestion and noise cost | 216,771 | \$/year | | |
| Pavement costs | Input | Federal cost for new pavement improvement | 0.66 | \$/mile | | |
| | Output | Yearly pavement costs | 2,035,123 | \$/year | | |

Benefits in constant dollars

| | Efficiency | NOx | HC | PM | CO2 | Safety | Congestion and Noise | Pavement costs | Total | |
|-------|------------|------------|------------|-----------|--------------|------------|----------------------|----------------|-------------|-------------|
| 2022 | 0 | 683,735.52 | 452,132.00 | 60,765.04 | 1,063,246.57 | 241,351.35 | 631,295.20 | 2,035,123 | 5,384,420 | |
| 2023 | 1 | 683,736 | 452,132 | 60,765 | 1,063,247 | 241,351 | 631,295 | 2,035,123 | 5,384,420 | |
| 2024 | 2 | 769,202 | 515,007 | 69,788 | 1,216,942 | 276,953 | 710,207 | 2,289,514 | 6,091,379 | |
| 2025 | 3 | 854,668 | 582,826 | 79,118 | 1,376,378 | 312,527 | 789,113 | 2,543,904 | 6,809,747 | |
| 2026 | 4 | 940,134 | 652,766 | 88,592 | 1,537,072 | 351,770 | 868,031 | 2,808,361 | 7,534,722 | |
| 2027 | 5 | 1,025,600 | 724,824 | 98,338 | 1,703,383 | 390,989 | 946,343 | 3,072,857 | 8,267,902 | |
| 2028 | 6 | 1,111,070 | 799,002 | 108,365 | 1,874,799 | 431,414 | 1,025,863 | 3,322,244 | 9,009,786 | |
| 2029 | 7 | 1,196,537 | 875,299 | 118,922 | 2,051,145 | 464,601 | 1,104,767 | 3,574,550 | 9,752,087 | |
| 2030 | 8 | 1,282,004 | 959,014 | 129,795 | 2,232,653 | 506,838 | 1,183,679 | 3,826,446 | 10,516,286 | |
| 2031 | 9 | 1,367,470 | 1,042,261 | 140,909 | 2,420,295 | 549,839 | 1,263,679 | 4,078,342 | 11,287,377 | |
| 2032 | 10 | 1,452,937 | 1,125,508 | 152,360 | 2,613,980 | 593,616 | 1,343,679 | 4,330,238 | 12,076,468 | |
| 2033 | 11 | 1,538,404 | 1,208,755 | 164,142 | 2,813,639 | 637,293 | 1,423,679 | 4,582,134 | 12,883,559 | |
| 2034 | 12 | 1,623,870 | 1,292,002 | 176,264 | 3,019,264 | 680,870 | 1,503,679 | 4,834,030 | 13,707,650 | |
| 2035 | 13 | 1,709,337 | 1,375,249 | 188,638 | 3,230,915 | 724,247 | 1,583,679 | 5,085,926 | 14,548,741 | |
| 2036 | 14 | 1,794,804 | 1,458,496 | 201,369 | 3,448,590 | 767,424 | 1,663,679 | 5,337,822 | 15,416,832 | |
| 2037 | 15 | 1,880,270 | 1,541,743 | 214,451 | 3,672,281 | 810,401 | 1,743,679 | 5,589,718 | 16,301,923 | |
| 2038 | 16 | 1,965,737 | 1,625,990 | 227,902 | 3,901,988 | 853,178 | 1,823,679 | 5,841,614 | 17,204,014 | |
| 2039 | 17 | 2,051,204 | 1,710,237 | 241,724 | 4,147,713 | 895,755 | 1,903,679 | 6,093,510 | 18,123,105 | |
| 2040 | 18 | 2,136,670 | 1,794,484 | 255,935 | 4,400,454 | 938,132 | 1,983,679 | 6,345,406 | 19,058,196 | |
| 2041 | 19 | 2,222,137 | 1,878,731 | 270,536 | 4,660,213 | 980,309 | 2,063,679 | 6,597,302 | 19,993,287 | |
| 2042 | 20 | 2,307,604 | 1,962,978 | 285,537 | 4,927,988 | 1,021,686 | 2,143,679 | 6,849,198 | 20,938,378 | |
| 2043 | 21 | 2,393,070 | 2,047,225 | 300,938 | 5,203,779 | 1,062,063 | 2,223,679 | 7,101,094 | 21,893,469 | |
| 2044 | 22 | 2,478,537 | 2,131,472 | 316,739 | 5,495,580 | 1,101,440 | 2,303,679 | 7,352,990 | 22,858,560 | |
| 2045 | 23 | 2,564,004 | 2,215,719 | 332,940 | 5,804,391 | 1,140,217 | 2,383,679 | 7,604,886 | 23,834,651 | |
| 2046 | 24 | 2,649,470 | 2,300,466 | 349,541 | 6,120,212 | 1,178,594 | 2,463,679 | 7,856,782 | 24,820,742 | |
| 2047 | 25 | 2,734,937 | 2,385,213 | 366,542 | 6,443,043 | 1,216,371 | 2,543,679 | 8,108,678 | 25,816,833 | |
| 2048 | 26 | 2,820,404 | 2,469,960 | 383,943 | 6,772,884 | 1,253,948 | 2,623,679 | 8,360,574 | 26,822,924 | |
| 2049 | 27 | 2,905,870 | 2,554,707 | 401,744 | 7,118,735 | 1,291,325 | 2,703,679 | 8,612,470 | 27,839,015 | |
| 2050 | 28 | 2,991,337 | 2,639,454 | 419,945 | 7,480,586 | 1,328,502 | 2,783,679 | 8,864,366 | 28,865,106 | |
| 2051 | 29 | 3,076,804 | 2,724,201 | 438,546 | 7,858,437 | 1,365,479 | 2,863,679 | 9,116,262 | 29,901,197 | |
| 2052 | 30 | 3,162,270 | 2,808,948 | 457,547 | 8,242,288 | 1,402,256 | 2,943,679 | 9,368,158 | 30,947,288 | |
| Total | | 36,067,049 | 26,659,136 | 3,609,193 | 62,112,818 | 16,662,294 | 33,300,822 | 11,434,694 | 107,352,749 | 297,258,805 |

Present Value of Benefits @7% Discount

| | Efficiency | NOx | HC | PM | CO2 | Safety | Congestion and Noise | Pavement costs | Total |
|------|------------|---------|---------|--------|-----------|---------|----------------------|----------------|-----------|
| 2022 | 0 | 639,026 | 422,553 | 56,790 | 993,888 | 225,562 | 589,896 | 2,020,900 | 5,032,168 |
| 2023 | 1 | 671,851 | 449,827 | 60,956 | 1,062,837 | 241,899 | 620,322 | 2,130,04 | 5,320,446 |
| 2024 | 2 | 697,860 | 475,760 | 64,592 | 1,127,719 | 258,119 | 644,156 | 2,211,88 | 5,558,782 |
| 2025 | 3 | 717,226 | 492,992 | 67,847 | 1,192,655 | 274,863 | 667,217 | 2,272,889 | 5,748,203 |
| 2026 | 4 | 731,241 | 516,790 | 70,114 | 1,214,474 | 278,750 | 675,157 | 2,318,833 | 5,894,900 |
| 2027 | 5 | 740,351 | 532,409 | 72,209 | 1,249,225 | 287,470 | 683,570 | 2,347,21 | 6,003,601 |
| 2028 | 6 | 745,441 | 545,992 | 74,059 | 1,277,350 | 289,330 | 687,901 | 2,362,400 | 6,073,110 |
| 2029 | 7 | 746,138 | 558,155 | 75,542 | 1,299,424 | 294,884 | 688,912 | 2,366,556 | 6,120,574 |
| 2030 | 8 | 747,323 | 568,521 | 76,840 | 1,314,415 | 298,324 | 691,843 | 2,370,611 | 6,159,079 |
| 2031 | 9 | 748,010 | 577,888 | 77,900 | 1,323,263 | 299,830 | 693,679 | 2,373,679 | 6,184,614 |
| 2032 | 10 | 748,297 | 585,255 | 78,773 | 1,328,002 | 300,616 | 694,464 | 2,375,679 | 6,200,149 |
| 2033 | 11 | 748,187 | 590,622 | 79,397 | 1,330,639 | 300,892 | 694,250 | 2,375,679 | 6,207,724 |
| 2034 | 12 | 747,077 | 594,989 | 79,811 | 1,327,126 | 300,616 | 693,034 | 2,373,679 | 6,196,309 |
| 2035 | 13 | 744,967 | 598,356 | 80,066 | 1,318,513 | 300,340 | 691,818 | 2,371,679 | 6,177,894 |
| 2036 | 14 | 741,857 | 599,723 | 80,271 | 1,304,900 | 300,064 | 690,602 | 2,369,679 | 6,152,479 |
| 2037 | 15 | 737,747 | 599,090 | 80,436 | 1,285,787 | 299,788 | 689,386 | 2,367,679 | 6,121,064 |
| 2038 | 16 | 732,637 | 597,457 | 80,571 | 1,262,674 | 299,512 | 688,170 | 2,365,679 | 6,077,649 |
| 2039 | 17 | 726,527 | 594,824 | 80,676 | 1,235,561 | 299,236 | 686,954 | 2,363,679 | 6,022,234 |
| 2040 | 18 | 719,417 | 591,191 | 80,751 | 1,204,448 | 298,960 | 685,738 | 2,361,679 | 5,956,819 |
| 2041 | 19 | 711,307 | 586,558 | 80,806 | 1,169,335 | 298,684 | 684,522 | 2,359,679 | 5,881,404 |
| 2042 | 20 | 702,197 | 580,925 | 80,831 | 1,120,222 | 298,408 | 683,306 | 2,357,679 | 5,796,989 |
| 2043 | 21 | 691,087 | 574,292 | 80,836 | 1,059,109 | 298,132 | 682,090 | 2,355,679 | 5,693,574 |
| 2044 | 22 | 678,977 | 566,659 | 80,811 | 987,996 | 297,856 | 680,874 | 2,353,679 | 5,573,159 |
| 2045 | 23 | 665,867 | 558,026 | 80,766 | 906,883 | 297,580 | 679,658 | 2,351,679 | 5,438,744 |
| 2046 | 24 | 651,757 | 548,393 | 80,701 | 815,770 | 297,304 | 678,442 | 2,349,679 | 5,294,329 |
| 2047 | 25 | 636,647 | 537,760 | 80,616 | 714,657 | 297,028 | 677,226 | 2,347,679 | 5,140,914 |
| 2048 | 26 | 620,537 | 526,127 | 80,511 | 603,544 | 296,752 | 676,010 | 2,345,679 | 4,978,500 |
| 2049 | 27 | 603,427 | 513,494 | | | | | | |

ATTACHMENTS FORM

Instructions: On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

Important: Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.

| | | | | |
|---------------------------------|-------------------------------|----------------|-------------------|-----------------|
| 1) Please attach Attachment 1 | 1234-Attachment 1- PIDP 2022 | Add Attachment | Delete Attachment | View Attachment |
| 2) Please attach Attachment 2 | 1235-Attachment 2- SF 424 App | Add Attachment | Delete Attachment | View Attachment |
| 3) Please attach Attachment 3 | 1236-Attachment 3-SF-424C Com | Add Attachment | Delete Attachment | View Attachment |
| 4) Please attach Attachment 4 | 1237-Attachment 4- Port Commi | Add Attachment | Delete Attachment | View Attachment |
| 5) Please attach Attachment 5 | 1238-Attachment 5- Engineerin | Add Attachment | Delete Attachment | View Attachment |
| 6) Please attach Attachment 6 | 1239-Attachment 6- Engineerin | Add Attachment | Delete Attachment | View Attachment |
| 7) Please attach Attachment 7 | 1240-Attachment 7- Letters of | Add Attachment | Delete Attachment | View Attachment |
| 8) Please attach Attachment 8 | 1241-Attachment 8- Letter of | Add Attachment | Delete Attachment | View Attachment |
| 9) Please attach Attachment 9 | 1242-Attachment 9- Barge Rate | Add Attachment | Delete Attachment | View Attachment |
| 10) Please attach Attachment 10 | 1243-Attachment 10- Benefit-C | Add Attachment | Delete Attachment | View Attachment |
| 11) Please attach Attachment 11 | 1244-Attachment 11- Benefit-C | Add Attachment | Delete Attachment | View Attachment |
| 12) Please attach Attachment 12 | 1245-Attachment 12- Exhibit X | Add Attachment | Delete Attachment | View Attachment |
| 13) Please attach Attachment 13 | | Add Attachment | Delete Attachment | View Attachment |
| 14) Please attach Attachment 14 | | Add Attachment | Delete Attachment | View Attachment |
| 15) Please attach Attachment 15 | | Add Attachment | Delete Attachment | View Attachment |

| Application for Federal Assistance SF-424 | | |
|--|--|--|
| * 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application | * 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision | * If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify): <input type="text"/> |
| * 3. Date Received: <input type="text" value="05/12/2022"/> | 4. Applicant Identifier: <input type="text"/> | |
| 5a. Federal Entity Identifier: <input type="text"/> | 5b. Federal Award Identifier: <input type="text"/> | |
| State Use Only: | | |
| 6. Date Received by State: <input type="text"/> | 7. State Application Identifier: <input type="text"/> | |
| 8. APPLICANT INFORMATION: | | |
| * a. Legal Name: <input type="text" value="Port of Beaumont Navigation District of Jefferson County, Te"/> | | |
| * b. Employer/Taxpayer Identification Number (EIN/TIN): <input type="text" value="(b)(4)"/> | * c. UEI: <input type="text" value="(b)(4)"/> | |
| d. Address: | | |
| * Street1: <input type="text" value="1225 Main Street"/> | Street2: <input type="text"/> | |
| * City: <input type="text" value="Beaumont"/> | County/Parish: <input type="text"/> | |
| * State: <input type="text" value="TX: Texas"/> | Province: <input type="text"/> | |
| * Country: <input type="text" value="USA: UNITED STATES"/> | * Zip / Postal Code: <input type="text" value="77701-3648"/> | |
| e. Organizational Unit: | | |
| Department Name: <input type="text"/> | Division Name: <input type="text"/> | |
| f. Name and contact information of person to be contacted on matters involving this application: | | |
| Prefix: <input type="text"/> | * First Name: <input type="text" value="David"/> | |
| Middle Name: <input type="text"/> | * Last Name: <input type="text" value="Fisher"/> | |
| Suffix: <input type="text"/> | Title: <input type="text" value="Port Director & CEO"/> | |
| Organizational Affiliation: <input type="text" value="Port of Beaumont"/> | | |
| * Telephone Number: <input type="text" value="409-299-4249"/> | Fax Number: <input type="text" value="409-835-0512"/> | |
| * Email: <input type="text" value="dcf@pobtx.com"/> | | |

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

D: Special District Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Maritime Administration

11. Catalog of Federal Domestic Assistance Number:

20.823

CFDA Title:

Port Infrastructure Development Program

*** 12. Funding Opportunity Number:**

MA-PID-22-001

* Title:

2022 Port Infrastructure Development Program Grants

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

BeauHou Container on Barge

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

| | |
|---------------------|--|
| * a. Federal | <input type="text" value="26,440,500.00"/> |
| * b. Applicant | <input type="text" value="8,813,500.00"/> |
| * c. State | <input type="text" value="0.00"/> |
| * d. Local | <input type="text" value="0.00"/> |
| * e. Other | <input type="text" value="0.00"/> |
| * f. Program Income | <input type="text" value="0.00"/> |
| * g. TOTAL | <input type="text" value="35,254,000.00"/> |

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

| COST CLASSIFICATION | a. Total Cost | b. Costs Not Allowable for Participation | c. Total Allowable Costs (Columns a-b) |
|---|---|--|---|
| 1. Administrative and legal expenses | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 2. Land, structures, rights-of-way, appraisals, etc. | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 3. Relocation expenses and payments | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 4. Architectural and engineering fees | \$ <input type="text" value="1,834,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="1,834,000.00"/> |
| 5. Other architectural and engineering fees | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 6. Project inspection fees | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 7. Site work | \$ <input type="text" value="250,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="250,000.00"/> |
| 8. Demolition and removal | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 9. Construction | \$ <input type="text" value="28,810,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="28,810,000.00"/> |
| 10. Equipment | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 11. Miscellaneous | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 12. SUBTOTAL (sum of lines 1-11) | \$ <input type="text" value="30,894,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="30,894,000.00"/> |
| 13. Contingencies | \$ <input type="text" value="4,360,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="4,360,000.00"/> |
| 14. SUBTOTAL | \$ <input type="text" value="35,254,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="35,254,000.00"/> |
| 15. Project (program) income | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="0.00"/> |
| 16. TOTAL PROJECT COSTS (subtract #15 from #14) | \$ <input type="text" value="35,254,000.00"/> | \$ <input type="text" value="0.00"/> | \$ <input type="text" value="35,254,000.00"/> |
| FEDERAL FUNDING | | | |
| 17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter eligible costs from line 16c Multiply X <input type="text" value="75"/> % Enter the resulting Federal share. | | | \$ <input type="text" value="26,440,500.00"/> |

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2025

| | | |
|--|--|--|
| 1. * Type of Federal Action: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance | 2. * Status of Federal Action: <input checked="" type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award | 3. * Report Type: <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change |
|--|--|--|

4. Name and Address of Reporting Entity:

Prime SubAwardee

* Name: Port of Beaumont

* Street 1: 1225 Main Street Street 2: _____

* City: Beaumont State: TX: Texas Zip: 77701-3648

Congressional District, if known: TX-14

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

| | |
|---|--|
| 6. * Federal Department/Agency: USDOT | 7. * Federal Program Name/Description: Port Infrastructure Development Program CFDA Number, if applicable: 20.823 |
|---|--|

| | |
|---|---|
| 8. Federal Action Number, if known: _____ | 9. Award Amount, if known: \$ _____ |
|---|---|

10. a. Name and Address of Lobbying Registrant:

Prefix _____ * First Name Rick Middle Name _____

* Last Name Maldonado Suffix _____

* Street 1: 1836 15th St NW Street 2: _____

* City: Washington State: DC: District of Columbia Zip: 20009

b. Individual Performing Services (including address if different from No. 10a)

Prefix _____ * First Name Rick Middle Name _____

* Last Name Maldonado Suffix _____

* Street 1: 1836 15th St NW Street 2: _____

* City: Washington State: DC: District of Columbia Zip: 20009

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* Signature: Rick Maldonado

* Name: Prefix _____ * First Name David Middle Name _____
* Last Name Fisher Suffix _____

Title: Port Director and CEO Telephone No.: 409-299-4249 Date: 05/12/2022

Federal Use Only: _____ Authorized for Local Reproduction
Standard Form - LLL (Rev. 7-97)