



New York State's only Port on Lake Ontario



Central New York Regional Agriculture Export Center Expansion Project

BUILD Grant Application

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Attachments:

Submitted as Attachments on Grants.gov

- Standard Form 424
- Standard Form 424 C
- 2020 BUILD Information Form
- Detailed Cost Estimate
- NYSDOT Funding Commitment
- Letters of Support
- Benefit Cost Analysis Narrative
- Benefit Cost Analysis Spreadsheet
- Service Life Worksheet
- Design Plans

- Viewshed Analysis

Provided on Applicant Website

<https://portoswego.com/central-new-york-regional-agricultural-export-center-expansion>

- Letters of Support (Also Attachment in Grants.gov)
- Design Plans (Also Attachment in Grants.gov)
- Environmental Assessment

Project Narrative

I. Project Description

The Port of Oswego (Port), New York State’s only port on Lake Ontario, is preparing to embark on its largest grain expansion project since its conception. The ***Central New York Regional Agriculture Export Center Expansion Project*** (the project) will repurpose two existing bulk storage structures and half a transit warehouse, construct two new grain towers with new dump pits for rail and truck, build a ship loading system, and improve the conveyance systems for five storage structures. Construction of this \$35.53 million project will triple the movement of agriculture products between the Port and suppliers in Central New York and Connecticut, and increase the Port’s export business to international markets. The Port is responding to the needs of its shippers and manufacturers, and completion of this project will be a significant improvement to its existing system through increased capacity, efficiency, and flexibility. New York State has demonstrated support for this project through award of a \$15 million grant resulting in a local match of 42.2%. The Port of Oswego requests funding in the amount of \$20.53 million from the 2020 Better Utilizing Investments to Leverage Development (BUILD Transportation Grants) program. The requested BUILD funding is a critical source of funding for this project. The Port has submitted concurrent applications to the DOT INFRA and PIDP grant programs with substantially no changes to the project as the Port needs funding to complete this project.

In the last ten years, the Port has seen spectacular growth in aluminum, windmill, grain and agricultural handling. The Port set a record in 2018 for grain exports with more than 53,405 metric tons of grain shipped out to foreign markets, representing a 533% increase from the previous year. The Port’s two largest shippers have indicated they want to double the agricultural freight volumes through the Port, and this project will allow local farmers better and lower cost transportation options that are more environmentally friendly.

Well the Port’s customers would like to increase freight volumes through the Port, there are several challenges. The Port is currently running at storage capacity, and has to use temporary grain bunkers to maintain export operations as shown in the picture to the right. It is also currently using portable conveyers and pay loaders for loading/unloading which increases the time needed and limits both the operational effectiveness and the performance of the operation. Finally, a new “weigh-as-you-go”



scale system is needed for the continuation of exporting grain by ship. The ability for growth by both the Port and the Port's customers relies on the completion of this project.

The Port has previously successfully completed a \$3 million Intermodal Center project that was federally supported through a Tiger grant to provide improved access by rail and road to the storage facilities. The Intermodal Center project included construction of a combined connector roadway and rehabilitated railroad track from the East Harbor storage lot at Lake Ontario along the lake to a new double unloading facility immediately south of the Canadian National Industrial Lead. Successful completion of this project gave the Port improved access to Canadian National's railway and increased operating efficiencies and safety. With improved access to rail transport, the Port now has a need to improve the storage capacity and loading/unloading efficiency to increase the ability to transport by both rail and ship.

The proposed infrastructure investment will facilitate the efficient and cost-effective increase in storage capacity and export of agriculture products from the Port by ship, which will reduce current transportation to Virginia. As shown in the map in the Project Location section, it is necessary for agricultural products and by products that are not currently being exported through the Port to be sent to Virginia for export. This includes loading the products in New York and transporting them to Virginia where they are unloaded and then loaded into ships for export. It will also increase imports of agriculture products and potash (fertilizer), into the Port by ship, for centralized distribution to Central New York and Connecticut, which will reduce truck traffic volumes as well.

The construction of this project will have a twofold near-term economic impact on a designated Opportunity Zone in a Rural Area. Construction will impact the area immediately. An estimated \$11.5 million will be expended in the local economy through approximately 25,000 man-days in construction trades with an average wage rate of \$57/hr. over a 3 year period. Follow-on employment will include 12 full-time equivalent positions. Port employment will need to increase as longshoremen positions will be necessary to run the rail/container yard. New positions will average 2,080 hours a year at \$35/hour all in costs. This will increase as heavy lift projects use the new facility. Non Port jobs will also increase as added capacity and import/export capabilities will allow the Port's customers to increase their operations and grow. These jobs will help strengthen the community by providing greater economic stability to individuals and families.

The project is divided into two phases.

Phase 1 of the project will be construction of a new Dome 4 storage structure, with an increase of 10,000 metric tons of storage capacity, along with demolition of Dome 1 and repurposing it to Silo 1, with a storage capacity of 14,500 metric tons. This phase includes new conveyance systems between Dome 1 for ship loading and truck and rail unloading/loading for shipment throughout Central New York and Connecticut. As part of phase 1, a new Control Center Building will be erected for the automated processing and handling systems including equipment for a USDA certified laboratory necessary for grain export. The equipment for the USDA certified laboratory was needed immediately for continued agricultural export, so it has been

purchased. Since the costs have been previously incurred, they are not included in the project's budget.

Phase 2 includes the demolition of Dome 2 storage structure and repurposing it to Silo 2, with a storage capacity of 14,500 metric tons. The north half of the Transit Warehouse will be repurposed for storage as well by raising and replacing the roof and reinforcing the walls. Phase 2 also includes completion of new conveyance systems between Silo's 1 and 2 along with the existing Barrel Dome for truck and rail unloading/loading and ship loading via hopper scale to "Lakers" (bulk carrier vessels, which carry 21,000 metric tons of agricultural product for export per ship). The repurpose of the two dome storage structures will increase the storage capacity from 11,000 metric tons to 30,800 metric tons, repurposing the north half of the Transit Warehouse will increase storage capacity from 4,000 metric tons to 15,000 metric tons, and automating conveyance of the Barrel Dome will provide improved efficiency, flexibility and competitiveness for the Port of Oswego. When complete, the project will allow the Port to increase agriculture export from 15,000 metric tons to 308,000 metric tons annually and increase the storage and distribution of fertilizer from 15,000 metric tons to 30,000 tons annually.

Currently, the Port is running at capacity. It maintains three storage domes (115' W x 50' H), which have a bulk storage capacity of 5,500 – 7,500 tons each based on different products, and one barrel building (365' L x 135' W) capable of storing 15,400 tons. The electrical system in the barrel building is in need of replacement to handle the increase in demand, and the existing incline receiving conveyer system, which is inoperable and obsolete, also needs to be replaced. A new bucket elevator, in-floor conveyance tunnel system, and overhead conveyance with diverters running to Domes 1 and 2 (Silos 1 and 2) then on to the ship loader system is also proposed.



Silos 1 and 2 replacing existing Domes 1 and 2 and new Dome 4.

An additional Dome 4 storage facility will need to be constructed to accommodate increased storage demands. It will be located south of Dome 3. A truck/rail dump pit will be installed on the railroad tracks west of the storage domes, and also on the tracks east of Domes 1 thru 3 which will serve as the central facility for loading and unloading to ships, barges, rail cars, and trucks. The pits will include a conveyor system that will distribute product to all of the storage facilities at a top rate of 400 tons per hour to 30,000 BPH (bushels per hour), and will replace the portable conveyers and pay loaders used presently for loading/unloading which have a rate of 20,000 BPH. It also allows transfer of product between storage structures at 400 tons per hour. The design includes a ship loading 800 TPH (ton per hour) conveyor that allows the Port to select any 2 of the 3 storage structures (Silo 1, Silo 2, or Barrel Building) for unloading at 400 TPH each onto the 800 TPH (60,000 BPH) conveyor going to ship.



Off-loading of bulk product is completed in reverse order of the current loading system as none of the domes contain a live bottom or dump pits to help speed up the process. Truck unloading can take up to 30 minutes or more, including scaling in and out, and rail cars take up to an hour or more as each car must be aligned to the conveyor and one pocket of the rail car is individually unloaded. The proposed system will reduce the unloading time to under 10 minutes. Once constructed, the new loading/unloading systems will triple the Port's operational effectiveness and performance.



Rail freight shipments have increased in the last several years at the Port and loading/unloading capabilities, as well as site storage, is essential for the Port's and its customer's future growth. An essential aspect of this project is the facilitation of on-dock rail loading between rail cars and ships to further the expansion of grain export.

The Port also has a need for installation of a "weigh-as-you-go" system required by USDA (GIPSA) regulations for increased export above 15,000 metric tons. The USDA (GIPSA) has been approving the temporary system that is in place, but they are now requesting that a permanent system be installed to provide U.S. officially approved weights and grades. They are

not willing to grant further waivers of the temporary system. The immediate installation of a permanent system is needed to continue to provide a market outlet for New York farmers. The attached support letter from Perdue AgriBusiness provides more detail.

Project improvements are listed by category below.

Additional New Storage Capacity

- Construction of one additional storage dome (Dome 4) with 10,000 tons capacity.
- Replace Domes 1 & 2 with Silos 1 & 2 along with live floors to increase storage capacity from 5,500 tons per dome to 15,400 tons per silo.
- Repurposed “*North Half*” of Transit Warehouse to increase storage capacity from 4,000 tons to 15,000 tons.
- Ability to mechanically load and extract product from new facilities.
- Ability to unload from rail, truck, barge, and ship into all facilities.
- Ability to reclaim from these facilities to barge, rail, truck, and ship.

Upgrade Existing Barrel Dome Storage Facility (Existing Storage Capacity = 18,000 Tons)

- Replacement of the overhead conveyor system that utilizes the domes’ open roofs to unload directly into the tops of the domes.
- Make the floor live by installing tunnel conveyor longitudinal with building and out to North End for new Bucket Elevator.
- Construction of a new overhead conveyer systems between Barrel Dome and new Silos 1 & 2.
- Use of the same conveyer system for all products being received and reclaimed.
- Addition of a dump pit west of the storage domes for rail and truck.

Upgrade Existing *North Half* of Transit Warehouse Storage Facility

- Replacement raising the roof system to increase storage inside warehouse.
- Construction of a new Bucket elevator and tunnel conveyor and overhead drag conveyer systems to store and ship grain/ Dried Distiller Grain (DDG’s) onto truck, rail and ship for export.
- Construction of new 10’ tall concrete walls along interior perimeter of northern half of Transit Warehouse.
- Renovate the existing firewall between the northern and southern half of the Transit warehouse.

Unload and Reclaim Systems

- Mechanical conveyor systems to load and unload from storage facilities.
- Installation of protective buildings to cover the load/unload locations and allow foul weather operations.
- Construction of a control room for the new conveyer system, which will be located above the loading docks.
- Installation of central reclaim hopper on the southwest corner of the barrel building for reloading ships, barges, rail cars, and trucks.

Scale System Upgrade

- Renovation and upgrade of the scale to current industry standards.
- Installation of a “weigh-as-you-go” system to allow for more efficient operation of rail car loading/unloading.
- Computerization and automation of all scale systems to accommodate quicker vehicle/rail car turnaround.

Truck Scale

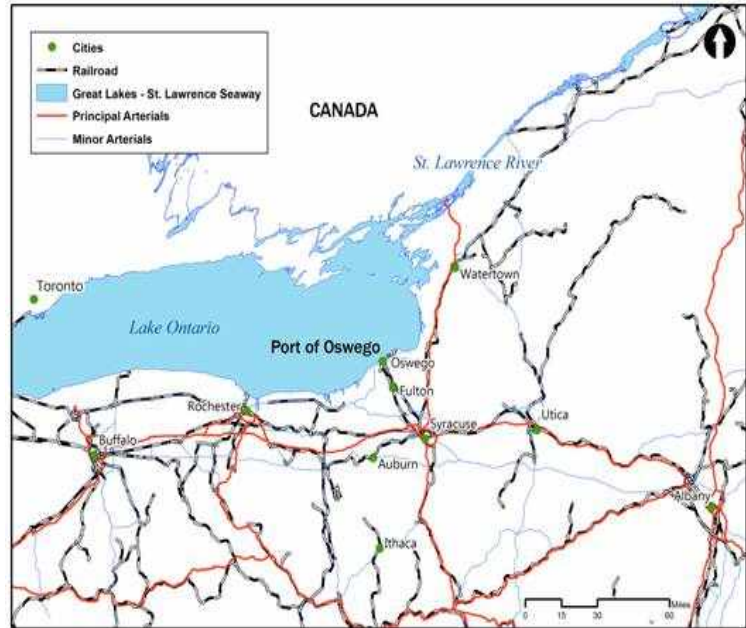
- Readjustment and renovation of the scale.
- Installation of a “weigh-as-you-go” system.
- Computerization of scale.

The Port continues to increase handling of agriculture products by tonnage annually, and its customers want to increase exports. The Port is currently limited in storage capacity, unloading and loading capabilities, and has a need for installation of a “weigh-as-you-go” scale system. In 2017 the Port saw an export of 10,028 metric tons of grain, and in 2018 the Port saw an export of 53,405 metric tons of grain. This represents a 533% increase. In 2019 the USDA gave a permit to export 81,000 metric ton, however, due to trade negotiations going on in 2019 the Port did not reach this number. These numbers demonstrate both the increasing demand of the Port’s services, and the need for continued investment in the Port’s infrastructure to accommodate this crucial economic activity.

"New York State is committed to helping New York farmers reach new markets and broaden their consumer base. Thanks to the Governor and the DOT, this funding will allow us to build out and develop a critical infrastructure project that will support our agricultural economy."
State Agriculture Commissioner Richard A. Ball

II. Project Location

Positioned as New York State's only Port on Lake Ontario, the Port of Oswego is a deep-water port and is the first U.S. Port of call on the Great Lakes from the St. Lawrence Seaway. It is on the route to the interior of North America and is accessible from any international port in the world. From its deep draft terminal to its access to the New York State Barge Canal, the Port offers multi-modal connectivity that includes its designation as a Marine Highway, one of only 34 in the US that is designated by the US DOT. Additionally, it has on dock rail, a new railyard that was completed in 2014, and immediate efficient connections to the Interstate System.



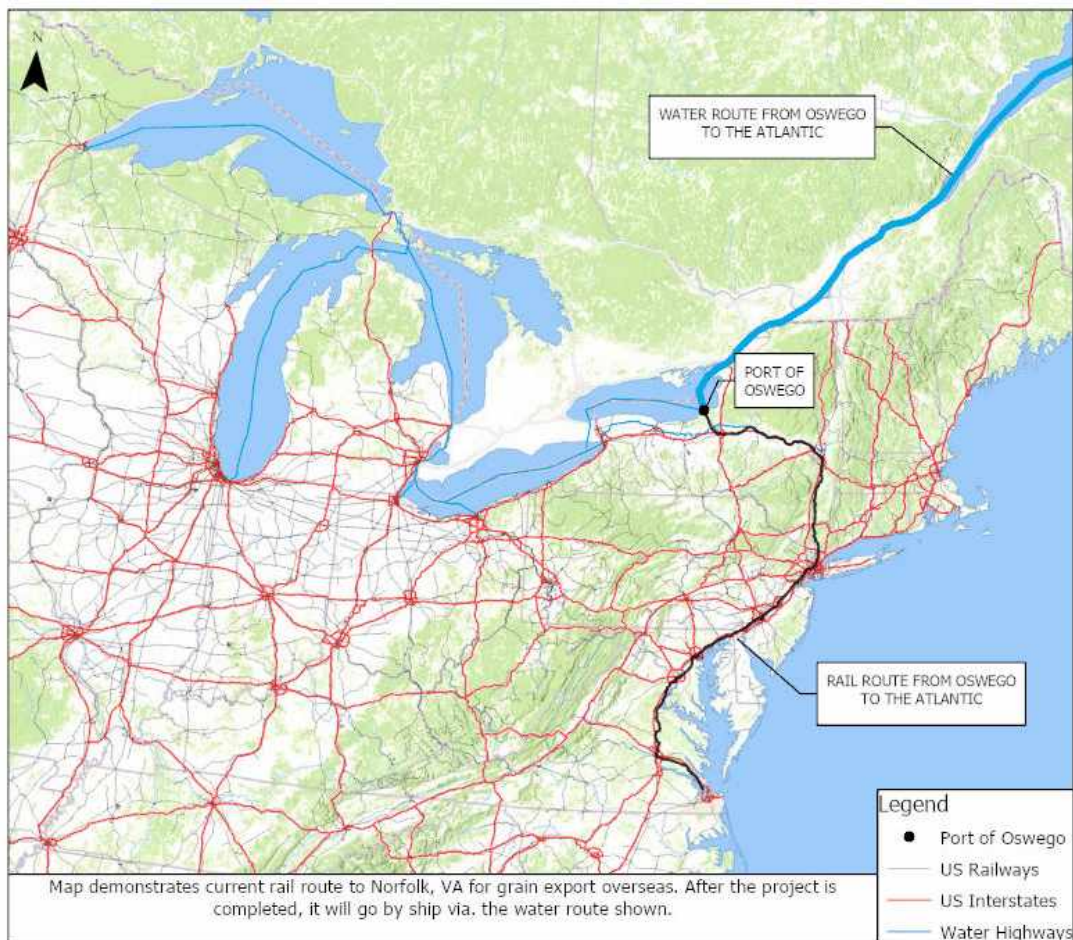
The Port's strategic location at the crossroads of the northeastern North American shipping market places it at 150 miles from 60 million people. Extend that to 750 miles and half of the United States and Canadian populations could be accessed, along with half of their business and manufacturing facilities. Its key position also places it minutes from major truck routes including Interstates 481, 81 and 90.

The Port's location, at the southeastern point of Lake Ontario, allows it to be a leader, not only as a domestic partner, but also as a leading international port. One of the most productive ports in North America, nearly 120 vessels and more than one million tons of cargo move through the Port on an annual basis. Free of coastal port congestion and large city traffic, the Port is able to offer international and domestic shippers virtually year-round access to various northeastern United States industrial and agricultural markets. Also, as an ice free port, the Port can receive vessel traffic 12 months of the year, with deep draft vessels arriving from the North shore of Lake Ontario, even when the St. Lawrence Seaway is closed to navigation.



The Port is open 24 hours a day, seven-days a week to accommodate vessels from all ports on the Great Lakes and around the world. The Port’s entrance depth is 27 feet plus, with a width of 750 feet, and a turning basin of 115 acres, and it has no restrictions on beam or length for ships entering the harbor. The Port also hosts a U.S. Customs office to facilitate the movement of legitimate international cargo by rail, truck and water.

The project location is on the east side of the Oswego Harbor, which is home to the Port’s East Terminal including the main dock, grain storage, rail connections and administrative operations. The project is located within a **designated Opportunity Zone as part of Census Tract #36075021605, which is in a rural disadvantaged area**. The project’s location is within the City of Oswego. Oswego, New York's population for the 2010 census was 18,142, and its current estimated population is 17,337 according to the most recent United States census estimates. The map of the project’s location, Latitude N 43.463454 - Longitude W -76.510807, and connections to existing transportation infrastructure is shown below. The existing route for export from Norfolk, VA is shown as well as the water route for export after the project is completed. Water transportation is both economical and environmentally friendly and provides transportation of commodities with little or no impact on the state’s highway system.



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

The Central New York Regional Agriculture Export Center Expansion Project is key to the continued growth and development of the Port and regional agricultural community. As shown below, BUILD funding is necessary to complete this project. **The actual local financial leveraging of this project, considering the Port is in a rural and economically disadvantaged area qualified as an Opportunity Zone, is 42.2%.**

GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS	
BUILD grant funding requested (57.8%)	\$20,530,000
NYS DOT Commitment (42.2%)*	\$15,000,000
Total Project Cost	\$35,530,000

*See attached documentation of New York State funding commitment

Future eligible project costs are \$35.53 million. This includes \$15 million committed by New York State Department of Transportation (NYSDOT) and \$20.53 million requested with this grant application. **New York State Special Infrastructure Account funds have been appropriated and sub-allocated to the Department of Transportation to improve and enhance freight goods movement within the State by rail and port.** The NYSDOT Capital Program Agreement documenting the funds committed by the NYSDOT is included in the attachments. The expenditure of the NYSDOT grant funding will need to take place during phase 1 of the project, as the work identified in the Work Schedule for the NYSDOT grant must be completed no later than July 31, 2021. These funds will be used as the needed matching funds to the requested BUILD grant funding.

The project will be separated into two phases. Phase 1 part 1 will have two Lump Sum Publicly Let Bid packages including a Foundation and Site/Civil Contract for Dome 4 and a Performance Lump Sum Contract for Dome 4. Phase 1 part 2 will include a Foundation and Site/Civil Contract for Dome 1 and a Performance Lump Sum Contract for Conveyance, Equipment, Control Systems and Control Center Building for Silo 1. Phase 2 includes two contracts being let including a Foundation and Site/Civil Contract for Dome 2 and a Performance Lump Sum Contract for Conveyance, Equipment, Control Systems and Control Center Building for Silo 2.

PROJECT FUNDS BY PHASE		
	Non Federal – New York State Funds (42.2%)	BUILD Grant Funds (57.8%)
PHASE 1	\$12,707,000	
Phase 1 (Part 1)		
<ul style="list-style-type: none"> • Foundation and Site/Civil Contract for Dome 4 • Performance Lump Sum Contract for Dome 4 	<ul style="list-style-type: none"> \$ 500,000 \$1,100,000 	

Phase 1 (Part 2)		
<ul style="list-style-type: none"> • Foundation and Site/Civil Contract for Dome 1 	\$2,788,800	
<ul style="list-style-type: none"> • Performance Lump Sum Contract for Conveyance, Equipment, Control Systems and Control Center Building for Silo 1 	\$8,318,200	
PHASE 2	\$2,293,000	\$20,530,000
Phase 2		
<ul style="list-style-type: none"> • Foundation and Site/Civil Contract for Dome 2 & Barrel Dome & Tunnels 	\$579,600	\$5,216,400
<ul style="list-style-type: none"> • Performance Lump Sum Contract for Conveyance Equipment Silo 2 and Barrel Building 	\$463,400	\$4,063,600
<ul style="list-style-type: none"> • Design-Bid-Build Contract for Warehouse Modifications 	\$950,000	\$8,550,000
<ul style="list-style-type: none"> • Performance Lump Sum Contract for Ship Loading at East Wharf 	\$300,000	\$2,700,000

Sufficient contingency amounts to cover unanticipated cost increases has been budgeted for the project. The Detailed Cost Estimate included in the attachments shows contingency costs of 10% included for the construction costs, engineering and legal costs, and maintenance and operational costs.

BUILD funding is needed to complete this project. Existing and potential marine related operations will be lost if this project is not completed as the USDA (GIPSA) will not grant further waivers of the temporary scale system that is currently in place. Further development will also not occur without the project.



IV. Selection Criteria

Primary Merit Criteria

Safety

This project will foster a safe transportation system for the movement of goods by reducing agricultural product shipment by truck on our nation's highway system and increasing its shipment by rail and water. The Port of Oswego is located in a small city surrounded by rural communities, many served by aging two-lane highways that support a myriad of users, from commuters in passenger cars to farm machinery to short and medium haul trucks. Statistics from NYSDOT and the NYSDMV can show the lower than average pavement conditions and bridge ratings, and the above average accident rates, that typify many routes throughout Oswego County and the region, that must be traversed by heavy vehicles with both import and export shipments.

Expansion of the Port's facilities with a multi-modal approach can have threefold positive benefits. Improved transloading of import shipments, mainly corn and potash, for movement by railroad (Canadian National) will reduce the dependency on last mile delivery by truck, relieving the local highway system of heavy traffic. Specifically, corn bound for ethanol production at Attis Biofuel can move directly by rail. Also, distiller grains from Attis Biofuel, currently trucked to farmers regionally would be reduced due to export opportunities at the Port. Attis Biofuel can also take advantage of direct movement by rail service to the Port. Finally, export traffic composed of agricultural products and byproducts, currently trucked long distances, will now be accommodated by the expanded port facilities, for storage or direct loading onto ships for transport, significantly reducing over-the-road mileage. Companies like Purdue, Nutrien, and Anderson Grain, along with many small independent suppliers, can increase production without placing additional strain on the highway infrastructure, by having an adequate port facility nearby, resulting in direct economic benefits to the region. Most truck shipments will now be short haul deliveries over two capable, major state highways: Route 481 which is built to Interstate standards, and Route 104 which has recently received major rehabilitation and safety upgrades on both the east and west sides of Oswego.

Without directly applying funds toward rebuilding overburdened rural highways, this project can therefore create benefits by offering a local alternative to current long-haul trucking, and increasing the economic feasibility and effectiveness of alternate modes of transportation by ship and rail.

The Port had the following volume and share of freight passes through the project area in 2017 and 2018 as recorded by the Port. These numbers includes all inbound and outbound and all commodities and material types combined.

VOLUME AND SHARE OF FREIGHT			
	Trucks	Railcars	Ships
2017	5,552 Trucks 219,235.767 ST	177 Railcars 18,356.268 ST	18 Ships 102,326.25 ST
2018	5,769 Trucks 168,469.637 ST	602 Railcars 57,044.271 ST	16 Ships 137,737.695 ST

*Figures are in short tons, and numbers were calculated using the calendar year.

Given the existing trips to the Port, growth projections, and anticipated shift of existing business to water and rail, it is anticipated the Port could save 3,234 truck trips per year to or from the Port, resulting in approximately 291,494 miles saved annually (based on the average for grain/soybean and potash trips). The number of miles saved in 30 years would be 3,625,994. By reducing the amount of truck trips over the road, there will be a reduction in the number, rate and consequences of potential transportation-related accidents. Using a truck fatal accident rate of \$0.156 and a truck injury accident rate of \$5.30 as specified in the DOT guidance document, it is estimated that total accident costs avoided would be \$197,834 over a 30 year period using a 7% discount rate. According to 2017 data provided by the Analysis Division of the Federal Motor Carrier Safety Administration, 57% of all fatal crashes occurred in rural areas, 27% on Interstate Highways, and 13% on rural Interstate Highways.

State of Good Repair

The Port's current facilities are operating at capacity, have inoperable and obsolete equipment, and are in need of improvement for future optimization of mobility of goods and economic growth. Without improvement, the Port will continue operating at a limited amount of its potential capacity, inefficiently loading/unloading agricultural products, and the mobility of goods will rely more on the current truck transit than the more efficient and cost effective transit by ship. The Port has a plan for maintaining the project in a state of good repair through operation and maintenance allocation in their budget and by requirements in the NYS DOT contract with the Port for this project.

This project is part of a relevant State, local, and regional effort to maintain transportation facilities. The Port project directly aligns with the Central New York Regional Planning and Development Board's Comprehensive Economic Development Strategy, and is listed as a top economic development priority for the region. This project complements "Central NY Rising," the region's comprehensive blueprint to generate robust economic growth and community development. New York State has demonstrated support through a \$15 million grant for the project.

The Port, an important regional asset, maintains a value that extends far beyond the current market value of over \$150 million. It is an asset that must be looked at as a future investment in

the nation's transportation system. The current configuration of the Port as constructed in 1963, was for the type of cargo the port handled and was common in the Great Lakes at that time. Changing markets and reconfigurations of shipping methods have placed the Port at a disadvantage in the current economic reality of shipping. As the demand for grain, potash aluminum and windmills has become a major factor in the annual shipping season, and with port rail increasing, we must realign to what the transportation community requires. A major increase in storage and rail refurbishment is necessary to continue operations.

"Governor Cuomo's latest investment in the Port of Oswego will help promote New York State produced goods and commodities throughout the globe. This funding will rejuvenate the Port and region, opening new doors for agriculture and logistics activities.

New York State Department of Transportation Commissioner Marie Therese Dominguez

Demolishing and repurposing two grain storage silos will not only improve their condition, but also increase the storage capacity at the Port. The north half of the Transit warehouse remodeling will repurpose space that is currently unusable for storage and recondition it to usable space and increased storage capacity. Installing a new conveyor system and loading/unloading equipment will triple efficiency and replace the existing inoperable and obsolete equipment. There will also be a savings associated with the lack of necessity to maintain and replace aged equipment that is being replaced as part of this project.

The Port also has a need for installation of a "weigh-as-you-go" system required by USDA (GIPSA) regulations for increased export above 15,000 metric tons. The USDA (GIPSA) has been approving the temporary system that is in place, but they are now requesting that a permanent system be installed to provide U.S. officially approved weights and grades. They are not willing to grant further waivers of the temporary system. The immediate installation of a permanent system is needed to continue to provide a market outlet for New York farmers. Without a permanent system, the Port will not have the ability to continue exporting grain by ship.

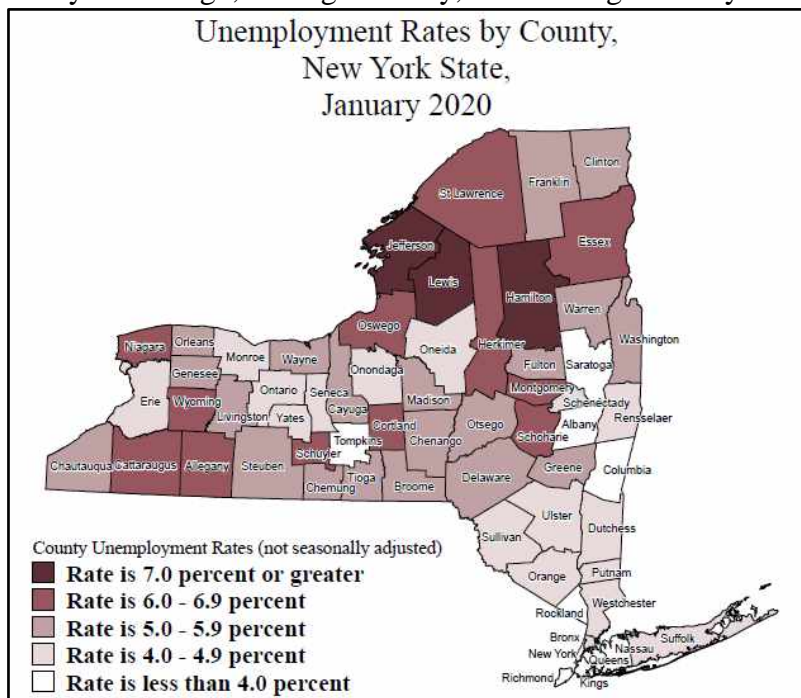
Increased revenue from increasing storage capacity and improved efficiency will support increasing overall operations and maintenance costs to include specific operation and maintenance cost of the project. The Port will increase its agricultural product storage capacity from 11,000 metric tons to 55,800 metric tons, which will in turn increase freight capacity as it will have additional ability to export by ship. With the addition of new conveyance systems, the Port will have more flexibility for turnover and increased efficiency moving products between domes, silos, and truck/rail/ship transportation. These storage improvements will increase the amount of product the Port is able to handle which in turn will increase the revenue generated. The Port annually budgets for overall operation and maintenance costs, which is included in the

Port's Annual Budget and Financial Plan. [The 2019 – 2020 Annual Budget and Financial Plan is linked here.](#) Operation and maintenance costs specific to the project will be incorporated in the overall operation and maintenance costs of the Port. As part of the Port's contract for the NYSDOT grant, the Port agrees to maintain the project facilities as well as ancillary facilities for 10 years from the project completion date. All components within the proposed project have been or will be designed and constructed to ensure long-term resilience, extending the useful life of the facility. The present discounted value of the remaining service life of the project's assets at the end of 30 years will be \$4,918,224 with a 7% discount rate.

Economic Competitiveness

The Port of Oswego is located in the City of Oswego, Oswego County, NY. Oswego County suffers from chronic high levels of unemployment, and is consistently in the top 3-4 highest unemployment rates in New York State. The per capita income is 16% lower than the national average.

The construction of this project will have a twofold near-term economic impact on a designated Opportunity Zone in a Rural Area. Construction will impact the area immediately. An estimated \$11.5 million will be expended in the local economy through approximately 25,000 man-days in construction trades with an average wage rate of \$57/hr. over a 3 year period. Follow-on employment will include 12 full-time equivalent positions. Port employment will need to increase as longshoremen positions will be necessary to run the rail/container yard. New positions will average 2,080 hours a year at \$35/hour all in costs. These jobs are considered high paying for the area, and will help strengthen the community by providing greater economic stability for individuals and families. Additional employment will increase as heavy lift projects use the new facility. Non Port jobs will also increase as added capacity and import/export capabilities will allow the Port's customers to increase their operations and grow.



Additionally, this project will result in an increase in the handling capacity at the Port, which will in turn result in increased transportation opportunities for regional businesses and support for existing businesses, including expansion of new business. With increased storage capacity and loading/unloading efficiency, the opportunity to transport agricultural produces by ship will

provide businesses with an economic, environmentally friendly option. Both rail and ship transport increase the efficiency of the movement of goods and will reduced the cost to transport goods both nationally and globally for businesses.

As described by Governor Cuomo, *“The Port of Oswego is a key economic generator for the entire Central New York Region,”* said Andrew M. Cuomo, New York State governor. *“This investment will help the port renew and modernize its agricultural handling facilities, providing the region with enhanced access to international markets and boosting local economies.”*

<https://www.world-grain.com/articles/12918-port-of-oswego-receives-15-million-in-funding>

The economic benefits associated with development at the Port will extend far beyond the City of Oswego and Oswego County. The benefits will be experienced across a large portion of the Central and Northern New York region and the nation.

Some of these benefits are demonstrated by a recent study conducted by Martin Associates entitled *Economic Impacts of Maritime Shipping in the Great Lakes-St. Lawrence Region*. Under current operating conditions, the Port of Oswego supports 106 direct jobs and 209 total jobs. Port operations generate more than \$4.6 million in local purchases, more than \$5.7 million in state and federal taxes, more than \$13.8 million in total personal income, and more than \$19 million in total business revenue annually. In total, the Port’s operations and activities represent more than \$26.7 million in total annual economic impact. This demonstrates not only the Port’s existing and well-established economic significance, but also the potential to expand this impact by investing in this important regional and national economic engine.

The construction of the Project will:

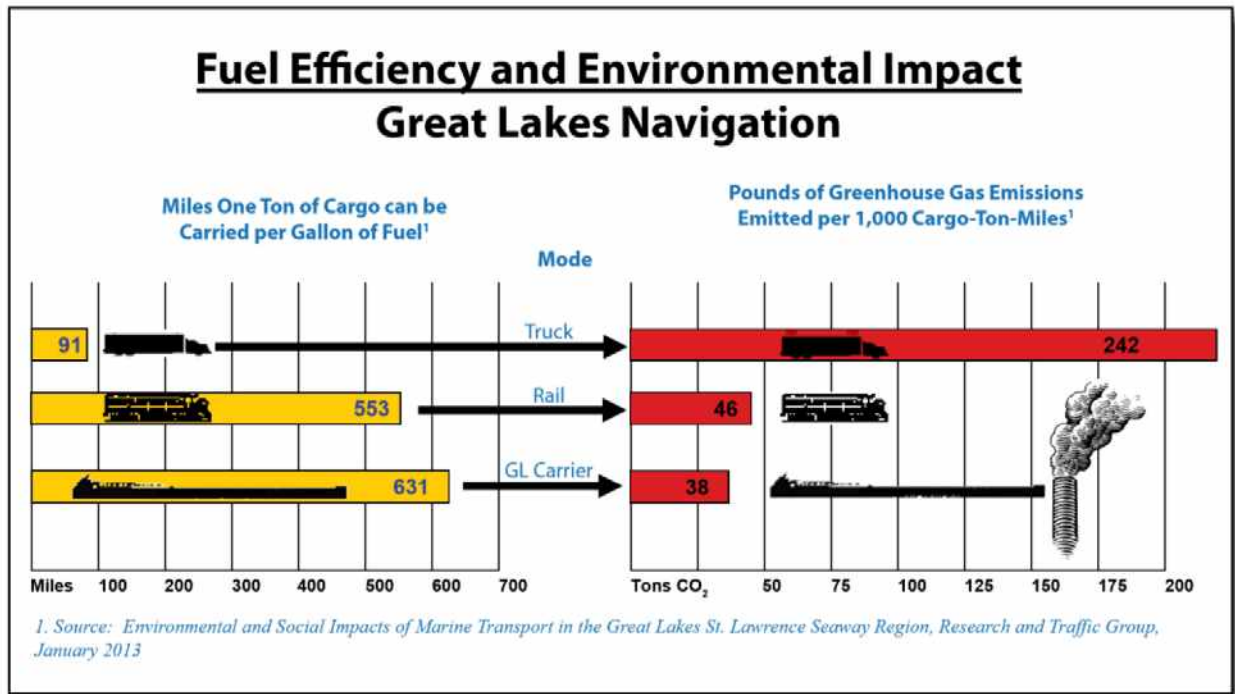
- Improve conditions by centralizing and simplifying transfers between the multiple modes of transportation, currently not located in a single location.
- Rehabilitate the Port of Oswego as a valuable transportation asset by allowing the Port to increase grain exports and storage for international markets.
- Create sustainable sources of revenue for long-term transportation operations.
- Allow for long-term facility maintenance and cost savings, making the Port competitive against foreign ports.
- Reduced shipping costs and the environmental benefits of transportation by ship will relieve overburdened roadways and will make the region’s exports more economically competitive both locally and internationally.

The multi-modal facilities will provide shippers and farmers with increased access to national and international markets. The expansion of the Port, with the addition of a modern multi-model center, will allow the Port to both supply local growth and job development as well as help maintain current jobs.

Environmental Sustainability

This project incorporates environmental sustainability by reducing energy use and air pollution of regional and national transportation systems while providing needed opportunities for growth for the future. The completion of this project will facilitate the increase in both ship and rail transportation, which provides a cost-efficient means of moving commodities between both domestic and international markets. Water transportation is both economical and environmentally friendly and, combined with rail, provides transportation of these commodities, with little or no impact on the state's highway system.

Water and rail transportation both reduce energy use as they are both more fuel efficient than trucking. As shown in the graphic below, ships transport more cargo per gallon of fuel than both rail and truck transportation. Increasing the storage capacity, loading/unloading efficiency, and installing the necessary equipment required by the USDA will allow the Port to reduce truck transport and increase shipment by rail and water. As shown in the BCA, it is anticipated that yearly the Port could save 3,234 truck trips to or from the Port, resulting in approximately 291,494 miles saved (based on the average for grain/soybean and potash trips). The number of miles saved in 30 years would be 3,625,994. This will reduce the consumption of fuel by increasing the miles cargo can be carried per gallon of fuel.



By reducing truck trips, truck emissions will also be reduced. Using the Benefit Cost Analysis Guidance provided by the US DOT calculations of emissions avoidance were made. Over a 30-year period, the completion of the project would result in an avoidance of 87,853 lbs. NO_x, 4,397 lbs. VOCs, 24,861 lbs. of CO₂ and 1,919 lbs. of PM 2.5. In total, the emissions savings amount to \$804 million.

Secondary Merit Criteria

Quality of Life

This project will increase shipping transportation choices by increasing the capacity for shipment by water of both imports and exports as well as shipping by water nationally. It will allow local farmers better and lower cost transportation options that are more environmentally friendly. As efficiency and capacity are improved, additional economic development can take place.

By increasing the capacity, efficiency, and cost effectiveness to ship by rail and water, this project will reduce existing over the road trucking. Reducing the number of trucks traveling the local and interstate highway system will increase the quality of life for local residents as well as those traveling on interstate highways. It will result in decreased pavement damage, improved air quality, and reduced accident rates.

As well as other improvements regarding quality of life, this project will also increase and help maintain both Port and non-Port jobs in a community that is designated as an opportunity zone. The Port will need to add 12 longshoreman positions after completion of this project. Non port positions will be needed during construction and as shippers, manufacturers and regional farmers have the ability to increase freight volumes.

Partnership

The Port of Oswego Authority is the proposed grant recipient, and operates the port facilities. The Port has the authority to carry out the project as demonstrated by the linked [Enabling Statute](#). The Port is a NYS Public Authority Benefit Corporation dedicated to the development of commercial business and agricultural development in Central New York whose main mission is to create jobs and support development. The Port's mission statement clearly indicates this. *"The mission of the Port of Oswego Authority is to serve as an economic catalyst in the Central New York Development Council District Region by providing diversified and efficient transportation services and conducting operations in a manner that promotes regional and international growth and development while being mindful of our responsibility to serve as a steward of the environment."* As a nine-time Seaway Pacesetter Award Winner, the Port has a proven track record of economically and efficiently handling international cargoes. In a recent economic study completed by the Great Lakes Seaway Partnership, the Port supports over 209 jobs and contributes over \$26.7 million in economic activity annually in Central New York.

The Port has proven its capability to manage both federal and state grants, and is able to administer this grant funded project in accordance with all applicable federal regulations. The Port successfully managed a 2014 TIGER grant lead NEPA Agency [MARAD] for \$1.5 million. The Port has also been the recipient of 7 Port Security Grants, having been awarded over half \$1 million in total. Additionally, the Port is currently administering a FEMA disaster declaration (DR4348) of over \$6.1 million, which is to aid in repairs incurred from the high-water emergency on Lake Ontario. The Port competes with passenger and freight rail for NYSDOT Passenger Freight Rail Assistance Program grants [PFRAP]. The Port has been successful on 5 PFRAPS which have been used to increase rail storage capacity and renewal of all the rail facility owned by the Port for a total of over \$8 million.

The Port has received an overwhelming level of local support from all of the key local economic development organizations. These individuals have pledged their allegiance to a collaboration with the Port in supporting this investment in Oswego's local resources and infrastructure, which will provide immediate and long-term jobs and sustainable growth. The [NYS funding announcement](#) demonstrates some of this support. A substantial number of letters of support in the application attachments also document this.

Many partners support the continued growth of regional agriculture/agribusiness including the State University of New York at Oswego, Center State CEO a regional business leadership and economic development organization, NYSDOT, and the Governor of New York.

Customers that rely on the Port include local farmers, Anderson Grain, Attis Biofuels, Novelis and Perdue Agribusiness, just to name a few. Currently, fourteen companies use the Port for their domestic and international shipping operations. The Port has a USDA grain export license, scale system and a grading laboratory for grain export at the Port, which is run in cooperation with the State University of New York at Oswego.

Completion of this project would help with specific growth for several of the Port's customers.

- A commitment has been made from Perdue Agribusiness to increase volume into the Port of Oswego for increased ship exports. They would like to double the volume they are currently exporting.
- Nutrien Agri-Solutions (formerly Crop Production Services) also looks to the Port to increase export volume from 15,000 tons to 30,000.
- Anderson Grain is interested in exporting 208,000 tons annually of Dried Distiller Grain (DDG) to Europe in 8,000 metric ton small "bulk" and 20,000 metric ton "salties." Approximately 50 "bulk" annually return to Europe from the Great Lakes, many of them empty on return. Anderson is also interested in importing corn/barley from western Ontario for use at Attis Biofuels, an ethanol plant in Fulton, NY. The ethanol plant uses 90,000 bushels of corn per day. There is an opportunity for the Port to handle 200,000 metric ton per year of this corn from the Port of Toledo and western Ontario. Attis Biofuels and the Port of Oswego are both located on the Canadian National Fulton railroad branch. A letter of support is included in the attachments from Attis Biofuels.

Canadian National Railway (formerly CSX Transportation) has shown large interest in helping to support rail logistics for the project.

ILA Local 1570A is the contracted labor force at the Port that provides longshoreman employees for the Port. They will support the increase in operational workforce.

[Innovative Technologies](#)

Innovative technology will not be used on the project. While the Port will be improving their technology as it pertains to the conveyor systems, this technology is industry standard, and is not considered innovative.

Innovative Project Delivery

Innovative project delivery will be used on the project. Lump Sum Bidding will be used as an innovative strategy to improve project delivery. This will result in more efficient project implementation through several strategies. The project will have a well defined scope, so lump sum bidding will reduce the cost and time of design and contract administration to calculate, measure, and verify quantities. It will also streamline unit items into bundled items reducing the administrative burden of pricing and tracking separately. The contractor will have an incentive to control costs and work more efficiently. Lastly, the contractor will have responsibility for invoicing, so payments can be processed more efficiently which will aid with improved coordination and cooperation among all the project parties.

Innovative Financing

Innovative financing will not be used on the project. The 42.2% local matching funding for this project will be from a \$15 million New York State grant and BUILD grant funding is needed for the remaining funding for this project to be completed.

V. Environmental Risk Review

Project Schedule

An aggressive and attainable project schedule is depicted in the *Central New York Regional Agriculture Export Center Expansion Project* schedule shown below. The project is being built on existing Port property. The Port has already started groundwork having completed preliminary design and engineering, relevant repair work, buy-in from local and regional leadership and economic development officials, obtained financial commitments from the State of New York, and have begun the SEQRA and NEPA environmental review processes. The financial commitment from NYSDOT will allow the project to start quickly as the contract between the state and the Port is already underway. This will allow phase 1 of the project to begin in 2020.

Phase 1:

11/31/20: Design Started

2/25/20: Survey and geotechnical drilling program completed

1/31/20 – 3/31/20: Design, Site Civil and Performance contract documents preparation for PART 1

1/31/20 – 6/30/20: Design and contract documents preparation for PART 2

5/31/20: Public bidding PART 1 for two (2) Contracts for Part 1

6/24/20: Public bidding PART 2 for two (2) Contracts for Part 2

5/29/20: SEQRA, NYSDOS Costal Consistency Approval Letter and State Historic Preservation No Adverse Impact Completed

6/15/20: Part 1 Contracts Awarded

7/24/20: Part 2 Contracts Awarded

6/15/20 – 9/30/20: Part 1 Construction

7/24/20 – 2/18/21: Part 2 Construction

Phase 2:

9/15/20: Phase 2 BUILD GRANT Announcement

1/11/21: Design Started (BUILD GRANT Agreement Executed)

1/11/21 to 5/21/21: Design, Site Civil and Performance contract documents preparation
(Silo 2 & Barrel Building)

5/12/21: NEPA, NYSDOS Costal Consistency Approval Letter and Section 106 Historic Preservation No Adverse Impact Completed

1/11/21 to 5/21/21: Design and Performance contract documents preparation (Ship Loading)

1/11/21 to 6/21/21: Design, Site Civil and Performance contract documents preparation
(*North Half* Transit Warehouse)

5/21/21: Public bidding for three (3) Contracts for (Silo 2, Barrel Building, and Ship Loadout)

6/24/21: Public bidding for one (1) Contract for *North Half* Transit Warehouse

7/7/21: Contracts Awarded for Silo 2, Barrel Building, and Ship Loadout

8/7/21: Contract Awarded for *North Half* Transit Warehouse

6/30/22: Phase 2 Construction Completed

Required Approvals

The Port of Oswego, working with a contractor C&S Companies, will submit the required **National Environmental Policy Act (NEPA)** under the guidance of MARAD should we be successful and awarded grant funding. The **New York State Environmental Quality Review**

Act (SEQRA) is currently under design and is scheduled for completion in May 2020. The environmental reviews will be completed for the SEQRA and it is anticipated that the work for the NEPA will utilize the SEQRA and be completed May 2021 as shown in the project schedule above. As the requirements for the environmental reviews are currently underway, if a grant is awarded, the agency that controls the grant will need to adopt the work. Standard background data collection and agency consultation has started including background data collection, threatened and endangered species investigations, cultural resources assessment/SHPO consultation, and a visual impact report. If the project submission in CRIS results in a NYSOPRHP/SHPO letter requesting additional studies such as a Phase I Archaeological Survey, historic properties evaluation or other information, it will be prepared and submitted. It is assumed that a Negative Declaration will be issued by the lead agency to conclude the SEQR process, and that services associated with a Positive Declaration will not be required. An Environmental Assessment Report will be prepared for NEPA compliance.

As this project is a port project, the documentation will also be submitted to MARAD and be consistent with MARAD's Administrative Order No. 600-1, Procedures for Considering Environmental Impacts. In accordance with 23 CFR § 771.117 and 40 CFR § 1508.4, the proposed project is consistent with actions under "Categorical Exclusion" (CE), not to have a significant effect on the human environment. While the project is not listed as an "automatic" CE identified in 23 CFR § 771.117(c), the type of project (renovation/rehabilitation) is consistent with actions determined to be consistent with a CE based on the provision of additional documentation. Phase 1 work funded by New York State requires technical and legal review and approval by NYSDOT prior to advertising and award. The project is not dependent on, or affected by, US Army Corps of Engineers investment or planned activities.

Public engagement about the project has been positive and the Port has received an overwhelming level of local support from all the key local economic development organizations. The only concern that was raised during public engagement was regarding "viewshed" of the harbor being partially blocked by the new grain silos. **Relative project information will be available on the Port's website and available to the public for comment.** Further information regarding this is included under the project risks section.

Assessment of Project Risks and Mitigation Strategies

The Port has assessed the project risks and has built contingencies into the project budget and schedule. The project is being built on existing property that is owned by the Port. The project location is near other successfully completed projects and is located in an active industrial area. For these reasons, project risk and the need for mitigation is minimum.

The domes that are being decommissioned and rebuilt will use the existing drilled shaft foundations. Determination of existing foundation capacity and existing foundation conflicts with the new proposed tunnels may have an impact on existing estimates. There are contingency costs built into the estimates to mitigate this risk.

During the NEPA and SEQRA process there may be concern by the Oswego Best Western Plus Hotel and Conference Center and New York State Parks which has jurisdiction over Fort Ontario over the “viewshed” of the harbor being partially blocked by the new grain silos. The Port’s consultant has preparing scale renderings of the built project from eye views of the concerned parties as well as conducted a viewshed analysis. Two silo height alternatives have been considered for the project. Both alternatives are identical in scope and work. The differences are the proposed diameter of Silos 1 & 2 which dictates the silo height required to store 500,000 bushels of grain per silo and the Bucket Elevator height to provide Gravity Feed Fill Spout versus use of Fill Conveyors. The Port’s goal is to use as large a diameter silo as practical without restricting truck and rail traffic flow and movements, as this will reduce the height of the silos. The 105’ diameter Silo alternative is preferred since it is 25 feet shorter than the 90’ diameter silo option. The viewshed analysis conducted for the Project (see attached map) shows that visibility of the proposed Project will be largely constrained to areas along city streets and the waterfront that already have views of the existing port infrastructure. The only area of significant new visibility is within Fort Ontario Park to the east of the Project parcel. However, actual visibility is anticipated to be limited by vegetative screening separating the park from the port. The Port plans to make a presentation for city officials and the public before or after a city council meeting. In addition, the Port will be adding a link on their website regarding all relative project information related to the NEPA and SEQRA for public comment.

Materials and manufactured products needed for the project will be produced or manufactured domestically. A waiver of the Buy American provisions will not be necessary for the project. Each of the Lump Sum Publicly Let Bid packages will contain requirements for domestically produced or manufactured products within the contractor bid documents and executed agreement. NYS DOT also requires domestically produced or manufactured products, and the requirement is included in the NYS DOT grant funding agreement with the Port of Oswego Authority. The Port intends to source products locally to enhance local benefit and job creation. Buy American provisions will be required to flow down to every project task undertaken in the project description and funded with Better Utilizing Investments to Leverage Development (BUILD Transportation Grants) program funding.

VI. Benefit Cost Analysis

The project supports the freight and goods movement and plays an important role in supporting economic vitality. The Port, an important regional asset, maintains a value that extends far beyond the current market value of over \$150 million. The current configuration of the Port, as constructed in 1963, was for the type of cargo the Port handled and was common in the Great Lakes at that time. Changing markets and reconfigurations of shipping methods have placed the Port at a disadvantage in the current economic reality of shipping. As the demand for grain, potash, and other potential agricultural products are become a major factor in the annual shipping season, the Port must realign to what the community requires. A major increase in storage and increased efficacy moving products is necessary to continue operations.

Completion of this project would increase the Port's grain storage capacity from 11,000 metric tons to 55,800 metric tons. This will enable the Port to handle the expected increase in agriculture export from 15,000 metric tons to 308,000 metric tons annually and increase the storage and distribution of fertilizer from 15,000 metric tons to 30,000 tons annually. There is also an opportunity for the Port to handle 200,000 metric ton per year of corn for the local ethanol plant.

The Benefit Cost Analysis supports the project, and shows that the benefit/cost ratio is **2.27**. The table below summarizes the cost and the quantifiable benefits of the project in terms of Present Value. As shown in the table, the Present Value of the project's capital cost is valued at around \$35,530,000 (full build out) at 3% and 7% yielding the 3.04 and 2.27 BCA ratios. Operation and maintenance costs were calculated for 30 years. This calculation only recognizes the CO₂ benefits from the overall emission benefits. The net present value was also calculated using all of the emission benefits, which resulted in a much higher benefit cost ratio, and that table is shown below as well.

Benefit Cost Analysis Summary with only CO₂ benefits

Category	Present Value at 7%	Present Value at 3%
Construction Cost	\$35,530,000	\$35,530,000
Non CO2 Benefits	\$61,779,679	\$75,410,501
CO2 Benefits	\$61,863,567	\$75,494,390
Residual Value	\$4,918,224	\$5,109,223
Operations & Maintenance Costs	-\$6,204,000	-\$6,204,000
Conveyance System Replacement in 15 years	-\$6,100,000	-\$6,100,000
NET PRESENT VALUE BENEFITS	\$80,727,470	\$108,180,114
BENEFIT/COST RATIO	2.27	3.04

The project creates a net present value benefit of \$80,727,470 with a 7% discount rate.

Benefit Cost Analysis Summary with all Emissions

Category	Present Value at 7%	Present Value at 3%
Construction Cost	\$35,530,000	\$35,530,000
Non CO2 Benefits	\$61,779,679	\$75,410,501
Emission Benefits	\$309,760,945	\$511,176,573
Residual Value	\$4,918,224	\$5,109,223
Operations & Maintenance Costs	-\$6,204,000	-\$6,204,000
Conveyance System Replacement in 15 years	-\$6,100,000	-\$6,100,000
NET PRESENT VALUE BENEFITS	\$328,624,847	\$543,862,298
BENEFIT/COST RATIO	9.25	15.31

The Construction costs occurring during the construction phase, which is anticipated to be completed by 6/30/2022, are \$35,530,000.

An estimate of the annual operating and maintenance cost of the project is \$206,800 or \$6,204,000 over 30 years. This includes:

- Annual conveyor maintenance \$86,400
- Cleaning storage facilities prior to new product introduction into storage \$86,400
- Asphalt surfacing repairs \$14,000
- Storage facilities maintenance \$20,000

The estimate of the lifecycle costs of the project is included as an attachment labeled Service Life Worksheet. As the life of the conveyance system is only 15 years, they will need to be replaced and the \$6.1 million replacement cost is included in the BCA. The Port annually budgets for overall operation and maintenance costs, which is included in the Port's Annual Budget and Financial Plan. [The 2019 – 2020 Annual Budget and Financial Plan is linked here.](#) Operation and maintenance costs specific to the project will be incorporated in the overall operation and maintenance costs of the Port. As part of the Port's contract for the NYSDOT grant, the Port agrees to maintain the project facilities as well as ancillary facilities for 10 years from the project completion date. Increased revenue from increasing storage capacity and improved efficiency will support increasing overall operations and maintenance costs to include specific operation and maintenance cost of the project. The present discounted value of the remaining service life of the project's assets at the end of 30 years will be \$4,918,224 with a 7% discount rate.

As the benefit cost analysis shows, there are four main quantified project benefits. These include increased revenue at the Port, emissions reductions, avoided road repair costs, and avoided accidents as described below and detailed in the benefit cost analysis. There are other economic benefits and impacts that are not included in the benefit cost analysis. These include:

- Creating jobs immediately and leveraging significant follow-on economic activity in a designated Opportunity Zone with an unemployment rate of nearly 5% and as one of the New York State's top economic development priorities.
- Supporting the expansion of a major increase in agri-business development, which in turn

Benefits

Better utilization of current Port assets.

Expands international market, allowing for greater quantities of products and ability to ship to new customers.

Reduces carbon footprint of truck transportation.

Provides additional markets for agricultural products produced in the northeast.

Provides an estimated \$11.5 million, or 25,000 man days, in construction jobs during construction of new facility and 12 permanent jobs at the Port.

Increase freight volumes on the Great Lakes

will support the region in the increased crop production, and economical export of these products to new markets.

- Assuring that the only port on Lake Ontario in New York State is able to grow and adapt to evolving markets and take advantage of the growing international markets. Failure to complete these improvements will severely hinder the Port's ability to maintain and develop relationships with growing economic market players.

The construction of this project will have a twofold near-term economic impact on a designated Opportunity Zone in a Rural Area. Construction will impact the area immediately. An estimated \$11.5 million will be expended in the local economy through approximately 25,000 man-days in construction trades with an average wage rate of \$57/hr. over a 3 year period. Follow-on employment will include 12 full-time equivalent positions. Port employment will need to increase as longshoremen positions will be necessary to run the rail/container yard. New positions will average 2,080 hours a year at \$35/hour all in costs. This will increase as heavy lift projects use the new facility. Non Port jobs will also increase as added capacity and import/export capabilities will allow the Port's customers to increase their operations and grow. These jobs will help strengthen the community by providing greater economic stability to individuals and families.

Additionally, this project will result in an increase in the handling capacity at the Port, which will result in increased transportation opportunities for regional businesses and support for existing businesses, including expansion of new business. With the repurposing of 2 dome structures to silos, repurposing the north half of the Transit Warehouse, and the addition of Dome 4, the Port will increase its agricultural product storage capacity from 11,000 metric tons to 55,800 metric tons which will in turn increase freight capacity as it will have additional ability to export by ship. With the addition of new conveyance systems, the Port will have more flexibility for turnover and increased efficiency moving products between domes, silos, and truck/rail/ocean transportation. These increases are projected to be significant in the near term of five years.

Benefit Calculation Assumptions

The benefits of the project are derived by comparing conditions under a BUILD and NO BUILD scenario. These two scenarios are defined as follows:

NO BUILD

The Port of Oswego is operating at over capacity. Presently the Port has to utilize temporary grain bunkers to maintain export operations, which is far from ideal. Increases in Grain/Soybean and Potash handling have brought the Port to the point of experiencing expansion problems. Proper handling of import and export products in these growing markets will facilitate local, regional, and national economic growth. Currently the Port has been unable to meet the storage demands necessary for grain export. Expansion and improvements, along with the utilization of increased water carriers will allow the Port to support significant growth in local, regional, and national businesses, and facilitate greater access for local farmers to export markets.

BUILD

Increased Revenue

The Port is anticipating continued growth in grain/soybean and potash handling in the future years. Given the proposed greater utilization of water carriers and improvements, the Port is anticipating, conservatively, the following growth projections over the first five years.

Grain			CPS		
	NBR Rail Car	Revenue		NBR Rail Car	Revenue
Year 1	0	\$0.00	Year 1	0	\$0.00
Year 2	87	\$28,300.00	Year 2	33	\$10,612.17
Year 3	139	\$45,175.00	Year 3	76	\$24,645.53
Year 4	175	\$56,800.00	Year 4	132	\$43,060.71
Year 5	345	\$112,018.75	Year 5	205	\$66,496.72
Total	745.52	\$242,294	Total	445.59	\$144,815

Grain		
	NBR Tons From Ships	Revenue
Year 1	0	\$0.00
Year 2	260000	\$650,000.00
Year 3	280000	\$700,000.00
Year 4	300000	\$750,000.00
Year 5	300000	\$750,000.00
Total	1140000	\$2,850,000

*Average Lake Grain Ship is 20,000 ton

** To model the Dried Distiller Grain export by ship the grain tonnage has been increased 208,000 tons

Given the forecasted potential of the expanding grain/soybean and potash markets, these projections are being considered extremely conservative; however, the Port is attempting to carefully consider the benefits of the project and is taking care not to overestimate growth. Forecasted potential for dried distiller grains to be shipped internationally has been factored into the BCA by increasing the grain export by ship and the grain handling by 208,000 tons. The Port is not currently and does not have capacity for exporting this product. However, with the increased storage capacity that would result from this project, there is opportunity for growth in this area.

With the cost-effective increase in storage capacity and export of agriculture products from the Port by ship, current transportation volumes to Virginia will be reduced. As shown in the map in the Project Location section, it is necessary for agricultural products and by products that are not currently being exported through the Port to be sent to Virginia for export. This includes loading the products in New York and transporting them to Virginia where they are unloaded and then loaded onto ships. It will also increase imports of agriculture products and fertilizer, into the Port

by ship, for centralized distribution to Central New York and Connecticut, which will reduce truck traffic volumes as well.

According to the 2019 NYDOT Freight Transportation Plan, it estimates almost 84% of all freight tonnage in New York State moves by truck, and it is projected to increase by more than 50% over the next 20 years. Having a cost-effective alternative transportation option will help reduce overall emissions and highway wear and tear.

Emission Reductions

Emissions reductions will play a significant role in improving the benefits to this project. Significant air quality improvements are anticipated based on the removal of trucks from the road and with the utilization of more efficient modes of transportation in water carriers and rail-ways. Because of the variations in truck visits, and projected growth, the following assumptions were derived:

Fertilizer Trips	956
Grain Trips	2,278
Fewer Truck Trips	3,234
Average truck trip (fertilizer)	162
Average truck trip (Grain) *	60
Fertilizer Miles Saved	154,794
Grain Miles Saved	136,700
Total Miles Saved	291,494
Total Truck Miles Saved (30 yrs)	3,625,994
Lbs. CO ₂ Avoided	24,861

* average grain trip calculation

Given the existing trips to the Port, growth projections, and anticipated shift of existing business to water and rail, it is anticipated the Port could save 3,234 truck trips to or from the Port, resulting in approximately 291,494 miles saved (based on the average for Grain/soybean and Potash trips). The reduction in truck VMT will result in a reduction in emissions. Over the 30 years period, the project would result in an avoidance of 87,853 lbs. NO_x, 4,397 lbs. VOCs, 24,861 lbs. of CO₂ and 1,919 lbs. of PM 2.5. In total, the emissions savings amount to **\$804 million.**

Reduced Pavement Damage

The DOT BCA Guidance document calculations for avoided road repair costs per mile were used to evaluate the cost of avoided pavement damage with the decrease in truck trips. This improvement project will allow the Port to move a significant part of its existing business to water-ways and rail. Based on current capacities and projected ability to handle significantly more ship and rail transportation there are savings in road repair costs of \$750,581 over a 30 year period.

Fertilizer Trips	956
Grain Trips	2,278
Fewer Truck Trips	3,234
Average truck trip (fertilizer)	162 Miles
Average truck trip (Grain)	60 Miles
Fertilizer Miles Saved	154,794
Grain Miles Saved	136,700
Total Miles Saved	291,494
Avoided Road Repair Costs Per Mile*	\$0.207
Annual Maintenance Fees Avoided	\$60,339
Maintenance Fees Avoided (30 years)	\$750,581

* \$0.207 truck pavement damage per VMT

Accident Reductions

Reducing truck VMT reduces the probability of truck crash costs. Using the recommended values from the BCA Guidance and the number of miles saved, the total accident costs avoided over a 30 year period are \$197,834.

Fertilizer Trips	2,278
Grain Trips	3,234
Fewer Truck Trips	3,234
Average truck trip (fertilizer)	162 Miles
Average truck trip (Grain)	60 Miles
Fertilizer Miles Saved	154,794
Grain Miles Saved	136,700
Total Miles Saved	291,494
Truck fatal accident rate	\$0.156
Truck injury accident rate	\$5.30
Total accident costs avoided	\$15,904
Total accident costs avoided (30 years)	\$197,834

per 100m vmt

PROJECT DOCUMENTATION AND WEBSITE

<https://portoswego.com/central-new-york-regional-agricultural-export-center-expansion>

