

**DRAFT**  
**SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT**  
**NEW YORK CONTAINER TERMINAL EXPANSION, STATEN ISLAND, NY**

**CEQR NO. 09SBS004R**  
**ULURP Nos. XX**

**January 20, 2010**

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**A. INTRODUCTION**

This scope of work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the expansion of New York Container Terminal, Inc. (NYCT) operations in Staten Island Community District 1. The Proposed Action would facilitate the construction and installation of a new 50-foot deep container ship berth (“Berth 4”) and associated marine container terminal on a portion of the former Port Ivory site, a previously utilized marine-related site and partial brownfield located adjacent to the existing NYCT-operated Howland Hook Marine Terminal (HHMT). The proposed berth and associated marine container terminal would be located on an approximately 39-acre site (referred to as the “Berth 4 site”), which encompasses part of Block 1306, Lot 14; and Block 1309, Lots 1, 2, 10 and part of Lot 5. It is roughly bordered to the north by the Arthur Kill, to the west by Bridge Creek, to the east by Arlington Marsh, and to the south by Richmond Terrace. This site is largely owned by or leased to the Port Authority of New York and New Jersey (“Port Authority”) by the City of New York, with a small area in the southeastern corner owned by the City of New York and a second small area owned by NYCT. Development on the Berth 4 site would include a container ship berth with a 50-foot mean low water depth, along with a 1,340-foot pile-supported wharf, four ship-to-shore quay cranes, a container storage and handling area, a three-story marine operations building, a one-story crane operations building, and five one-story security booths (collectively referred to as the “Proposed Project”).

The Proposed Action would also include the demapping of a segment of Richmond Terrace and an unimproved segment of Catherine Street, and the relocation of a segment of Western Avenue to provide for a more efficient and functional layout with respect to the new marine terminal, the existing marine terminal and an adjacent intermodal rail yard. An electrical substation and crane maintenance facility serving Berth 4 would be located in the northeast corner of the approximately 25-acre area south of Richmond Terrace between the intermodal rail yard and the relocated Western Avenue. The remainder of this area would serve as ancillary space for both the HHMT and the proposed Berth 4, and would be used for truck chassis storage (relocated from the Berth 4 site) and for the storage of empty containers. The “project site” encompasses this area, the Berth 4 site and the segments of Richmond Terrace, Catherine Street and Western Avenue to be mapped and/or demapped (a total of approximately 71 acres). The directly affected area also includes approximately 4.33 acres of underwater lands adjacent to the Berth 4 site where some dredging activities associated with the Proposed Action would take place.

The Proposed Action is comprised of the following: 1) disposition via lease or sale of City-owned land on the Berth 4 site to the Port Authority; 2) demapping and mapping of public streets and easements as part of the site’s improvement program; 3) approval of the filling of City-owned land along the waterfront to create the new berth; 4) a City Planning Commission special permit for development within a railroad right-of-way; and 5) a number of State and/or Federal actions, as detailed in Section C below. The Proposed Action would facilitate the re-use of an important parcel of waterfront property in a manner that would allow the expansion of waterfront industrial uses and the creation of new jobs. This document

provides a description of the Proposed Action, and includes task categories for all technical areas to be analyzed in the EIS.

The EIS will be prepared in conformance with all applicable laws and regulations, including Executive Order No. 91, New York City Environmental Quality Review (CEQR) regulations, and will follow the guidelines of the *CEQR Technical Manual*. The EIS will contain:

- ❖ A description of the Proposed Action and its environmental setting.
- ❖ A statement of the environmental impacts of the Proposed Action, including its short-and long-term effects, direct, indirect and cumulative effects, and typical associated environmental effects.
- ❖ An identification of any adverse environmental effects that cannot be avoided if the Proposed Action is implemented.
- ❖ A discussion of alternatives to the Proposed Action.
- ❖ A discussion of any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented.
- ❖ A description of mitigation measures proposed to eliminate or minimize adverse environmental impacts.

The environmental analyses in the EIS will assume a Build Year of 2014 for the Proposed Project, and identify the cumulative impacts of other projects in areas affected by the Proposed Action. The New York City Department of Small Business Services (DSBS) would serve as lead agency (the “Lead Agency”), and will coordinate the review among the involved and interested agencies and the public. A list of involved and interested agencies is provided in Appendix A.

## **B. DESCRIPTION OF THE PROPOSED ACTION**

### **Description of the Project Site and its Context**

New York Container Terminal, Inc. currently operates the Howland Hook Marine Terminal, a marine container and break-bulk cargo handling terminal on a 187-acre site on Staten Island that is largely owned by or leased to the Port Authority by the City. Figure 1 illustrates the location of the HHMT in the context of the NY Harbor region. As shown in Figure 1, the HHMT is one of five container terminals in the Port of New York and New Jersey (PONYNJ). These include: (1) Howland Hook Marine Terminal, (2) Elizabeth Marine Terminal, (3) Port Newark, (4) Global Marine Terminal, and (5) Red Hook Container Terminal. As shown in Figure 2, the HHMT is situated on Staten Island’s northwestern waterfront along the Arthur Kill, just north of the Goethals Bridge (I-278) and approximately one mile west of the City’s newly rebuilt Arlington Rail Yard. The terminal is readily accessible to major truck routes, and has capability for on-dock rail service connecting to the North American rail freight network.

The Howland Hook Marine Terminal is comprised of a 3,011-foot-long wharf with three deep-water container vessel berths along the Arthur Kill and nine quayside gantry cranes. There are approximately 147 acres of open area for container storage, and a 37-acre intermodal rail yard provides on dock rail service. The facility also includes a 39,000 square foot main office building, three on-site warehouses with a total of 417,000 square feet of general warehouse space for dry cargo and 82,000 square feet of temperature-controlled storage, and an equipment maintenance and repair shop.



New York Container Terminal Expansion

Figure 1  
Existing Container Terminals in the Port of New York & New Jersey



Project Site

Over the past five years, the Port Authority, City of New York, and NYCT have collaborated in upgrading the Howland Hook Marine Terminal. Approximately \$400 million has been invested in deeper channels, longer berths, restored rail service, and new cranes and yard equipment. With these improvements, the HHMT has a sustainable practical capacity of approximately 450,000 lifts per year<sup>1</sup> (765,000 TEU<sup>2</sup> per year). In 2004, NYCT handled approximately 260,000 lifts at the HHMT, which is below the capacity of the facility. However, trade growth and better facility competitiveness achieved through a range of operational improvements resulted in an annual container throughput of 400,000 lifts in 2007. In 2008, a surge in container traffic resulted in an annual throughput of approximately 540,000 lifts, greater than the terminal's sustainable practical capacity of 450,000 lifts per year. It is important to note however, that this level of throughput resulted in decreased efficiency and substantially higher operating costs. Containers needed to be handled multiple times within the terminal, and truck queues and dwell times at the terminal increased substantially. Overall, a throughput greater than 450,000 lifts per year is not sustainable over the long-term with the present facilities at the HHMT. Figure 3 illustrates NYCT's performance for the period from 1996 through 2007 in terms of lifts and vessel calls. NYCT currently employs approximately 555 people.

The Proposed Action would facilitate the construction and installation of Berth 4, a new 50-foot deep container ship berth and associated marine container terminal. As shown in Figure 4, the Berth 4 site encompasses approximately 39 acres located northeast of the existing HHMT facility on the east side of Bridge Creek. The Berth 4 site is roughly bordered to the north by the Arthur Kill, to the west by Bridge Creek, to the east by Arlington Marsh, and to the south by Richmond Terrace. The Proposed Action would also include the demapping of a segment of Richmond Terrace and an unimproved segment of Catherine Street, and the de-mapping and re-mapping of a segment of Western Avenue along a new alignment. These mapping/demapping actions would provide for a more efficient and functional layout with respect to the new marine terminal, the existing marine terminal and an adjacent intermodal rail yard.

The specific alignment for a relocated Western Avenue has not been finalized. One option under consideration, shown in Figure 5, would relocate the intersection of Western Avenue and Richmond Terrace approximately 450 feet to the east. The realigned roadway would continue southward roughly parallel to the existing Western Avenue before turning westward and rejoining the original alignment at a point approximately 1,800 feet south of Richmond Terrace. This would provide for a fully contiguous container terminal, would minimize terminal vehicle use of Western Avenue, and would provide for the separation of container terminal activity from the adjacent public roadway network. An option that would have the new roadway rejoin the existing alignment somewhat further to the south may also be considered.

In addition to the Berth 4 site, the project site encompasses the approximately 25-acre area south of Richmond Terrace between the intermodal rail yard and the relocated Western Avenue, and the segments of Richmond Terrace, Catherine Street and Western Avenue to be mapped and/or demapped (see Figure 5). The Proposed Project also includes the dredging of an approximately 4.33-acre area to the south of the bulkhead line adjacent to the Berth 4 site to create the proposed ship berth.

As illustrated in Figure 4, the project site is a former industrial site served by two local roadways (Western Avenue and Richmond Terrace). The Berth 4 site is vacant, although a portion is currently used by NYCT for truck chassis storage. Prominent land uses surrounding the HHMT and the project site include transportation facilities and industrial sites, in addition to wetlands such as Bridge Creek to the west of the Berth 4 site, and Arlington Marsh and Mariners Marsh Park to the east. (Mariners Marsh Park

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<sup>1</sup> A lift is the single movement of a container, usually loaded, to or from a berthed vessel.

<sup>2</sup> A TEU is a 20-foot-long container. As containers can be different lengths, a TEU is a way of measuring container size. For example, a 20-foot container is one TEU; a 40-foot container is two TEU. The TEU to lift ratio is approximately 1.7 TEU per container.

is unmapped parkland under the jurisdiction of the New York City Department of Parks and Recreation.) The Goethals Bridge, located south of the site, provides vehicular access between Staten Island and New Jersey. The existing Goethals Bridge would be replaced by a new cable-stayed bridge in 2014 under the Port Authority's Goethals Bridge Replacement (GBR) project, which is currently undergoing environmental review. The Staten Island Expressway (I-278) and South Shore Expressway (Route 440) link the area to points south and east. Industrial properties south of the project site include the Port Authority's Teleport facility, the Visy Paper Plant, R.T. Baker & Sons (a defunct salvage operation), the former GATX Staten Island Terminal property and New York City's Arlington Rail Yard. In 2006, improvements were made to the HHMT, Arlington Yard, the AK Lift-Bridge (the rail connection between Staten Island and New Jersey) and New Jersey's Chemical Coast rail line by the City of New York and the Port Authority to allow the movement of containers directly to the national rail network from the HHMT. The Staten Island Corporate Park, also located to the south of the project site, is a commercial development that includes office, hotel and retail space, and a candy factory. Shooters Island, a 43-acre uninhabited island, is located to the east of the site, in Newark Bay. The island is an important breeding ground for wading birds, and is managed by the NYC Department of Parks and Recreation as a bird sanctuary.

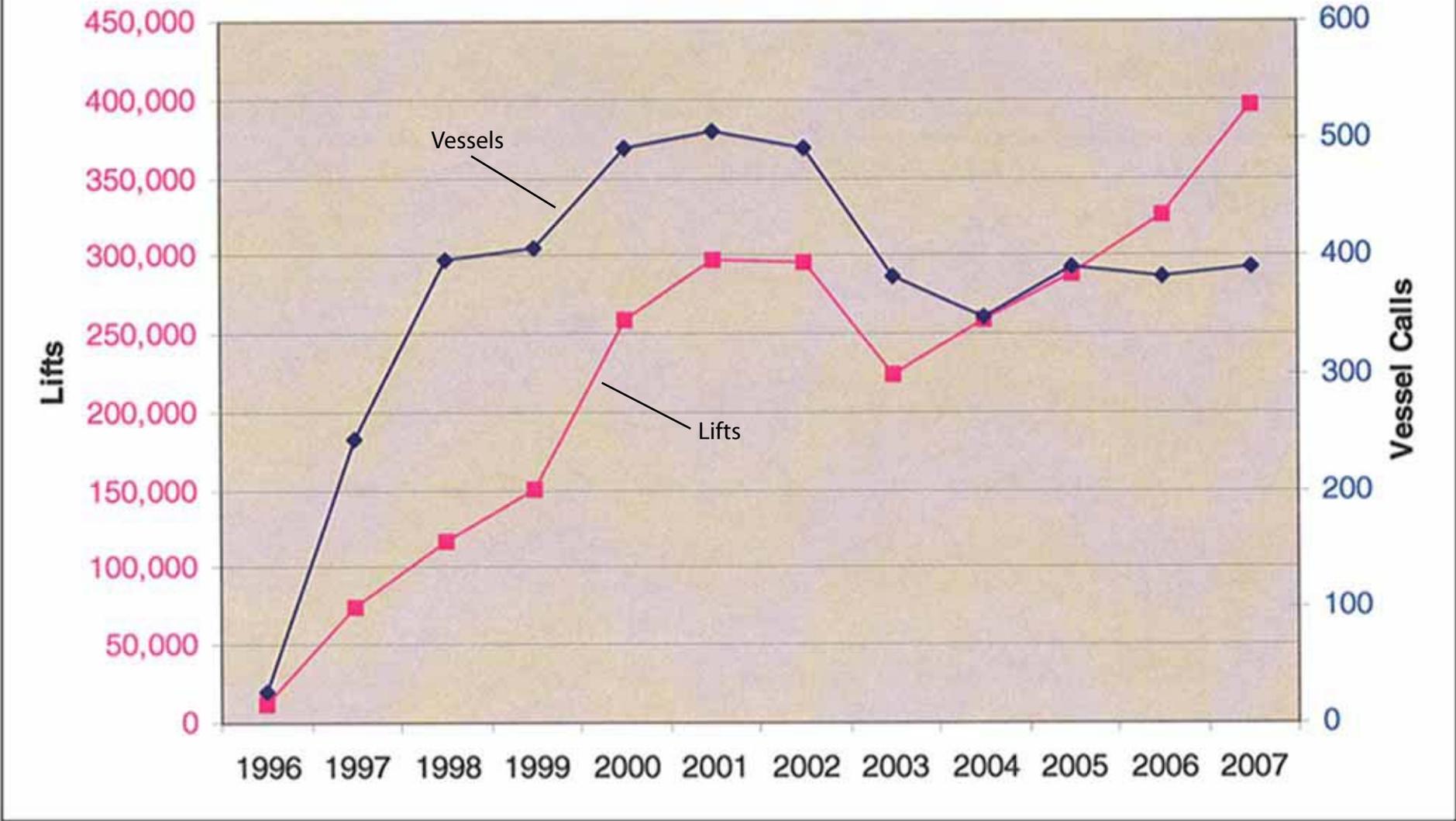
The proposed new deep-water container ship berth would be adjacent to the Arthur Kill Federal Navigation Channel, which will be deepened to 50 feet below mean low water as part of the Harbor Deepening Project (HDP). The HDP (which is independent of the Proposed Project), is being undertaken by the United States Army Corps of Engineers (USACE) with the Port Authority as the local sponsor, and will deepen the Arthur Kill, Kill van Kull, and other navigation channels in the PONYNJ by approximately 2012. The channels are being deepened to allow larger draft vessels to safely reach terminals in the PONYNJ.

The Port Authority has also initiated planning studies regarding the feasibility of developing a new I-278 eastbound exit ramp that would provide a direct connection for trucks traveling between the Goethals Bridge and the existing HHMT facility. The planning for the eastbound ramp project is independent of both the proposed New York Container Terminal Expansion project and the Goethals Bridge Replacement Project (GBR). The independent utility attributed to a new eastbound ramp is due to the fact that traffic engineering studies indicate that the local roadway system is expected to reach capacity in the near future. Therefore, the eastbound ramp would be needed to provide sufficient roadway capacity for future growth. In addition, neither the Port Authority, nor NYCT, have plans to construct any other new I-278 connections between the Bridge and the terminal, nor do current cargo and traffic projections indicate that any additional roadway connection capacity will be needed, although the new Goethals Bridge design will allow for a possible westbound ramp connection in the future.

As completion of the GBR project is expected concurrent with the 2014 Build year of the NYCT Expansion project, the No-Action and With-Action analyses for the Proposed Project will reflect conditions with the replacement bridge. If the potential new I-278 eastbound ramp advances past the feasibility study phase during the EIS process for the NYCT Expansion project, inclusion of this ramp (and its associated traffic benefits) in the No-Action and With-Action EIS analyses will be considered.

Zoning at and around the HHMT is manufacturing and consists of M3-1, heavy manufacturing north and south of the Goethals Bridge, including the project site; M2-1, medium manufacturing, encompassing the Goethals Garden Homes Community; and M1-1, light manufacturing, further east. The closest residential zone is R3-2, located in the Arlington neighborhood approximately 1/2-mile to the east of the project site.

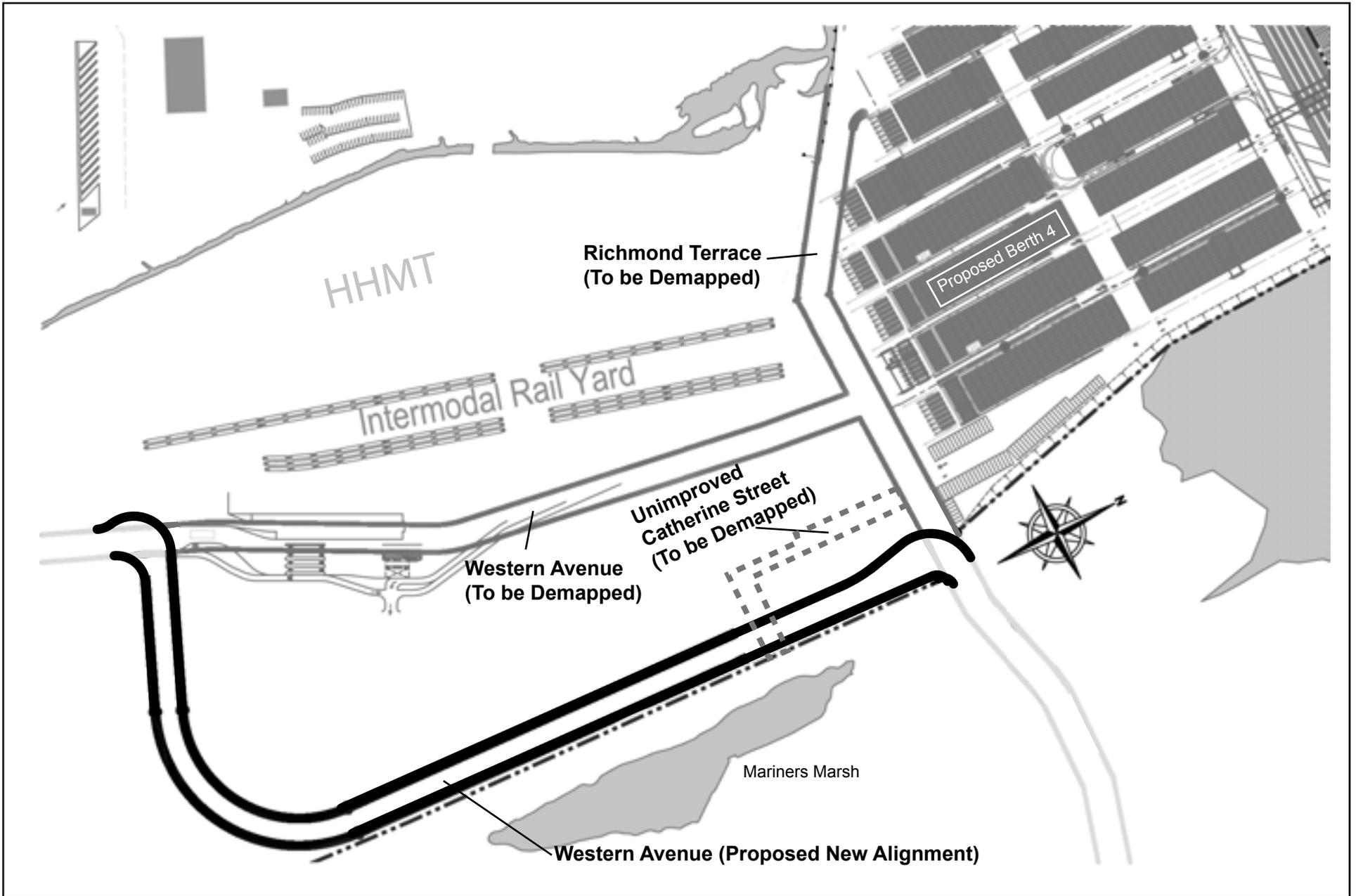
# NYCT LIFTS / VESSELS



Existing Conditions at Proposed Berth 4 Site



— — — Proposed Berth 4 Site



## **The Proposed NYCT Expansion**

The New York Container Terminal, Inc. proposes the development of Berth 4, a new container ship berth and associated marine container terminal on a previously utilized marine-related site and partial brownfield located immediately adjacent to and northeast of the existing NYCT-operated Howland Hook Marine Terminal on the Arthur Kill on Staten Island (refer to Figure 2 above). The conceptual design for the project site includes a new 1,340-foot pile-supported wharf, Berth 4 with a 50-foot below mean low water depth, four quayside cranes, a container handling and storage area, a three-story marine operations building, a one-story crane operations building, and five one-story security booths.

Other auxiliary functions associated with the proposed Berth 4 (i.e., administrative facilities, truck entrance and checkpoint, maintenance and repair shop, etc.) would be provided by existing facilities at the adjacent Howland Hook Marine Terminal. Utilizing these existing facilities would allow the new berth to achieve an anticipated 350,000 lifts per year within the space available on the Berth 4 site. Figure 6 shows the conceptual plan for Berth 4 and the marine container terminal. The Proposed Project also includes the dredging of an approximately 4.33-acre area to the south of the bulkhead line adjacent to the Berth 4 site to create the proposed ship berth, the relocation of a portion of Western Avenue, the demapping of the portion of Richmond Terrace west of the relocated Western Avenue, and the demapping of an unimproved segment of Catherine Street. These roadway mapping/demapping actions are necessary to provide for a more efficient and functional layout with respect to both the new marine terminal and the existing marine terminal and intermodal rail yard. An electrical substation and crane maintenance facility serving Berth 4 would be located in the northeast corner of the approximately 25-acre area south of Richmond Terrace between the intermodal rail yard and the relocated Western Avenue. The remainder of this area would be used for truck chassis storage (relocated from the Berth 4 site) and for the storage of empty containers in support of the three existing berths and the proposed Berth 4. In addition, it is important to note that a high level of security must be maintained at all NYCT-operated facilities for the purposes of both homeland security and customs enforcement. Relocating Western Avenue would facilitate security by allowing all operations at both the HHMT and the proposed Berth 4 to be secured within a single contiguous area, undivided by a public street.

As noted above, NYCT currently employs approximately 555 employees. Construction of Berth 4 and its associated marine container terminal would create up to 100 temporary construction jobs, and operation of the expanded terminal would create the equivalent of approximately 311 permanent full time jobs.

Development of the Proposed Project would require dredging of existing bottom materials in an area spanning approximately 4.33 acres, with an estimated 12.05 acres of wetlands to be filled. In total, approximately 16.38 acres of water bodies and tidal wetlands would be dredged or filled under the Proposed Action (refer to Figure 7 for affected areas). A vertical bulkhead would be constructed along the waterside face of the wharf to retain the existing landfill material. With the bulkhead in place, additional fill would be placed over the existing soil material to achieve a uniform grade. The concrete wharf deck would be supported on piles, but would also be cast on top of the proposed fill. The dredging of approximately 425,777 cubic yards of material would be required within the Arthur Kill along the northern property boundary of the Berth 4 site. The proposed dredging would be necessary to provide adequate area for maneuvering the large deep-draft vessels that would access Berth 4 from the Arthur Kill, and also for side slope areas to maintain the desired Berth 4 dredge footprint and prevent adjacent sediment from re-entering the footprint.

## **Project Purpose and Need**

The City of New York and the larger New York/New Jersey metropolitan region are dependent on the capability to import and export goods – food, clothing, machinery, electronics, paper, etc. – using intermodal shipping containers. These containers are handled through specialized marine terminals. The Port of New York and New Jersey is the largest container handling hub on the Atlantic Coast of North America, and the second largest geographic concentration of container facilities in the US, behind only Los Angeles and Long Beach.

Container volumes through the PONYNJ have grown steadily over the past two decades, and the Port has periodically acted to increase its container handling capacity, through a variety of strategies including channel deepening, terminal expansion (via redevelopment of underutilized properties and landfills), equipment and operational improvements, and landside access improvements.

Today, the PONYNJ facilities are approaching capacity and new container capacity will be needed to keep pace with projected demand. There are many different possibilities for adding capacity at PONYNJ, and it is likely that most – if not all – of these will need to be pursued at some point before the year 2040. Expansion of the existing Howland Hook Marine Terminal (HHMT), operated by New York Container Terminal (NYCT), is one important strategy to meet a significant share of the region’s growing container handling needs in the immediate near term.

The purpose of the Proposed Action is to ensure the long-term viability of container operations in New York City, secure the jobs and local and state tax revenues generated by this industry, respond to growth of the container cargo market, and establish modern, sustainable marine terminal operations at HHMT. The terminal currently offers three vessel berths. The proposed project would add a fourth berth to (a) handle the largest ships planned for the world fleet; (b) operate at an extremely high level of efficiency, and (c) respond to a critical shortfall of container capacity. Each of these factors is discussed below.

### ***Berth 4 Would Help Meet the Region’s Need to Accommodate Larger Containerships Following Expansion of the Panama Canal***

The size of vessels deployed for maritime commerce is increasing and is expected to continue to increase in the foreseeable future. The next generation of mega-vessels with capacities approaching 10,000 TEU is expected to replace existing Post-Panamax<sup>3</sup> vessels on the Pacific trade routes. (Pacific trade routes have historically utilized larger vessels than North Atlantic routes.) The displaced Post-Panamax vessels will then begin operating on North Atlantic routes including to and from the PONYNJ.

It is also important to note that the planned expansion of the Panama Canal will triple its capacity upon completion of the project in 2014. With this expansion, 99 percent of the world’s container fleet will be able to transit the Canal, compared to 90 percent today. This is expected to further increase demand at U.S. East Coast ports, as well as increase the average size of vessels calling at U.S. East Coast ports. These larger ships will require greater channel depths than current vessels. Whereas ships calling at PONYNJ terminals currently have up to an approximately 38 foot draft (requiring a 41-foot deep channel and berth), the larger capacity ships have a draft of up to approximately 48 feet (requiring a 50-foot deep channel and berth), as well as up to 1,200 linear feet of berth space.

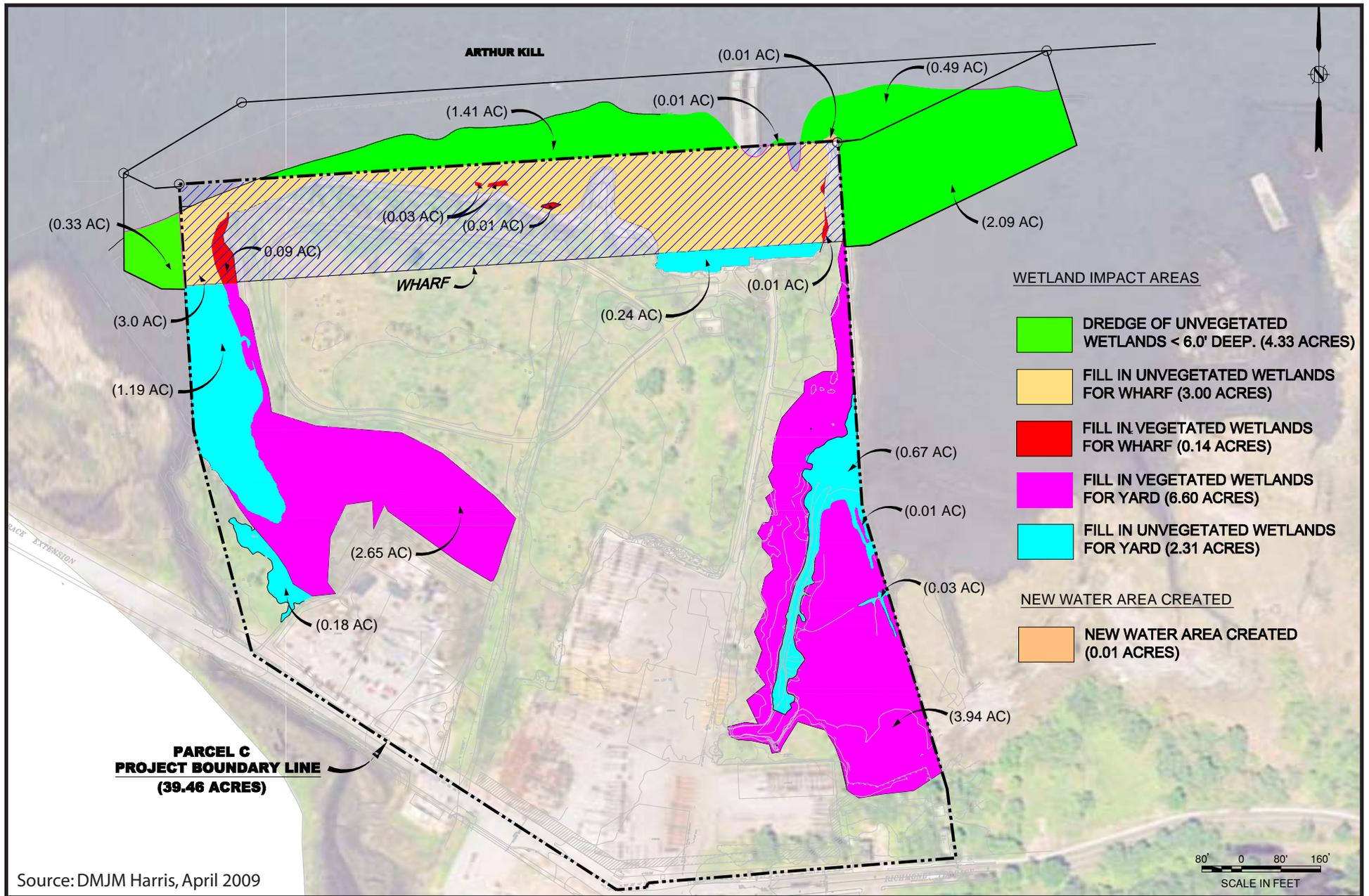
As shown in Figure 1, HHMT is one of five container terminals in the PONYNJ: (1) Howland Hook Marine Terminal, (2) Elizabeth Marine Terminal, (3) Port Newark, (4) Global Marine Terminal, and (5) Red Hook Container Terminal. The approved Harbor Deepening Project (HDP) will establish 50-foot

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<sup>3</sup> Vessels classified as Post-Panamax exceed the maximum dimensions of what will fit through the Panama Canal.



Berth 4 2014 Conceptual Plan



depths in certain PONYNJ navigation channels, enabling larger ships to call at PONYNJ terminals, including the HHMT, by 2012. The proposed Berth 4 would be specifically designed to accommodate these new, larger classes of container ships, thereby supporting the long-term viability of marine container operations in New York City.

***Berth 4 Would be One of the Most Efficient Terminals in the U.S. and Would Substantially Upgrade the Overall NYCT Operation***

The Howland Hook Marine Terminal is comprised of one 3,011-foot wharf with three berths along the Arthur Kill. With this wharf arrangement and the corresponding yard storage and support services, the sustainable practical capacity of the existing terminal is an annual container throughput of 450,000 lifts. HHMT has been operating at or near capacity since 2007.

Like most terminal operators in the PONYNJ, New York Container Terminal, Inc. has developed and improved its operations incrementally over the years. Currently, NYCT and other terminal operators in the PONYNJ use diesel-powered yard equipment, including rubber-tire gantry (RTG) cranes, yard tractors and other equipment. The type of equipment used largely governs the way the yard is configured and the potential capacity of the yard. NYCT is reaching the limit of the operational and capacity improvements it can make at the HHMT without significant redevelopment of its facilities and the substantial disruption in operations that such a redevelopment could cause. NYCT sees a need not only to respond to recent growth in the container market, but also to respond with a long-term view that is consistent with modern terminal design. Thus, NYCT's next step requires a commitment to an entirely different and updated operational design from that which is currently used at the Howland Hook Marine Terminal and elsewhere in the PONYNJ.

Proposed state-of-the-art cargo handling equipment would allow Berth 4 to achieve throughputs of 8,974 container lifts per acre per year -- or 15,256 twenty-foot equivalent units (TEU) per acre per year -- by 2014. This would be one of the most efficient operations in the U.S. As shown in Table 1, introducing the efficiencies offered by Berth 4 alongside the existing three berths would increase the sustainable practical capacity of the NYCT-operated facilities from 450,000 lifts/765,000 TEUs to 800,000 lifts/1.36 million TEUs annually by 2014, an increase of 78 percent.

The highly competitive nature of terminal marketing and operations necessitates that actions to expand terminal capacity be implemented or constructed in such a way that the facility continues to operate as close to normal as is reasonable. Moreover, the plan has to be coordinated with the relevant actions of other agencies and entities. Thus, NYCT has a need to add facility capacity in a way that avoids the disruption of existing operations and makes sense in the context of the scheduled completion of the HDP.

***Berth 4 Would Help Meet Critical Shortfalls in Regional Container Handling Capacity***

With the transition of the U.S. economy from a manufacturing base to a service-oriented economy, the demand for imported goods is strong. The U.S. East Coast, with its large and rapidly growing population base, is fueling import demands that in turn, generate demand for container terminal throughput in North Atlantic ports, especially the PONYNJ. The Port's sizable local market and strong intermodal connectivity to hinterland markets will continue to drive demand, thus keeping the PONYNJ as a "must call" facility on the U.S. East Coast.

<b>NYCT Terminal Complex</b>	<b>Berths 1-3</b>	<b>Berth 4</b>	<b>Berths 1-4</b>
Acres*	147	<b>39</b>	186
Throughput: Lifts/Year			
2004	260,000	-----	260,000
2006	326,000	-----	326,000
2007	400,000	-----	400,000
2008**	540,000	-----	540,000
2014	450,000	<b>350,000</b>	800,000
2014 (TEU/year)	765,000	<b>595,000</b>	1.360 million
Throughput: Lifts/Year/Acre			
2004	1,769	-----	1,769
2006	2,217	-----	2,217
2007	2,721	-----	2,721
2008**	3,673	-----	3,673
2014	3,061	<b>8,974</b>	4,301
2014 (TEU/acre/year)	5,204	<b>15,256</b>	7,312

\* Does not include the adjacent rail yard.

\*\* Terminal operated above its sustainable practical capacity of 450,000 in 2008.

Source: NYCT.

A Comprehensive Port Improvement Plan (CPIP) for the PONYNJ, completed in 2005, defined water and landside infrastructure improvement initiatives to accommodate the region’s capacity demand through the year 2060. As shown in Table 2, below, the CPIP forecast a total demand of 3,954,000 TEUs for the PONYNJ by 2007, increasing to 5,020,000 TEUs by 2015. By contrast, actual demand in 2007 totaled approximately 5,299,000 TEUs. Table 2 also shows an updated forecast of regional container demand that reflects current economic conditions.

	<b>2000</b>	<b>2007</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>	<b>2050</b>
CPIP	2,923	3,954	4,500	5,020	5,600	6,306	7,100	7,769	8,500	9,173	9,900
Revised	---	5,299	6,153	7,597	9,381	10,485	11,719	13,098	14,639	16,362	18,288
Actual	3,050	5,299	---	---	---	---	---	---	---	---	---

Source: Transsystems Corporation.

Even allowing for a protracted economic downturn of up to five years, regional container demand is expected to increase substantially over the long term, due to rising population, production, and consumption. Overall, it is anticipated that regional demand will exceed the current capacity of the PONYNJ by 2015. Improvements at HHMT, along with planned improvements at other marine terminals in the region, will be needed to meet this shortfall and keep pace with growing demand through the year 2040. The proposed Berth 4 would therefore provide critically needed capacity to accommodate increases in regional demand expected in the near term. By itself, Berth 4 does not meet all of the region’s needs; but it is a key element of a larger, comprehensive strategy to ensure these needs are met.

### **The Future Without the Proposed Action (No-Action Condition)**

In order to assess the potential effects of the Proposed Action, the “future No-Action” (No-Build) and “future With-Action” (Build) conditions will be analyzed for an analysis year, or Build Year of 2014. For analysis purposes, all components of the Proposed Project are assumed to be operational by 2014. The No-Action scenario incorporates similar development projections for 2014 absent the Proposed Action. The incremental difference between the With-Action and No-Action scenarios serves as the basis for impact analyses.

In the future without the Proposed Action, the Berth 4 site would remain mostly vacant, terminal capacity and operation at the HHMT would remain unchanged, and the benefits associated with the proposed terminal expansion project would not occur. NYCT would not be able to accommodate future increases in demand. In the future without the Proposed Action, there would be no potential for significant adverse impacts in areas such as land use, urban design, historic resources, natural resources, hazardous materials, the city’s Waterfront Revitalization Program, traffic, air quality and noise.

### **The Future With the Proposed Action (With-Action Condition)**

In the future with the Proposed Action, a new container ship berth would be constructed, increasing the capacity and improving the function of the NYCT-operated facilities on Staten Island. This would also increase the capacity of the PONYNJ, which would be expected to improve the distribution of goods throughout the region and stimulate the local economy. As discussed below in Section D, “Scope of Work for an EIS,” the Proposed Action may result in significant adverse impacts in a number of areas. To the extent feasible, mitigation measures to lessen or eliminate any significant adverse impacts will be identified and proposed, as noted in the discussion of Task 21, “Mitigation.”

## **C. REQUIRED APPROVALS AND REVIEW PROCEDURES**

The following permits/approvals would be required for construction of the proposed New York Container Terminal Expansion project.

### **City**

- Disposition of Land  
Dispose via lease approximately 0.48 acres (20,858 sf) of City-owned land southeast of the proposed Berth 4 site to the Port Authority. This action also pertains to any lands related to the mapping and de-mapping of public streets that require disposition.
- Amendments to the City Map  
Amend the City Map to map and de-map public streets as part of the project site’s improvement program. The street mapping actions would facilitate the expansion of marine container operations by creating a road configuration at the Western Avenue and Richmond Terrace intersection that would accommodate the access and mobility needs of the proposed berth and associated marine container terminal facilities.

- Filling of Land  
Approval to fill City-owned land along the waterfront as part of the proposed wharf and marine container terminal expansion activities. Approximately 12.05 acres of wetlands would be filled; in total, dredging and filling activities relating to the Proposed Action would affect approximately 16.38 acres of wetland.
- Development Within a Railroad right-of-Way  
As industrial rail sidings serving a former Proctor & Gamble facility were once located on the project site, a City Planning Commission Special Permit for development within a railroad right-of-way may be required.

Given the above discretionary actions, the Proposed Action is also subject to review pursuant to the City's Uniform Land Use Review Procedure (ULURP).

### **State**

- NYSDEC Protection of Waters Permit  
The Protection of Waters permit program regulates activities that occur in or near protected waters which are navigable or have been identified and mapped. Generally, regulated activities include any alteration or excavation of the bed or banks of a protected waterway (river, stream, canal) or any excavation or fill in a protected body of water or watercourse. A watercourse is the area of land upon which the flow of water is ordinarily confined due to the contour of the land. The Arthur Kill is a navigable water body. Construction of Berth 4 and its associated marine container terminal would require dredging and construction in the Arthur Kill; therefore, the project would require a Protection of Waters Permit from the New York State Department of Environmental Conservation (NYSDEC).
- NYSDEC Tidal Wetlands Permit  
A Tidal Wetlands Permit is required for any activity that will alter tidal wetlands or adjacent areas, including the construction, reconstruction and/or expansion of structures, including roads, driveways and bridges. New York's tidal wetlands are mapped and include salt-water shores, bays, inlets, canals and estuaries. There are inter-tidal, littoral zone and mud flat tidal wetlands on and adjacent to the project site that would be impacted by construction of Berth 4 and its associated marine container terminal. Therefore, a Tidal Wetlands Permit would be required.
- NYSDEC Section 401 Water Quality Certification  
Any applicant proposing an action that could result in a discharge of a pollutant to a state's waters is required to obtain a certification from the state in which the activity is to occur. Certification ensures proper compliance with applicable effluent limitations, water quality standards, and any other applicable conditions of the state law. A certification obtained for construction of any facility must also pertain to the subsequent operation of the facility. The proposed Berth 4 and marine container terminal would require Water Quality Certification for construction activities, including dredging within the Arthur Kill and fill placement in wetlands. The USACE will not issue a Section 404 permit without Water Quality Certification from the NYSDEC. The Water Quality Certification is issued simultaneously with Protection of Waters and Tidal Wetlands permits.
- NYSDEC Stormwater General Permit  
The Clean Water Act provides that stormwater discharges associated with industrial activity from a point source (including discharges through a municipal separate storm sewer system) to waters of the United States are unlawful, unless authorized by a National Pollutant Discharge

Elimination System (NPDES) permit. In New York, EPA has approved the state program, which is enacted through the administration of the State Pollutant Discharge Elimination System (SPDES) program. Facilities must obtain permit coverage through either an individual industrial SPDES permit which addresses the stormwater discharges, obtain coverage under the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity or provide certification using the No Exposure Exclusion that industrial activities are not exposed to stormwater.

- Waterfront Revitalization Act/Coastal Zone Consistency/Waterfront Revitalization Program  
The New York State Department of State (NYS DOS) oversees all permit activities in the state's coastal waterways, their adjacent shorelines, and in some inland waters including the Arthur Kill. Within New York's Coastal Area, the actions of all Federal and State agencies, and local agencies in communities with an approved Local Waterfront Revitalization Program (LWRP) are reviewed for consistency with the enforceable policies of the New York State Coastal Management Program (CMP).

*Federal Consistency:* Pursuant to the federal consistency provisions of the Coastal Zone Management Act and 15 CFR Part 930, the New York State Department of State reviews Federal Agency activities (including permits and authorizations) to ensure that such activities are consistent with the enforceable policies of the New York City CMP. For the proposed marine container terminal expansion, the New York City Local Waterfront Revitalization Program contains the enforceable policies of the New York City CMP.

*State Consistency:* State activities, including direct funding and permit actions, are subject to the consistency provisions of the Waterfront Revitalization and Coastal Resources Act (article 42 of Executive Law) and are required to be reviewed by the State agency proposing the activity for consistency with CMP policies.

*Local Consistency:* At the local government level, when a community has an approved LWRP, the local government reviews its activities to ensure that they are consistent with the approved LWRP.

- New York State Office of General Services (NYSOGS) Permit  
An applicant proposing to occupy State-owned underwater lands must obtain a permit authorizing the use of such lands. The use of the lands is granted upon the issuance of a permit or interim permit which grants use of an easement or license. Use of the easement is generally authorized for a duration of 25 years, after which time, the application must be renewed. In the event that there are any State-owned underwater lands within the project site, a NYSOGS Permit may be required.

## **Federal**

- United States Army Corps of Engineers (USACE) Section 404 Permit  
This permit is required for placement of dredge and fill material and/or mechanized land clearing, ditching, draining, channelization or other excavation activities into waters of the United States, including wetlands. USACE jurisdiction includes all navigable waters of the United States and freshwater wetlands that are not isolated. As the Proposed Action would require disturbance in and adjacent to tidal wetlands and navigable waters of the United States, a USACE Section 404 permit is required.

- USACE Section 10 Permit  
This permit is required for work within navigable waterways. The law applies to any dredging or disposal of dredged materials, excavation, filling, rechannelization, or any other modification of a navigable water of the United States, and applies to all structures from the smallest floating dock to the largest commercial undertaking. As construction of the proposed Berth 4 would require dredging and construction in navigable waters of the United States, a Section 10 permit is required.
  
- Compliance with the Marine Protection Research and Sanctuaries Act (1972)  
Compliance with the Marine Protection Research and Sanctuaries Act (MPRSA) is required as the Proposed Action includes dredging activities. Unless authorized by permit, the MPRSA, also known as the Ocean Dumping Act, prohibits the dumping of material into the ocean that would unreasonably degrade or endanger human health or the environment. Virtually all material dumped in the ocean today consists of dredged materials (sediments) removed from the bottom of waterbodies to maintain navigation channels and berthing areas. The US Army Corps of Engineers (USACE) is the permitting authority for dredged material, subject to the Environmental Protection Agency's (USEPA's) concurrence and use of USEPA's dumping and testing criteria (MPRSA Section 103). In addition, USACE employs USEPA's-designated ocean dump sites (such as the Historic Area Remediation Site [HARS]) to the maximum extent feasible.

A Joint Permit Application has been filed for all of the above state and federal permits/certifications except NYSOGS.

#### **CEQR-SEQRA-NEPA Coordination**

All State agencies taking actions in New York City must follow the State Environmental Quality Review Act (SEQRA). When a State agency is an involved agency, SEQRA rules apply to its determinations. Federal agencies undertaking actions in New York City must comply with the National Environmental Policy Act (NEPA). The New York SEQRA regulations in Section 617.15 provide for coordination of environmental assessment provisions in New York with those required under NEPA for Federal agencies. The City and Federal decisions on the same project are independent of each other. Thus, a Federal decision not to undertake environmental review or to prepare an EIS does not automatically support or require a similar decision by the City.

NEPA's regulations provide for a process to coordinate the Federal and State and/or City procedures to achieve savings of time and money and to avoid duplicative procedures. These are published as Section 1506.2 of Title 40 of the Code of Federal Regulations. Federal agencies must cooperate with City agencies "to the fullest extent possible to reduce duplication between NEPA and State and local requirements," by such means as (1) joint planning processes, (2) joint environmental research and studies, (3) joint public hearings, and (4) joint environmental assessments. Joint studies, however, cannot oblige each agency to make the same decision. Each must meet its separate CEQR or NEPA and other statutory obligations.

## **D. SCOPE OF WORK FOR AN EIS**

As the Proposed Project would affect various areas of environmental concern and was found to have the potential for significant adverse impacts, pursuant to the EAS and Positive Declaration, an Environmental Impact Statement (EIS) pursuant to CEQR will be prepared for the Proposed Action. The EIS will be prepared in conformance with all applicable laws and regulations, and will follow the guidelines of the *CEQR Technical Manual*.

### **Task 1. Project Description**

The first chapter of the EIS introduces the reader to the Proposed Action and sets the context in which to assess impacts. The chapter contains a Proposed Action identification (brief description and location of the Proposed Action); the background and/or history of the Proposed Action; a statement of the public purpose and need for the Proposed Action; key planning considerations that have shaped the current proposal; a detailed description of the Proposed Action; and discussion of the approvals required, procedures to be followed, and the role of the EIS in the process. This chapter is the key to understanding the Proposed Action and its impact, and gives the public and decision-makers a base from which to evaluate the Proposed Action.

The Project Description chapter will present the planning background and rationale for the Proposed Action. The section on approval procedures will explain the required approvals (City, State and/or Federal) and the Uniform Land Use Review Procedure (ULURP) process, its timing, and hearings before Staten Island Community Board 1, the Staten Island Borough President's office, the New York City Planning Commission (CPC), and the New York City Council. The role of the EIS as a full-disclosure document to aid in decision-making will be identified and its relationship to ULURP and the public hearings described.

### **Task 2. Land Use, Zoning and Public Policy**

The land use, zoning and public policy analysis will be consistent with the methodologies presented in the *CEQR Technical Manual*. In completing the following subtasks, the land use study area will consist of the project site, where the land use impacts will be straightforward and direct (reflecting the Proposed Project and street mapping/demapping actions), and the neighboring areas where indirect impacts may be felt. For the purpose of environmental analysis, both a primary and secondary study area in New York State would be assessed. As shown in Figure 8, the primary study area will include the project site and will extend approximately ¼-mile from the project site boundaries. The secondary study area will extend for ½-mile from the project site boundaries. Tasks will include:

- Provide a brief development history of the project area and surrounding study areas.
- Provide a description and map of existing land uses and zoning in the project area and the surrounding study areas. Other public policies that apply to the study areas will also be described, such as the City's *Staten Island North Shore Land Use and Transportation Study* and PlaNYC 2030. Recent development trends in the land use study areas will also be noted.
- Based on field surveys, prior studies, and available databases, identify, describe, and graphically portray predominant land use patterns for the balance of the land use study areas. Based on discussions with the New York City Department of City Planning (NYCDCP), Staten Island Community Board 1, and other public agencies, describe recent land use trends in the study areas and major factors influencing those land use trends.

- Prepare a list of future development projects in the ¼-mile and ½-mile study areas that would be expected to influence future land use trends. Also, identify pending zoning actions or other public policy actions that could affect land use patterns and trends in the study areas in coordination with NYCDCP. Based on these changes, assess future conditions in land use and zoning without the Proposed Action.
- Describe proposed land use changes based on the Proposed Action.
- Assess effects of the Proposed Action on land use and land use trends, public policy, and zoning. Discuss the Proposed Action's potential effects related to issues of compatibility with surrounding land use, the consistency with zoning and other public policy, and the effect of the Proposed Action on ongoing development trends and conditions in the area.

### **Task 3. Socioeconomic Conditions**

Socioeconomic impacts may occur when a Proposed Action would directly or indirectly change economic activities in an area. The purpose of the socioeconomic assessment is to disclose changes that would be created by the Proposed Action and identify whether they rise to a significant level. The *CEQR Technical Manual* provides guidelines to determine whether a socioeconomic assessment is appropriate. Typically a socioeconomic assessment is required if a Proposed Action meets one or more of the following tests: (a) the action would directly displace residential population so that the socioeconomic profile of the neighborhood would be substantially altered; (b) the action would displace substantial numbers of businesses or employees, or would displace a business that plays a critical role in the community; (c) the action would result in substantial new development that is markedly different from existing uses in a neighborhood.

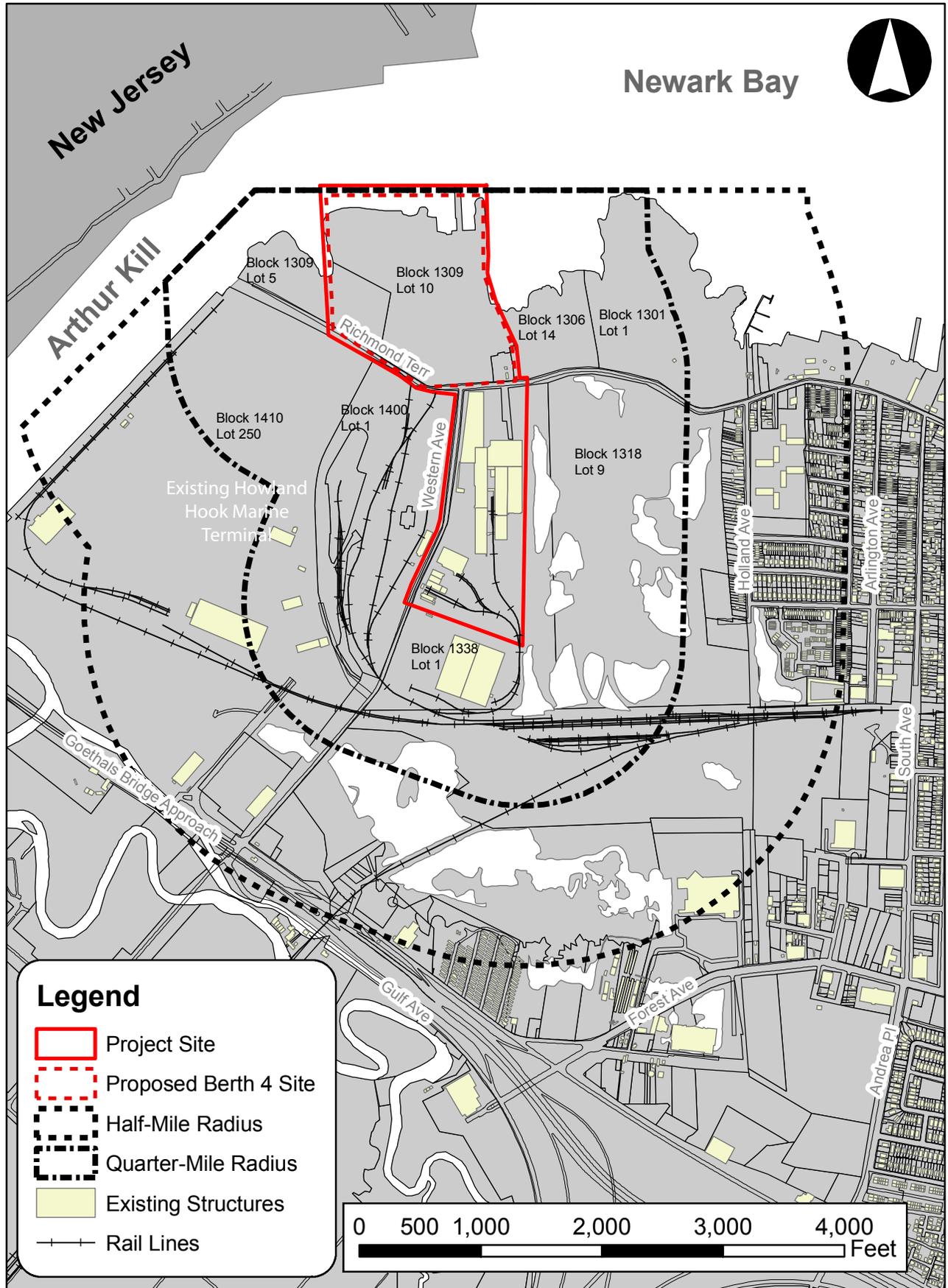
Screening analyses will be conducted pursuant to the *CEQR Technical Manual* methodology. The analyses will present sufficient information regarding the effect of the Proposed Project to make a preliminary assessment either to rule out the possibility of significant impacts or to determine that more detailed analysis is required to make a determination as to impacts. The preliminary assessment will examine five areas of concern including (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; (5) and adverse effects on specific industries. As the Proposed Action would have a direct effect on the marine cargo handling industry, specifically the handling of containerized cargo, a detailed analysis of the Proposed Action's potential to affect the operation and viability of this specific industry will be provided.

#### ***Direct Residential Displacement***

Currently, there are no residential buildings or residents located on the project site. The Proposed Action is not expected to directly displace any residential dwelling units on the project site, and therefore would not result in significant adverse impacts related to direct residential displacement and a detailed analysis is not warranted.

#### ***Direct Business/Institutional Displacement***

With the exception of some truck chassis storage for the adjacent HHMT, there are no active businesses or institutional buildings located on the Berth 4 site. A number of vacant former industrial buildings on the project site south of Richmond Terrace are in the process of being demolished; however, several other buildings are currently leased from the Port Authority by a warehouse management business with an



estimated 10 to 20 employees. The EIS will assess the potential effects of the displacement of this business as a result of the Proposed Action.

### ***Indirect Residential Displacement***

There are no residential uses located on or immediately adjacent to the project site (the closest residences are located more than ¼-mile to the east of the site on the other side of Mariners Marsh Park). Therefore, the Proposed Action is not expected to result in any significant adverse impacts related to indirect residential displacement and a detailed analysis is not warranted.

### ***Indirect Business/Institutional Displacement***

The Proposed Action would expand the existing NYCT operations onto a mostly vacant site, and is therefore not expected to (1) introduce a new type of economic activity that would change the existing economic patterns; (2) add to the concentration of one economic sector that would change the existing economic patterns; (3) introduce economic activity that would lead to higher commercial rents or lower property values; (4) directly or indirectly displace residents, workers, or visitors who form the base of existing businesses in the area. As such, the Proposed Action is not expected to result in any significant adverse impacts related to indirect business/institutional displacement and a detailed analysis is not warranted.

### ***Adverse Effects on Specific Industries***

As the Proposed Action would have a direct effect on the marine cargo handling industry, specifically the handling of containerized cargo, a detailed analysis of the Proposed Action's potential to affect the operation and viability of this specific industry will be provided.

Additional economic effects can be expected from the Proposed Action including the addition of an estimated 311 new full-time equivalent jobs and tax revenues for the City and State. The analysis will also assess the benefits of the Proposed Action in terms of employment, total effect on the local economy, and tax revenues realized by the City and State during the construction and operation of the proposed marine terminal. Overall economic activity associated with future uses will be estimated using the RIMS II model from the U.S. Department of Commerce, Bureau of Economic Activity. In conjunction with the construction impacts task (Task 18 below), construction costs and public investments/costs associated with the infrastructure improvements planned as part of the Proposed Project will be described where applicable, as will any economic activity, employment and tax benefits realized by the City and State during construction.

## **Task 4. Community Facilities**

The demand for community facilities and services is directly related to the type and size of the new population generated by development resulting from the Proposed Action. New workers tend to create limited demands for community facilities and services, while new residents create more substantial and permanent demands. As the Proposed Action would not introduce any new residents to the area, a detailed assessment of community facilities such as public schools, day care centers, libraries and hospitals is not warranted. Detailed assessment of potential impacts on police or fire service delivery is conducted only if a Proposed Action would affect the physical operations of, or access to and from, a station house. As the Proposed Action would not affect the physical operations of, or access to and from any police or fire facility, a detailed impact analysis of police and fire services is not warranted. The EIS will provide a qualitative review and screening assessment of community facilities and services.

### **Task 5. Open Space**

Open space is public or privately owned land that is publicly accessible and has been designated for leisure, play or sport, or land set aside for the protection and/or enhancement of the natural environment. While the Proposed Action is not eliminating or altering open space, the action may have an indirect impact from overtaking available open space. Under *CEQR Technical Manual* criteria, an assessment would need to be conducted if the Proposed Action were to create an additional 500 employees. NYCT currently employs approximately 555 people at the Howland Hook Marine Terminal. The Proposed Action is expected to create of the equivalent of approximately 311 additional full time jobs, which would be substantially less than the CEQR threshold of 500 additional employees. As such, a detailed open space analysis is not warranted. The EIS will provide a qualitative screening assessment of open space.

It should be noted that the project site is in proximity to both Mariners Marsh Park, which is unmapped parkland, and Arlington Marsh, the publicly-owned portions of which are to be transferred to the Department of Parks and Recreation subsequent to the establishment of the boundaries of the Berth 4 site. Mariners Marsh Park is a significant brownfield, and neither of these properties is currently accessible to the public. The Proposed Action's potential significant impacts to these resources will be addressed as part of Task 10, "Natural Resources/Water Quality/Hydrology," Task 16, "Air Quality," and Task 17, "Noise," as appropriate.

### **Task 6. Shadows**

The Proposed Project would include the construction of the following permanent structures: a three-story marine operations building, a one-story crane operations building, five one-story security booths, and four movable quayside cranes for loading and unloading ships. The largest proposed stationary structure is the marine operations building at 45 feet tall, which is shorter than the 50-foot CEQR threshold for a detailed shadow impact analysis. The four quayside cranes are expected to be greater than 50 feet in height, however, given their location adjacent to the proposed ship berth, any shadows that they cast would fall primarily within the boundaries of the proposed marine container terminal or on the adjacent Arthur Kill. In addition, given their mobility and relatively open design, they are not expected to cast substantial shadows. As none of the proposed structures would create shadows that reach publicly accessible open space, historic resources, or other important natural resources, no significant adverse shadow impacts are expected as a result of the Proposed Action based on *CEQR Technical Manual* criteria. Thus, a detailed analysis is not warranted; however, a shadows screening assessment may be provided in the EIS, and is detailed below. (The potential effects to marine life from shadows cast on underwater areas by the proposed wharf and the periodic presence of container ships will be addressed as part of Task 10, "Natural Resources.")

- A screening-level analysis will be performed to identify potential shadow impacts. This preliminary analysis will involve the identification of historic resources with sun-sensitive features in the area, as well as identification of publicly accessible open spaces, including existing and planned open spaces. The potential for incremental project shadows to fall on such resources will be assessed based on the height, bulk, and location of the proposed new building(s). The potential for incremental shadows to be cast over water areas will also be assessed. As mentioned above, while the quayside cranes would exceed 50 feet in height, due to their mobility and open design they are not expected to generate substantial shadows.

### **Task 7. Historic Resources**

The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated NYC

Landmarks; properties calendared for consideration as landmarks by the NYC Landmarks Preservation Commission (LPC); properties listed on the State/National Register of Historic Places (S/NR) or contained within a district listed on or formally determined eligible for S/NR listing; properties recommended by the NY State Board for listing on the S/NR; National Historic Landmarks; and properties not identified by one of the programs listed above, but that meet their eligibility requirements. Because construction of the Proposed Project would result in new in-ground disturbance, the action has the potential to result in impacts to archaeological resources.

Impacts on historic resources are considered on the affected sites and in the area surrounding the identified development sites. The historic resources study area is therefore defined as the project site plus a ¼-mile radius, as per the guidance provided in Chapter 3F, Section 312 of the *CEQR Technical Manual*. Archaeological resources are considered only in those areas where new in-ground disturbance is likely to occur.

In coordination with the research conducted for the land use and hazardous materials tasks, this chapter of the EIS will include an overview of the study area's history and land development. This history will be detailed enough to determine whether any potential archaeological resources may be on the site, requiring further study. Subtasks will include:

- Submit the Proposed Action to the New York City Landmarks Preservation Commission for its review and determination.
- Research and describe the history of land use and architecturally and archaeologically sensitive locations.
- Identify, map and describe designated historic/architectural resources (New York City Landmarks or pending Landmark designation and properties listed on the State and National Registers of Historic Places) in the immediate vicinity of the project site. Also identify any structures in the study area that have been suggested as eligible for designation.
- In coordination with the land use task, assess probable impacts of development of the Proposed Project on architectural resources in the study area.
- Based on City and State files, identify and map inventoried archaeological resources and/or sensitive locations.
- Determine the earliest dates of available municipal water and sewer services in the streets within the study area.
- For those lots identified by LPC or other record searches as archaeologically sensitive, prepare a Phase IA Archaeological Documentary Report. The work will document the site history, its development and uses, and the potential for the site to contain significant undisturbed archaeological features. Identify categories of resources that may be present and their potential to remain undisturbed on the site.
- Summarize the results of the Phase IA analysis in the EIS. Submit the full report to LPC for review. Undertake a Phase IB and Phase II archaeological analysis to evaluate the National Register eligibility of the site previously reported in the project area. Prepare a Phase I/II Archaeological Survey Report and submit this documentation for review to LPC. The Phase IB and Phase II work efforts will only be necessary if required by LPC after they review the results of the Phase IA analysis.

- In coordination with the land use task, assess probable impacts of the Proposed Action on archaeological resources.

### **Task 8. Urban Design and Visual Resources**

This chapter will assess urban design patterns and visual resources of the study area, and the effects on these of the Proposed Action. As defined in Chapter 3G, Section 310 of the *CEQR Technical Manual*, the urban design and visual resources study area will be the same as that used for the land use analysis. An area's urban design components and visual resources together define the look and character of the neighborhood. The urban design components encompass the characteristics of buildings and streets in the area, including building bulk, use and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. The concept of bulk is created by the size of a building and the way it is massed on the site. Height, length, and width define a building's size; volume, shape, setbacks, lot coverage, and density define its mass. An area's visual resources are its unique or important public view corridors, vistas, or natural or built features.

The Proposed Action would map new street segments, demap segments of existing streets, and pave and grade currently undeveloped vegetated areas of the project site. As such, the Proposed Action would change the visual character of the project site and could alter the urban design character of the adjacent areas. Therefore, this chapter of the EIS will assess the urban design patterns and visual resources of the study area and any changes that would occur as a result of the Proposed Action, based on *CEQR Technical Manual* methodologies.

- Based on field visits, describe the project site and the urban design and visual resources of the surrounding area, using text and photographs as appropriate.
- In coordination with the land use task, describe the changes expected in the urban design and visual character of the study area due to planned development projects in the future without the Proposed Action.
- Describe the potential changes that could occur in the urban design character of the study area as a result of the Proposed Action, including the effects of the proposed streets to be mapped. Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources, including views of/to resources of visual or historic significance (the waterfront, landmark structures, historic districts, parks etc.).

### **Task 9. Neighborhood Character**

The character of a neighborhood is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include traffic and pedestrian patterns, noise, etc. The Proposed Action would permit the expansion of marine container terminal operations at the project site, and therefore has the potential to alter certain constituent elements of the affected area's neighborhood character, including land use patterns, traffic and noise levels, and urban design features.

An amalgam of impact categories, a neighborhood character analysis considers the combined impacts of land use, urban design, visual resources, historic resources, socioeconomics, traffic and noise issues. This chapter of the document will explain those effects in a summary fashion. Since most of these elements will already be covered in other EIS sections, this assessment will essentially represent a summary of the

key findings of these other analyses. As suggested by the *CEQR Technical Manual*, the study area for neighborhood character will be coterminous with the ½-mile land use study area.

- Drawing on other EIS sections, describe the predominant factors that contribute to defining the character of the neighborhood.
- Based on planned development projects, public policy initiatives, and planned public improvements, summarize changes that can be expected in the character of the neighborhood in the future without the Proposed Action.
- The analysis of the Proposed Action's impacts on various EIS sections will serve as the basis for assessing and summarizing the Proposed Action's impacts on neighborhood character.

#### **Task 10. Natural Resources/Water Quality/Hydrology**

The project site is in proximity to Mariners Marsh Park, which is unmapped parkland. The western edge of the Berth 4 site borders Bridge Creek, while the eastern edge borders Arlington Marsh, which has been designated as part of the Northwest Staten Island/Harbor Herons Special Natural Waterfront Area (SNWA), an interconnected network of tidal and freshwater wetlands along the Arthur Kill. The publicly-owned portions of Arlington Marsh are to be transferred to the Department of Parks and Recreation subsequent to the establishment of the boundaries of the Berth 4 site. Shooters Island, located roughly one mile from the project site, has been an historical nesting site for colonial water birds. In addition, development of the Proposed Project would require dredging of existing bottom materials and filling of water bodies and tidal wetlands, and the relocation of Western Avenue as part of the Proposed Action may also impact wetlands. (Wetlands habitats also border the segment of Western Avenue that would remain in its current alignment to the south of the project site.) The EIS will therefore provide an assessment of the Proposed Action's potential for significant adverse impacts to natural resources. It is estimated that a total of 16.38 acres of wetlands (including littoral zone, intertidal marsh, mud flats and formerly connected tidal wetlands) would be dredged or filled with development of the Proposed Project. Any existing natural resources or habitat on or in the vicinity of the project site would be identified, including any significant fish habitats. Habitat on most, if not all, of the Berth 4 site has been diminished, in some cases significantly, for a variety of functions due to previous disturbance and fill activities. Aquatic ecosystems adjacent to the Berth 4 site, especially on the west (Bridge Creek) and east (Arlington Marsh) provide habitat for a variety of waterfowl and other birds. Portions of these habitats contained within the limits of and adjacent to the Berth 4 site would potentially be impacted by development of the Proposed Project (refer to Figure 7 above). In addition, aquatic organisms utilizing the water bodies adjacent to the project site would potentially experience temporary impacts during construction.

The Proposed Action's potential impacts on identified natural resources will be assessed, including both short-term construction effects and any potential long-term effects, including any new outfalls, expected run-off, and the potential increase in container ship traffic and port activity. Proposed mitigation for wetland loss or degradation from the Proposed Action will also be described.

- This task will examine the water quality conditions along the project site, including water quality trends and projection data as are available through existing literature and studies (e.g., the New York City Department of Environmental Protection [NYCDEP] Harbor Survey). This section will describe the general water quality characteristics of the Arthur Kill, including currents, tidal range, water quality classification, and overall pollutant loads and chemical and biological conditions.

- Data on aquatic resources will be reviewed and presented for the study area. This task will also be undertaken using published literature. The presence of tidal wetlands and their limits will be documented based on an August 24, 2007 Jurisdictional Determination from the U.S. Army Corps of Engineers. If needed, supplemental ground verification and flagging will be undertaken and subject to confirmation by NYSDEC. The EIS will describe the extent of disturbance to wetlands and the restoration and mitigation required. In addition, it should be noted that Local Law 506-A pertaining to new City wetlands policies has been passed, and these policies are to be developed by 2012. The EIS will include an assessment of the Proposed Project's compliance with these policies to the extent applicable and feasible utilizing the most updated available version of this document when the EIS is prepared.
- A description of the avian resources (including water birds, raptors, upland nesting species and other avifauna) and critical or significant habitats that may potentially be affected by the Proposed Project will be presented. Shooters Island, located roughly one mile from the project site and an historical nesting site for colonial water birds, will be included. Summer and fall bird surveys will be conducted on the project site and adjacent areas, including Arlington Marsh, and data from these surveys will be supplemented by data from a previous (2006) winter bird survey and published sources.
- It is anticipated that there will be limited issues with respect to terrestrial resources since most of the upland is characterized by previous disturbance and in some locations, an on-going abundance of human activity such as large truck traffic, and truck chassis storage and transfer. However, field surveys will be conducted and an assessment of existing terrestrial habitat will be developed to fully characterize the project site with respect to terrestrial resources.
- The New York State Natural Heritage Program and the U.S. Fish and Wildlife Service will be contacted to obtain any data on the potential presence of rare or endangered plant or animal species in the study area.
- An assessment of potential significant adverse impacts from development of the Proposed Project will be presented analyzing any potential water quality and river disturbance issues, and direct and indirect impacts to any fish and bird habitats, wetlands, terrestrial resources and rare or endangered species. This will include a wetlands assessment where wetlands will be divided into high marsh, low marsh and coastal shoals and mudflats, and littoral zone, and analyzed for loss of function and value. This will also include an assessment of the potential effects to marine life from shadows cast on underwater areas by the proposed container ship berth and the periodic presence of container ships. In addition the potential for cumulative impacts with respect to the Goethals Bridge Replacement project and other projects in the area will be assessed.
- Depending on the final alignment of the relocated Western Avenue, potential significant adverse impacts to natural resources resulting from this mapping/demapping action will be analyzed. The potential for increased truck traffic to affect wetlands habitats adjacent to the segment of Western Avenue that would remain in its current alignment will also be assessed. In addition, if any physical modifications to this roadway segment prove necessary to accommodate increased traffic or to address significant adverse traffic impacts, the EIS will include an assessment of the potential for impacts on the adjacent wetlands habitats.
- Mitigation to address any significant adverse impacts will be identified (see Task 21, "Mitigation," below). Included in any discussion of potential wetlands mitigation will be the fact that Bridge Creek, the Arlington Marsh Peninsula and the Arlington Marsh Cove have been

identified as potential mitigation sites by the New York City Wetlands Transfer Task Force. The need for any additional approvals, such as Federal approvals, will also be described.

### **Task 11. Hazardous Materials**

The objective of the hazardous materials assessment is to determine whether the project site may have been adversely affected by current or historical uses in the project area, and whether excavation, construction or other project-related activities may increase potential pathways to exposure. The Proposed Action would result in the development of a marine container terminal on a site previously occupied by industrial uses that also includes a capped construction and demolition (C&D) debris landfill and several active and inactive pipelines used for petroleum products. Previous site investigations have identified contamination of soils with historic fill consistent with the urbanized and industrial nature of the site, several semi-volatile organic compounds (SVOCs) (predominantly PAH compounds), metals, and petroleum and non-petroleum oils; and contamination of groundwater with the SVOC bis(2-ethylhexyl)phthalate and metals. The Port Authority is currently undertaking a Voluntary Cleanup Program (VCP) for much of the Berth 4 site in accordance with conditions set by NYSDEC.

The hazardous materials chapter of the EIS will describe and discuss the findings of the Voluntary Cleanup Program for the Berth 4 site. Additional data presented in the chapter will be based on a Phase I Environmental Site Assessment (ESA) to be prepared for the areas of the site not covered by the VCP. Therefore, Phase I analysis will be completed for the disposition parcels (one City-owned and one NYCT-owned), as well as areas affected by the relocation of Western Avenue. Included in the chapter will be a detailed discussion of current environmental conditions on the project site, the Proposed Action's potential to result in significant adverse hazardous materials impacts, and a description of possible mitigation measures that might be necessary to avoid significant adverse impacts. The potential for new exposure pathways as a result of the proposed relocation of Western Avenue closer to the contaminated Mariners Marsh Park will also be assessed.

The analysis will include the following:

- Perform a documentary search to determine previous uses on the site and in adjacent areas. Available historical maps, aerial photographs, and atlases will be reviewed.
- Inspect and examine the property for evidence of potential site contamination. The site inspection will target items such as visible spills and stains, the presence of drums or other containers or hazardous materials, dumped materials on vacant lots, areas of landfill, and the presence of suspect asbestos-containing material (ACM), as well as mercury and polychlorinated biphenyls (PCBs) containing electrical components. Where there are records of the presence of underground storage tanks, their location will be confirmed, if possible. The project area will be carefully inspected for evidence of undocumented tanks, such as fill caps and vent pipes. A visual review for suspect asbestos containing materials (ACM) and lead-based paint will be conducted.
- Information on subsurface conditions will be obtained from the U.S. Geological Survey and previous soil borings in the area, if applicable.
- Records maintained by the U.S. Environmental Protection Agency (EPA) and NYSDEC on properties of environmental concern will be reviewed, including records of known or suspected hazardous waste disposal sites, hazardous waste generators or treatment facilities, hazardous substance releases, and chemical and petroleum storage facilities.
- Gather the results of any soil and groundwater testing performed for the Port Authority.

- Assess the potential for site-wide contamination. If necessary, further actions, including testing on the site, will be recommended.
- Compile information into a Phase I Environmental Site Assessment report, which will be prepared in compliance with the American Society for Testing and Materials (ASTM) E1527-00, and then summarize within the existing conditions section of the EIS.
- If the Phase I assessment and the results of any previous Phase II testing are insufficient to define the potential impacts from contaminated materials on the site, then Phase II testing will be undertaken. In the event that testing and soil sampling should be required, a Phase II protocol and a Health and Safety Plan (HASP) defining the scope and methodology of the testing will be prepared and submitted to NYCDEP for their review and approval. If Phase II testing discloses site contamination that must be remediated, a Remedial Action Plan and Construction HASP will be submitted to NYCDEP and/or NYSDEC for review and approval.

### **Task 12. Waterfront Revitalization Program**

The New York City Waterfront Revitalization Program (WRP) is the city's principal coastal zone management tool. As originally adopted in 1982 and revised in 1999, it establishes the city's policies for development and use of the waterfront and provides the framework for evaluating the consistency of all discretionary actions in the coastal zone with those policies. A review of the City's coastal zone boundary maps indicates that entire project site is located within the designated NYC coastal zone boundary. In addition, the Berth 4 site is located within the Staten Island Significant Maritime and Industrial Area (SMIA), and the eastern project boundary abuts the Northwest Staten Island/Harbor Herons Special Natural Waterfront Area (SNWA).

A preliminary evaluation was undertaken for the Proposed Action, including completion of the WRP Consistency Assessment Form. As indicated in the Consistency Assessment Form, the Proposed Action requires further assessment of several policies, including 1, 2, 2.3, 3.1, 3.2, 4, 4.1, 4.2, 5.1, 5.2, 5.3, 6.3, 7.1, 7.2, 8, 8.2 and 9.2. As such, a detailed assessment of the Proposed Action's consistency with the applicable policies of the Waterfront Revitalization Program will be provided in this chapter of the EIS.

### **Task 13. Infrastructure, Solid Waste and Energy**

As described in the *CEQR Technical Manual*, because of the size of the City's water supply system and because the City is committed to maintaining adequate water supply and pressure for all users, few actions would have the potential to result in significant adverse impact on the water supply system. Similarly, an evaluation of potential solid waste or energy impacts is not generally necessary unless a project is unusually large. Therefore, although development of the Proposed Project may increase the demand on water supply and energy, and increase the generation of stormwater, sewage, and solid waste, the Proposed Project would not be expected to create an adverse impact on these services. However, as recommended by the *CEQR Technical Manual*, the Project's potential demands on water supply and energy and potential generation of stormwater, sewage, and solid waste will be disclosed. Additionally, any utility improvements necessary to facilitate the Proposed Project will be identified, and the potential impacts from installation of infrastructure will be described. As the Proposed Action includes street mapping and demapping actions associated with the demapping of portions of Richmond Terrace and the realignment of Western Avenue, there will be coordination with the New York City Department of Environmental Protection Bureau of Water and Sewer Operations (DEP BWSO) to determine potential impacts to existing infrastructure within the street bed and the need for new infrastructure in newly built

streets. The Proposed Action will also include sanitary and wastewater management infrastructure plans prepared in coordination with and to the satisfaction of the DEP BWSO.

The analyses will include the following:

### ***Water Supply***

- Based on information obtained from NYCDEP, the existing water supply network and capacity will be described, and any planned changes to the system will be discussed.
- Using water usage rates for typical land uses provided in the *CEQR Technical Manual*, the average and peak water demand for the Proposed Project will be projected.
- The effects of the incremental demand on the water system will be assessed to determine if there is sufficient capacity to maintain adequate supply and pressure to the service area.

### ***Stormwater***

- Describe the existing stormwater drainage system on the project site and estimate the amount of stormwater presently generated by the site.
- Assess the effects of any changes to the stormwater runoff due to the development of the Proposed Project and describe how stormwater would be managed in the future with the project. The analysis will describe how stormwater flows will be treated, attenuated, and managed both during construction and once the Proposed Project is built.

### ***Sewage***

- The existing sewer system serving the project site will be described based on information obtained from NYCDEP. The existing flows to the water pollution control plant (WPCP) that serves the site will be obtained for the latest 12-month period. The average monthly flow rate will be presented.
- Using the water demand determined in the task above, sanitary sewage generation for the projected uses will be estimated.
- The effects of the incremental demand on the system will be assessed to determine if there will be any impact on operations of the WPCP.

### ***Solid Waste***

- Existing and future New York City solid waste disposal practices will be described, including the collection system and status of landfilling, recycling, and other disposal methods.
- Using solid waste generation rates for typical land uses provided in the *CEQR Technical Manual*, provide an estimate of solid waste demand for the Proposed Project.
- The impacts of the Proposed Project's solid waste generation on the City's collection needs and disposal capacity will be assessed to determine whether the City's municipal service can adequately handle the future solid waste demand for the Proposed Project.

### ***Energy***

- The energy systems that would supply the Proposed Project with electricity and/or natural gas will be described.
- A qualitative assessment/screening analysis will be provided in the EIS, as appropriate, including an estimate of the Proposed Project's energy usage.

### **Task 14. Traffic and Parking**

The Proposed Action would facilitate the use of the project site as a container ship berth and associated marine container terminal, which would generate additional vehicular travel demand, mostly by truck. These new trips have the potential to affect the area's transportation systems. In addition, the Proposed Action includes relocation of public streets to facilitate the Proposed Project. Therefore, the likelihood that the Proposed Action would generate significant adverse traffic impacts requiring significant levels of mitigation will be a focus of the EIS.

### ***Traffic***

Based on preliminary estimates, the Proposed Project is expected to generate an aggregate of more than 50 additional peak hour vehicle trips. The analysis of traffic conditions will focus on the weekday AM, midday and PM peak periods when peak traffic generated by the Proposed Project is expected to coincide with peak demand on the roadway system serving the project site. The traffic impact analysis will focus on those intersections handling the highest concentrations of project-generated demand. Based on a preliminary assessment of the likely truck and auto travel routes to and from the project site, it is anticipated that a total of approximately four intersections connecting the project site to the area highway network will be analyzed in detail for potential traffic impacts (refer to Figure 9). An additional two intersections will be included as optional analysis locations pending finalization of the Proposed Project's travel demand forecast and vehicle trip assignments. A merge/diverge analysis of the ramps to and from I-278 and the Goethals Bridge will also be provided.

The analysis will include the following:

- Define a traffic study area to account for the principal travel corridors to/from the project site. This scope assumes that up to six intersections would be analyzed, as illustrated in Figure 9 and listed below:

#### *Intersections to be Analyzed*

- Western Avenue at Goethals Road North
- Forest Avenue at Goethals Road North
- Forest Avenue at Gulf Avenue
- Richmond Terrace at Western Avenue

#### *Optional Intersections to be Analyzed<sup>4</sup>*

- Forest Avenue at South Avenue
- South Avenue at Richmond Terrace

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<sup>4</sup> Included as optional analysis locations pending finalization of the Proposed Project's travel demand forecast and vehicle trip assignments.



- Conduct traffic counts at traffic analysis locations (including optional analysis locations) via a mix of automatic traffic recorder (ATR) machine counts and manual intersection turning movement counts. The counts will be conducted in accordance with the procedures set forth in the *CEQR Technical Manual*. ATRs will provide 24-hour traffic volumes for a full week at selected arterial locations. Turning movement counts and vehicle classification counts will be conducted at analyzed intersections during the weekday AM, midday, and PM peak periods. Where applicable, compile available information from recent studies of the area.
- Inventory physical data needed for the capacity analysis at each of the analysis locations, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, typical parking regulations, and signal phasing and timing data.
- Determine 2010 existing traffic operating characteristics at each analyzed intersection and highway corridor including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per traffic movement and per intersection approach. The analysis will be based on the methodology from the *2000 Highway Capacity Manual (HCS+ Version 5.3)*.
- Future No-Action developments in the vicinity of the study area and any associated changes to the study area street system will be identified. Traffic volumes from these developments will be estimated using previous EISs, U.S. Census data, and other sources. In addition to traffic from future No-Action projects, an annual growth rate of 1.5 percent per year will be applied to existing baseline traffic volumes to account for general background growth. Accepted mitigation measures for No-Action projects, as well as any measures associated with other initiatives, will be included in the future No-Action traffic network. These will include the Port Authority's planned improvements to Forest Avenue (Build year 2010) designed to accommodate increased traffic at the existing Howland Hook Marine Terminal. No-Action v/c ratios, delays and levels of service for analyzed intersections will be calculated and congested intersections identified.

As previously noted, the existing Goethals Bridge would be replaced by a new cable-stayed bridge in 2014 under the Port Authority's Goethals Bridge Replacement (GBR) project, which is currently undergoing environmental review. In addition, planning studies have been initiated by the Port Authority regarding the feasibility of developing a new I-278 eastbound exit ramp that would provide a direct connection for trucks traveling between the Goethals Bridge and the existing Howland Hook Marine Terminal. The planning for this ramp is independent of the Goethals Bridge Replacement Project as well as the Proposed Action. As completion of the GBR project is expected concurrent with the 2014 Build year of the NYCT Expansion project, the No-Action and With-Action traffic analyses for the Proposed Project will reflect conditions with the replacement bridge. If the potential new I-278 eastbound ramp advances past the feasibility study phase during the EIS process for the NYCT Expansion project, inclusion of this ramp (and its associated traffic benefits) in the No-Action and With-Action EIS analyses will be considered.

- Forecast trips generated by the Proposed Project based on data from the operator of the existing Howland Hook Marine Terminal, previous studies and standard professional references. New trips will be assigned to the respective travel modes (primarily truck and auto) in each peak hour.
- Determine the volume of vehicle traffic expected to be generated by the Proposed Project, assign that volume of traffic to likely approach and departure routes, and prepare traffic volume networks for the future With-Action condition for each analysis period. Site plan layouts for the Proposed Project and the relocated Western Avenue, and project-increment vehicle trip assignment maps for each analyzed peak hour, will also be included in the EIS.

- Determine the resulting v/c ratios, delays, and LOS at analyzed intersections for the future With-Action condition, and identify significant traffic impacts in accordance with *CEQR Technical Manual* criteria.
- Prepare a merge/diverge analysis to assess the effects of project-generated traffic on the I-278 ramps that would be used by auto and truck trips en route to and from Berth 4.
- Identify and evaluate traffic mitigation measures, as appropriate, for all significantly impacted locations in the study area. Potential traffic mitigation measures may include roadway modifications, new signal installations, new signage, signal timing changes, and parking regulation changes.

### ***Parking***

Parking demand associated with the operations at the new terminal would be accommodated either at the existing HHMT facility or on the project site. The parking studies in the EIS will focus on the amount of additional demand for parking resulting from development of the Proposed Project, and the ability of parking capacity at the NYCT-operated facilities to accommodate this new demand. Existing and proposed parking spaces at the HHMT and at the project site will be documented, as will the hourly auto and truck arrival/departure and parking accumulation patterns.

### **Task 15. Transit and Pedestrians**

The objective of the transit and pedestrian analyses is to determine whether a Proposed Project can be expected to have a significant impact on public transportation facilities and services and on pedestrian flows. According to general thresholds used by MTA New York City Transit (NYC Transit), if a proposed project is projected to result in fewer than 200 peak hour rail or bus transit riders, further transit analyses are not typically required as the project is considered unlikely to create a significant transit impact. The Proposed Project is not anticipated to generate an additional 200 peak hour rail or bus transit riders, and as such a detailed transit analysis is not warranted.

Projected pedestrian volume increases of less than 200 pedestrians per hour at any analyzed pedestrian element (sidewalk, corner area or crosswalk) would not typically be considered a significant impact. Due to the location and nature of the proposed marine container terminal facility, it is not expected that the Proposed Project would increase pedestrian volumes beyond this CEQR threshold in any given hour. As a result, a detailed analysis of pedestrian conditions is not warranted.

### **Task 16. Air Quality**

The Proposed Action would facilitate the expansion of NYCT's marine container operations on Staten Island, generating additional vehicular, rail and maritime travel demand. The air quality studies for the Proposed Action will include both mobile and stationary source analyses. The mobile source air quality impact analysis will address three distinct issues:

- What effect will traffic-generated emissions have on pollutant levels at locations within the adjacent study area;
- What effect terminal operations will have on regional air quality; and
- Will the Proposed Action be consistent with the applicable State Implementation Plan (SIP) for the area?

Since the Proposed Action would result in increased emissions from the expanded marine container terminal, the stationary source air quality impact analysis will have to determine the effects of emissions from on-site activities, including marine-related activities (which include marine vessels and container handling operations), and any proposed heating, ventilation, and air conditioning (HVAC) systems, on pollutant levels (i.e., sulfur dioxide, carbon monoxide, particulate and/or nitrogen dioxide concentrations).

The number of project-generated vehicle trips will likely exceed the *City Environmental Quality Review (CEQR) Technical Manual* screening threshold of 100 vehicles per hour at one or more locations in the study area. Thus, an analysis of mobile emissions air quality impacts will need to be conducted to determine carbon monoxide (CO) levels.

In addition, it is considered likely that an analysis of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) from mobile sources will be necessary due to the commercial traffic volumes generated by development of the Proposed Project. The City has developed and is employing interim guidance criteria for projects that are prepared under CEQR. In addition, the New York State Department of Environmental Conservation (NYSDEC) has developed a policy that provides guidance on assessing PM<sub>2.5</sub> impacts and determining when mitigation is necessary. These criteria and screening level thresholds will be used to determine whether a quantified PM<sub>2.5</sub> analysis is required, and for evaluating the potential PM<sub>2.5</sub> impacts from both mobile and stationary sources.

Using computerized dispersion modeling techniques, the effects of both project-generated traffic on CO and PM levels at critical intersection locations will be determined. Where significant project impacts are predicted to occur, cost effective, feasible traffic measures will be developed to alleviate those impacts, if necessary, in conjunction with the traffic studies.

The *CEQR Technical Manual* also requires an analysis of actions that would significantly increase vehicle miles traveled (VMT) within New York City. The proposed marine container terminal expansion would increase emissions on a local level. However, these increases would need to be compared against the effects of importing goods into the region under the No-Action condition. An assessment of the potential regional effects on air quality will be performed to determine the Proposed Project's effect on air quality in the airshed. The new change in VMT would be determined to calculate the increase (or decrease) in emissions from the Proposed Project.

The Proposed Project's potential to contribute to greenhouse gas (GHG) emissions will also be addressed. The methodology will be based on recent CEQR analyses of development projects in New York City, and also generally follow the preliminary draft guidance from NYSDEC.

### ***Mobile Source Analyses***

- Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by the NYSDEC will be compiled for the analysis of existing conditions.
- Determine receptor locations for microscale analysis. Select critical intersection locations in the study area, based on data obtained from the project's traffic analysis as well as traffic planners and engineers for the project. At each intersection, multiple receptor sites will be analyzed. For analysis purposes, it is assumed that up to one intersection will require analysis for CO, and two intersections will require analysis for PM<sub>10</sub>/PM<sub>2.5</sub>.

- Select dispersion model. EPA's CAL3QHC screening model will be used for less congested locations. EPA's CAL3QHCR refined intersection model will be used for PM<sub>10</sub>/PM<sub>2.5</sub> and at intersections that are found to exceed CO standards or de minimis criteria using the CAL3QHC screening model. For the CAL3QHCR analysis, utilize the latest available five years (2003-2007) of meteorological data from Newark Airport and concurrent upper air data from Brookhaven, New York for the simulation program.
- Select emission calculation methodology and "worst-case" meteorological conditions. Vehicular cruise and idle emissions for the dispersion modeling will be computed using EPA's MOBILE6.2.03 model. For the "worst-case" analysis (at screening locations), conservative meteorological conditions to be assumed in the dispersion modeling are a one meter per second wind speed, Class D stability, and a 0.70 persistence factor.
- At each mobile source microscale receptor site, calculate maximum 1- and 8-hour CO concentrations for existing conditions, the future conditions without the Proposed Project and the future conditions with the Proposed Project. CO concentrations will be determined for up to two peak periods. Calculate maximum 24-hour and annual PM<sub>10</sub>/PM<sub>2.5</sub> concentrations for the future conditions without the Proposed Action and the future conditions with the Proposed Action.
- Compare future levels with the Proposed Action with standards. Future CO pollutant levels with the Proposed Action will be compared with NAAQS to determine compliance with standards, and to the city's *de minimis* criteria (i.e., a comparison of future levels with the Proposed Action versus future levels without the Proposed Action) to determine project impacts.
- Perform a regional (mesoscale) analysis to determine the regional emissions from project-generated marine, rail and on-road traffic, and stationary source emissions. Emissions of vehicular pollutant burdens will be computed based on the EPA emission estimating procedures for CO, PM<sub>10</sub>, PM<sub>2.5</sub>, VOCs and NO<sub>x</sub> and on the changes in vehicle miles traveled for the Build year. Estimates of the anticipated regional reduction in truck trips and associated emissions from such trips will also need to be computed, to develop the potential net changes in regional emissions associated with this project component.
- Examine mitigation measures. Analyses will be performed to examine and quantify ameliorative measures to eliminate or minimize any significant adverse impacts of the Proposed Action.
- Determine the consistency of the Proposed Action with the strategies contained in the SIP for the area. At any receptor sites where violations of standards occur, analyses would be performed to determine what mitigation measures would be required to attain standards.

### ***Analysis of On-Site Activities***

- Perform a detailed analysis using the AMS/EPA AERMOD dispersion model to estimate the potential impacts from the Proposed Project's on-site stationary and mobile/non-road sources and marine operations. Five years of meteorological data (2003-2007), consisting of surface data from Newark Airport and concurrent upper air data from Brookhaven, New York, will be used for the simulation modeling. Concentrations of the air contaminants of concern (i.e., particulate matter, sulfur dioxide, nitrogen dioxide, and CO) will be determined at ground level receptors (e.g., at sidewalks, open spaces) as well as elevated receptors representing nearby building floors. Predicted values will be compared with NAAQS, and the most current NYSDEC and NYCDEP interim guideline thresholds for PM<sub>2.5</sub>.

### **Greenhouse Gas Analysis**

- Sources of GHG emissions from the Proposed Project will be identified. The pollutants for analysis will be discussed, as well as the various city, state, and federal goals, policy, regulations, standards and benchmarks for GHG emissions.
- Fuel consumption will be estimated for the marine operations building and any other structures that may use fuel for heat or hot water, based on data from the existing terminal and/or specific information for the new structures, if available.
- GHG emissions associated with container terminal equipment will be estimated based on the anticipated usage and fuel type. Indirect emissions associated with electric-powered equipment will be addressed.
- The increased demand for electricity with the proposed project will be estimated using data from the existing operations and available data specific to the proposed project. GHG emissions for the project Build year will be quantified, using the most recent emission factors from the eGRID model, the New York State Energy Research and Development Authority (NYSERDA), and NYSDEC guidance.
- A qualitative discussion of the advantages of the proposed Berth 4 and marine container terminal regarding freight transport emissions will be presented.
- GHG emissions that would result from the construction of the Proposed Project will be quantified. Total emissions as well as annualized emissions will be presented. The estimate will include direct on-site emissions from non-road engines, direct off-site emissions from on-road, marine, and/or rail deliveries, electricity use for construction, and emissions associated with production of steel and cement used for the wharf deck and other components. Unless more specific information is available, emissions associated with the production of construction materials other than iron, steel, and concrete will be assumed to be negligible. GHG emissions from construction trucks and other construction traffic, as well as non-road construction traffic will be quantified using estimates developed as part of the Construction chapter of the EIS. The emission factors will be based on the carbon content of the fuels and the average fuel efficiency for large trucks and fossil-fuel powered non-road equipment, and electric power used will be quantified.
- Measures expected to lead to energy efficiency and reduced GHG emissions will be described. To the extent that information is available, the potential of these measures to reduce GHG emissions will be quantified, or qualitatively discussed.

### **Task 17. Noise**

Existing noise levels in the area immediately adjacent to the project site are relatively high and reflect the level of activity (particularly vehicular activity) in the area. Autos and trucks, along with noise generated by aircraft flyovers, rail traffic, and mechanical equipment all contribute to the total ambient noise levels. Under *CEQR Technical Manual* noise criteria, existing and future noise levels, both with and without the Proposed Action, are examined to determine conformance with standards. In conformance with the *CEQR Technical Manual*, aircraft noise is separated from vehicular and other noise sources for purposes of determining project impacts and attenuation requirements in building design. In addition, the *CEQR Technical Manual* requires the use of the  $L_{eq}$  and  $L_{10}$  noise descriptors for vehicular noise analyses.

In terms of the effects of the Proposed Action on community noise levels, the *CEQR Technical Manual* noise criteria consider a 3-5 dBA increase in noise a significant impact. To achieve a 3 dBA increase in noise level from traffic, existing passenger car equivalent (PCE) values would have to increase by 100 percent or more.

New peak hour traffic generated by the Proposed Project would be concentrated at the intersection of Western Avenue and Goethals Road North, which is adjacent to the main entrance to the existing Howland Hook Marine Terminal and which would also be used by trucks en route to and from the proposed Berth 4. Based on 2006 data, existing weekday traffic volumes through this intersection range from approximately 650 to 690 vehicles per hour (vph) in the weekday peak hours. As much of this existing traffic is en route to and from the HHMT and other nearby industrial uses, it is predominantly comprised of trucks.

Based on a preliminary travel demand forecast, the Proposed Project would generate a maximum of approximately 310 vehicle trips per hour during the weekday peak hours. The volumes of new traffic would therefore be less than half the existing peak hour volumes at the intersection of Western Avenue and Goethals Road North (the location where project-generated traffic would be most concentrated). In addition, although much of the new project-generated traffic would be comprised of trucks, existing traffic along these corridors is also predominantly comprised of trucks. Project-generated vehicle trips are therefore not expected to result in a 100 percent increase in PCE values over existing conditions. Significant adverse impacts from new project-generated traffic are therefore considered unlikely. A qualitative review and screening assessment of noise with respect to project-generated traffic will be included in the EIS.

It should be noted, however, that the Proposed Action would also include the relocation of a portion of Western Avenue closer to Mariners Marsh Park, which is unmapped parkland under the jurisdiction of the New York City Department of Parks and Recreation. Although existing traffic volumes along Western Avenue are relatively light, and substantial numbers of new project-generated vehicle trips are not expected on the relocated roadway segment, an assessment of the potential for noise impacts on this parkland from traffic along Western Avenue will be provided in the EIS.

### **Task 18. Construction Impacts**

The construction schedule for development of the Proposed Project will be described, on-site activity will be estimated, and a qualitative analysis of the effects of construction activities will be performed. The analysis will be based on the peak construction period of the project. Technical areas to be analyzed include the following:

- **Project site.** This section will assess any physical changes to the project site resulting from the proposed construction. A discussion of construction staging, compliance with building codes and other applicable laws, etc. will be provided.
- **Natural Resources/Water Quality.** This section will assess the potential for construction activities to result in significant adverse impacts to water quality, and existing/future parkland (e.g., Arlington Marsh and Mariners Marsh Park) and other natural resources in the vicinity of the project site.
- **Transportation.** This section will consider any losses in traffic lanes, walkways, and other transportation services, and increases in vehicles from construction workers. Potential temporary impacts to these transportation systems will be assessed qualitatively.

- Air Quality. The construction air quality impact section will contain a qualitative discussion of both mobile source emissions from construction equipment (including dredging equipment) and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce potential impacts, as applicable.
- Noise Impacts. The construction noise impact section will contain a qualitative discussion of noise from construction activity.
- Hazardous Materials. This section will assess the potential for construction workers to be exposed to any potential contaminants during the construction process.

### **Task 19. Public Health**

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, hazardous materials, construction and natural resources. A public health assessment may be warranted if a Proposed Action results in a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking water; c) solid waste management practices that could attract vermin and result in an increase in pest populations; d) potentially significant adverse impacts to sensitive receptors from noise and odors; or e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts. Based on the findings of the tasks discussed above, the EIS will provide an assessment of potential public health impacts, following the guidelines presented in the *CEQR Technical Manual*.

### **Task 20. Environmental Justice**

With respect to environmental justice, NEPA guidelines will be used in the absence of CEQR guidance. NEPA guidelines require that federal agencies consider and address adverse environmental effects of proposed federal projects on minority and low-income communities. Therefore, environmental justice will be assessed in the EIS, as applicable.

### **Task 21. Mitigation**

EIS requirements include the development of mitigation measures to address any significant impacts. Practicable mitigation measures will be developed in close coordination with the responsible city and state agencies, which may include NYCDOT, NYCDEP, NYCLPC, NYSDEC, NYCDPR, NYCDCP, U.S. Army Corps of Engineers, and other agencies as necessary. Given the filling, shading and dredging to wetlands that would likely be necessary to develop the proposed container ship berth and terminal, it is anticipated that substantial wetlands mitigation efforts would be required. The potential effects of implementing wetlands mitigation and any other recommended mitigation measures would be fully assessed in the EIS. Where project-related impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

### **Task 22. Alternatives**

Environmental impact regulations require the consideration of alternatives, which are often formulated in response to impacts as a result of the action. The alternatives are usually defined when the full extent of the Proposed Action's impacts are identified. The EIS will analyze several alternatives. For the purposes

of scoping it is assumed that a No-Action Alternative will be analyzed in the EIS, along with alternatives that minimize or eliminate potential significant adverse impacts. It is anticipated that these will include a No-Impact Alternative (in which there is a change in density or program design in order to avoid any potential impacts associated with the Proposed Action), a Reduced Footprint Alternative (in which there is a change in program design so that it can be accommodated on a smaller site in order to reduce potential impacts to adjoining wetlands), and a New Location Alternative (in which the facility is located on an alternative waterfront site in New York City). For technical areas where impacts have been identified, the alternatives analysis will determine whether these impacts would still occur under each analyzed alternative, and also determine the level of mitigation needed when compared to the Proposed Action.

During the Proposed Project's early planning phase, a wide range of location and design alternatives were considered, including westward extension of the site over Bridge Creek, alternatives with a fewer number of container runs, and alternatives that would result in lesser or no impacts to wetlands. A detailed discussion of all of the various alternatives considered in developing the Proposed Project will also be provided in the EIS.

### **Task 23. Summary EIS Chapters**

In accordance with CEQR guidelines, the EIS will include the following three summary chapters, where appropriate to the Proposed Action:

- Unavoidable Adverse Impacts - which summarizes any significant impacts that are unavoidable if the Proposed Action is implemented regardless of the mitigation employed (or if mitigation is impossible).
- Growth-Inducing Aspects of the Proposed Action - which generally refer to "secondary" impacts of a Proposed Action that trigger further development.
- Irreversible and Irretrievable Commitments of Resources - which summarizes the Proposed Action and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

### **Task 24. Executive Summary**

The executive summary will utilize relevant material from the body of the EIS to describe the Proposed Action, its environmental impacts, measures to mitigate those impacts, and alternatives to the Proposed Action. The executive summary will be written in enough detail to facilitate drafting of a notice of completion by the lead agency.

**APPENDIX A**

**LIST OF INVOLVED AND INTERESTED AGENCIES**

**New York Container Terminal Expansion  
Draft Scope of Work for an EIS**

**APPENDIX A: LIST OF INVOLVED AND INTERESTED AGENCIES**

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**INVOLVED AGENCIES**

New York City Council  
New York City Department of City Planning  
New York State Department of Environmental Conservation  
New York State Office of General Services  
Office of the New York City Deputy Mayor for Economic Development and Finance  
United States Army Corps of Engineers  
Staten Island Borough Board  
U. S. Environmental Protection Agency  
NOAA-National Marine Fisheries Service  
National Fish and Wildlife Service

**INTERESTED AGENCIES**

New York City Department of Environmental Protection  
New York City Department of Parks and Recreation  
New York City Department of Transportation  
New York State Department of State  
New York State Department of Transportation  
Staten Island Borough President's Office  
Staten Island Community Board 1  
U. S. Department of Transportation