

DRAFT
SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT
BROOKLYN PIERS 7-12

CEQR NO. 06SBS009K
ULURP NOs. Pending

September 6, 2006

A. INTRODUCTION

This scope of work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the Brooklyn Piers 7-12 project in Brooklyn Community District 6. The Proposed Action comprises: acquisition of a portion of an approximately 120 acre site by the City of New York (the City) from the Port Authority of New York and New Jersey (Port Authority), encompassing the area between Piers 7 and 12; disposition of most of that property by the City for future development; mapping and demapping of public streets and easements as part of the site's program of improvements; rezoning of portions of the property being acquired and immediately adjacent areas to allow a wider range of accessory uses; modification of the Red Hook Peninsula Urban Renewal Plan (URP) to reflect these changes; and waterfront zoning certification/authorization; (collectively, "the Proposed Action"). The acquisition site, urban renewal area and area to be rezoned, combined, create the area defined as the "Project Site." The Proposed Action would facilitate the re-use of this significant parcel of waterfront property in a manner that would allow the preservation of the waterfront industrial uses on the northern portion, and the expansion of cruise terminal and complementary uses on the southern portion, while improving public access to the waterfront ("the Proposed Project"). This document provides a description of the Proposed Project and the projected development scenario, 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, 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. As the vast majority of the Project Site consists of waterfront property and would largely support maritime-related uses, the New York City Department of Small Business Services (DSBS), the legal successor to the New York City Department of Ports and Terminals, would serve as lead agency, and will coordinate the review of the Proposed Action among the involved and interested agencies and the public.

B. REQUIRED APPROVALS AND REVIEW PROCEDURES

The Proposed Action requires City Planning Commission (CPC) and City Council approvals through the Uniform Land Use Review Procedure (ULURP), and consists of the following actions:

- Acquisition of portions of an approximately 120 acre site by the City from the Port Authority, encompassing the area between Piers 7 and 12, generally to the west of Furman, Columbia, Van Brunt, Imlay, Conover, and Ferris Streets (acquisition site).
- Amendment to the City Zoning Map to rezone portions of the Project Site and immediately adjacent areas to allow a wider range of accessory uses. As shown in Figure 2 below, the proposed zoning changes would change some areas currently zoned M2-1 (the area of the Project Site to the south of Degraw Street) to M1-4, and an area along the west side of Columbia Street currently zoned M1-1 and M2-1 would be rezoned to an M1-4/R6A mixed-use district that allows a mix of uses, including commercial and residential.
- Amendments to the City Map to map and de-map public streets and easements as part of the site's program of improvements. This would include the extension of Conover Street north of Pioneer Street, as well as the mapping of other street segments, including Verona, Commerce, Bowne and Summit Streets between Imlay and Conover Streets. As part of this mapping action, the roadbeds of some of those street segments being mapped (namely, Commerce Street as well as portions of Verona and Bowne Streets between Imlay and Conover Streets) would be acquired by the City from private owners. In addition, the portion of Columbia Street between Atlantic Avenue and Degraw Street would be remapped at a width of 95 feet, and a portion of Degraw Street between Columbia and Conover Streets would be remapped at a width of 100 feet. The street mapping actions would facilitate the establishment of a 25-foot wide greenway/bikeway along the upland edge of the Project Site.
- Modification of the Red Hook Peninsula Urban Renewal Plan (dated 1972, amended in 1979 and 1988) to reflect proposed changes to the street network as well as allowable uses.
- Disposition of the acquired and City-owned property, encompassing 13 separate parcels, by the City for future development (proposed parcels). Disposition will require approval through ULURP under City Charter Section 197(c) and separate subsequent Borough Board and Mayoral approval pursuant to City Charter Section 384(b)(4).
- Waterfront zoning certification/authorization pursuant to ZR Section 62-71 and/or ZR Section 62-72, for public waterfront access requirements and visual corridors.

The above actions are subject to the City Environmental Quality Review (CEQR) procedures. An Environmental Assessment Statement (EAS) was completed on September 6, 2006. DSBS, acting as lead agency, has determined that the Proposed Action has the potential for significant adverse impacts. Therefore, a detailed assessment of likely effects in those areas of concern must be prepared and disclosed in an EIS.

This scoping document sets forth the analyses and methodologies, which will be utilized to prepare the EIS. The public, interested agencies, Brooklyn Community Board 6, and elected officials are invited to comment on the draft scope, either in writing or orally, at a public scoping meeting to be held on Thursday, October 12, 2006 at 6:00 PM at the Long Island College Hospital, 339 Hicks Street (at Atlantic Avenue), Brooklyn, 11201 in Conference Rooms B, C, and D. Comments received during the draft scope's public hearing, and written comments received up to 10 days after the hearing will be considered and incorporated as appropriate into a final scope of work. Written comments may be submitted at the public scoping meeting, or to Ms. Meenakshi Varandani at New York City Economic Development Corporation, 110 William Street, New York, 10038, or to her fax number at (212) 312-3989. The final scope of work will serve as a framework for preparing the Draft EIS (DEIS) for the Proposed Action.

Once the DEIS is complete, the document will be made available for public review and comment. The DEIS will accompany the Uniform Land Use Review Procedure (ULURP) application through the public hearings at the Community Board and City Planning Commission (CPC). A public hearing will be held on the DEIS in conjunction with the CPC hearing on the ULURP applications to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for 10 days after the public hearing to allow additional written comments on the DEIS. At the close of the public review period, a Final EIS (FEIS) will be prepared that will incorporate all substantive comments made on the DEIS, along with any revisions to the technical analyses necessary to respond to those comments. The FEIS will then be used by the decision makers at permitting agencies to prepare CEQR findings, which address project impacts and proposed mitigation measures, before deciding whether to approve the requested discretionary actions.

C. DESCRIPTION OF THE PROPOSED ACTION

Existing Conditions

The Project Site is a large swath of publicly controlled, partially utilized land on the waterfront of Brooklyn Community District 6 (see Figure 1 for location map). It encompasses approximately 120 acres of upland property, with approximately 1.1 miles of waterfront frontage, and includes areas to be acquired by the City from the Port Authority as well as some City-owned upland parcels that are part of the Red Hook Peninsula Urban Renewal Area. As shown in Figure 1, the northern boundary of the Project Site is at Atlantic Avenue, while the southern border is at Wolcott Street.

A mix of maritime uses, from traditional cargo activities to cruise homeport operations, currently occupies portions of the site, while other portions remain vacant. Piers 7 through 10 include a general import/export cargo area and a container terminal area. Pier 7 and Pier 8 are currently utilized as a general import/export cargo area. The upland property of Pier 8, and Piers 9A, 9B and 10 and their associated upland properties, which total approximately 67 acres, are currently leased by the Port



Authority to American Stevedoring Inc., which operates the Red Hook Marine Terminal, a container port. The Red Hook Marine Terminal is an off-loading cargo facility that imports raw materials to the region, and is a source of local employment. This facility handles both containerized and break-bulk cargo, and boasts the highest amount of cocoa imports from overseas in the United States.

Estimates of current employment at the Project Site vary. The Port Authority estimates that there are currently approximately 100 jobs on an average day at the general import/export cargo piers; an estimated 100 jobs on an average day at the container terminal; and approximately 130 jobs associated with the various miscellaneous and warehouse uses on the remainder of the acquisition site, for an estimated total of approximately 330 jobs currently at the Project Site, excluding Piers 11 and 12.

The City currently leases Piers 11 and 12 from the Port Authority. The shed on Pier 11 is currently occupied by “Picture Cars,” a business that supplies movies and TV shows with vehicles, which occupies the existing shed on a short-term basis. Pier 12, at the southern end of the Project Site, has been developed as the new Brooklyn Cruise Terminal in Red Hook, the exclusive port for the Norwegian and Carnival Cruise Lines. The 190,000 sf terminal was officially inaugurated on April 15, 2006, with the arrival of the Queen Mary 2, one of the largest passenger liners ever built. The Red Hook terminal is the first cruise port in the City that is long enough and deep enough to accommodate extra-large ships, which account for an ever-growing share of the worldwide cruise business. The cruise terminal is expected to accommodate an estimated 192,000 passengers from 38 ships during its first year of operation, eventually accounting for approximately one-fifth of the roughly one million passengers who will pass through New York City this year. It is estimated that the new Brooklyn facility at Pier 12 has created approximately 290 jobs.

The Proposed Action

As discussed above, the Proposed Action comprises several discretionary actions that would facilitate the re-use of this significant parcel of waterfront property in a manner that would allow the preservation of the waterfront industrial uses on the northern portion, and the expansion of cruise terminal and complementary uses on the southern portion, while substantially improving public access to the waterfront over the long term (“the Proposed Project”). The components of the Proposed Project have been carefully selected based on certain guiding principles for the redevelopment of Brooklyn Piers 7-12.

The Proposed Project is intended to sustain and substantially enhance Red Hook’s maritime identity by establishing and maintaining opportunities for maritime businesses on Piers 7 through 9B, including water-dependent cargo and related operations. In addition, the cruise operations would be expanded to Pier 10 (in addition to the current Pier 12), and active maritime uses would be located in Atlantic Basin (such as marine, maritime support services and waterborne transport).

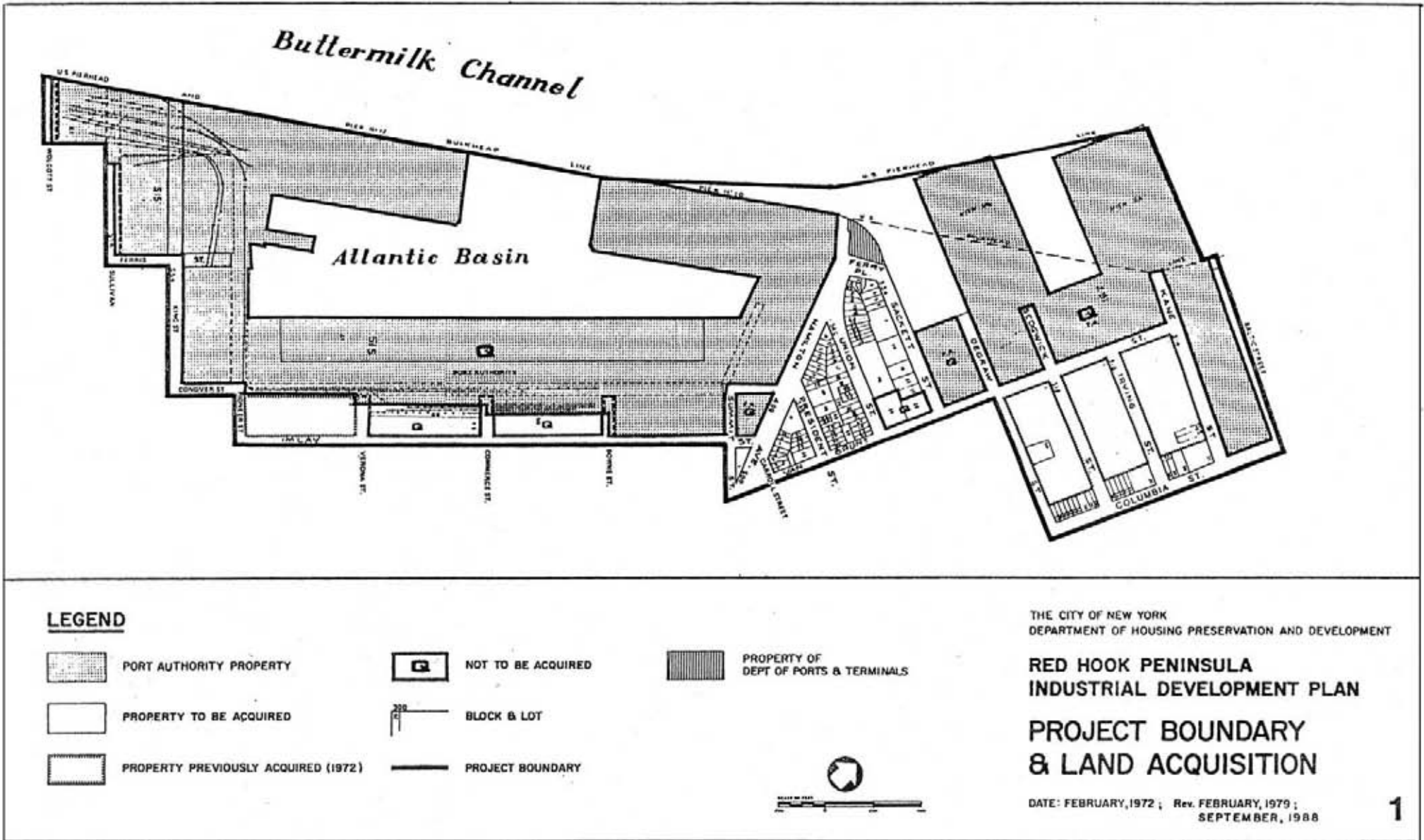
Additionally, the Proposed Project would create new economic development opportunities and jobs by creating a node of activity around Atlantic Basin, which would encourage the development of a dynamic mixed-use area that reflects both the urban fabric of the upland area and the maritime waterfront. Uses in this node of activity around Atlantic Basin, which is being referred to as a Dynamic Maritime Marketplace concept, could include maritime support/light maritime uses, open space, markets, light industrial and related retail, and ancillary uses to support maritime/cruise uses in

the Basin (such as a small hotel with conference/meeting space), as described below in the discussion of the reasonable worst-case development scenario.

Waterfront access would also be provided as part of the Proposed Project, and visual corridors would be established wherever possible, particularly at Atlantic Basin. In addition, the Proposed Action would connect points of waterfront access with the proposed Brooklyn Waterfront Greenway. The proposed expansion of the Brooklyn Waterfront Greenway would be facilitated by the proposed street mapping actions (widening of existing streets and mapping new streets, as discussed below), which would allow the establishment of a 25-foot wide greenway/bikeway along the entire upland edge of the Project Site. The Proposed Project would also improve the transportation and street network, by broadening north-south linkages through the extension (and mapping) of Conover street north of Pioneer Street, as well as the mapping of other new street segments close to the waterfront (including segments of Summit, Bowne, Commerce, and Verona Streets between Imlay and Conover Streets), and by facilitating ferry/water taxi transit nodes where practicable.

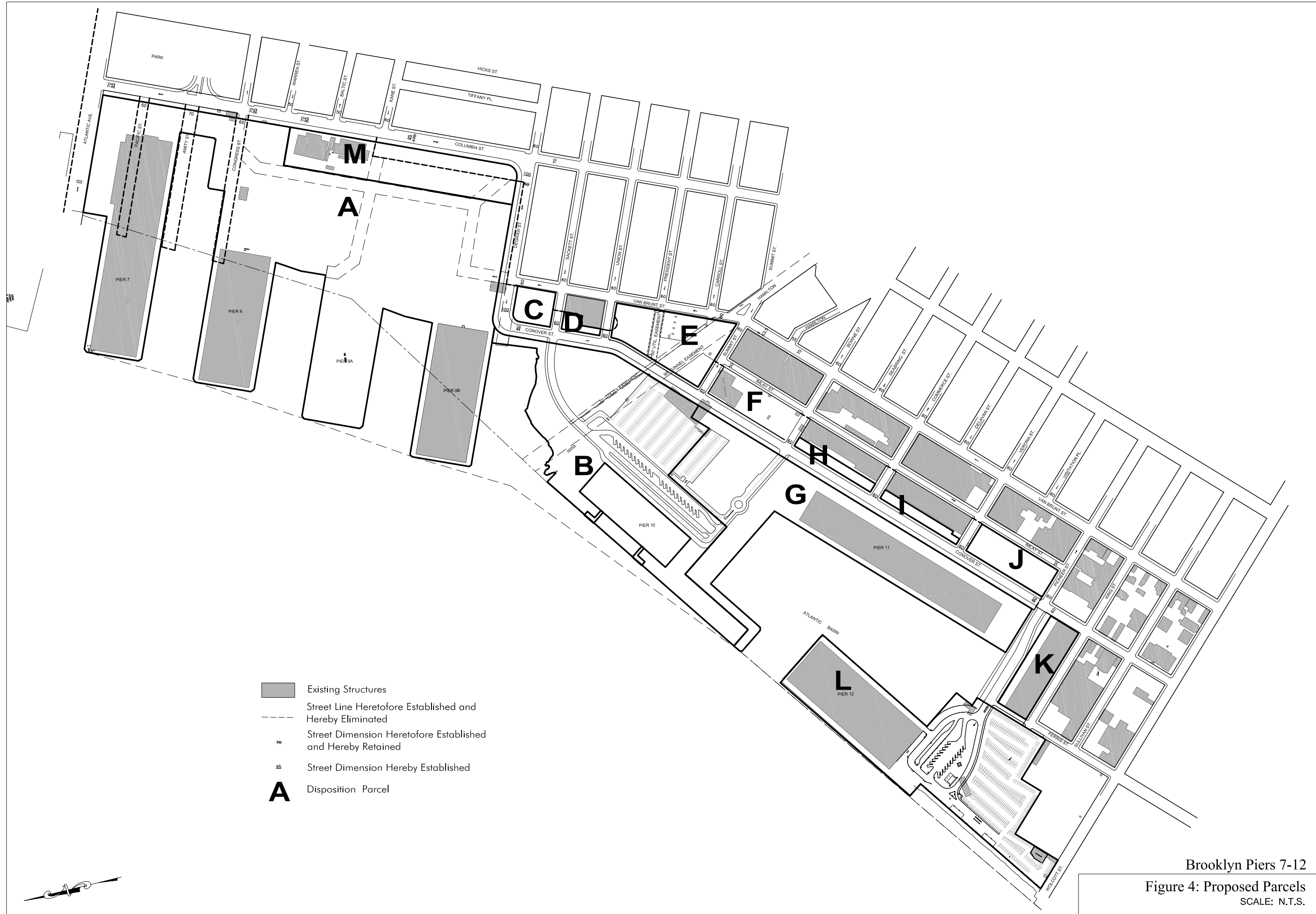
Implementation of the Proposed Project requires the following discretionary actions:

- Acquisition of portions of an approximately 120 acre site by the City from the Port Authority, encompassing the area between Piers 7 and 12, generally to the west of Furman, Columbia, Van Brunt, Imlay, Conover, and Ferris Streets (acquisition site), as illustrated in Figure 1.
- Amendment to the City Zoning Map to rezone portions of the Project Site to allow some accessory uses which are not allowed under current zoning (such as a hotel). As illustrated in Figure 2, the proposed zoning changes would change some areas currently zoned M2-1 (the area of the Project Site to the south of Degraw Street) to M1-4, and an area along the west side of Columbia Street currently zoned M1-1 and M2-1 would be rezoned to a M1-4/R6A mixed-use district that allows a mix of uses, including commercial and residential.
- Amendments to the City Map to map public streets as part of the site's program of improvements. As illustrated in Figure 4, this would include the extension of Conover Street north of Pioneer Street, as well as the mapping of other street segments, including Verona, Commerce, Bowne and Summit Streets between Imlay and Conover Streets. As part of this mapping action, the roadbeds of those street segments being mapped (namely, Commerce Street as well as portions of Verona and Bowne Streets between Imlay and Conover) would be acquired by the City from private owners. In addition, the portion of Columbia Street between Atlantic Avenue and Degraw Street would be remapped at a width of 95 feet, and a portion of Degraw Street between Columbia and Conover Streets would be remapped at a width of 100 feet. These mapping actions would facilitate the extension of the proposed Brooklyn Waterfront Greenway into the study area, by establishing a 25-foot-wide greenway/bikeway along the entire upland edge of the Project Site, which would run along the western side of Columbia Street, the northern side of Degraw Street, and the western side of the proposed Conover Street.
- Modification of the Red Hook Peninsula Urban Renewal Plan (dated 1972, amended in 1979 and 1988) to reflect proposed changes to the street network as well as allowable uses. The boundaries of Urban Renewal Plan are shown in Figure 3.
- Disposition of the acquired and City-owned property, encompassing 13 separate parcels, by the City for future development (proposed parcels, as illustrated in Figure 4). Disposition will



Brooklyn Piers 7-12

Figure 3
Red Hook Peninsula Urban Renewal Area



Brooklyn Piers 7-12

Figure 4: Proposed Parcels

SCALE: N.T.S.

require approval through ULURP under City Charter Section 197(c) and separate Borough Board and Mayoral approval pursuant to City Charter Section 384(b)(4).

- Waterfront zoning certification/authorization pursuant to ZR Section 62-71 and/or ZR Section 62-72, for public waterfront access and visual corridors.

Project Purpose and Need

With the Port Authority's current lease with American Stevedoring, Inc., expiring in 2007, and the Red Hook containerport's inability to compete with New Jersey's terminals, the City is seeking to acquire this waterfront site in order to facilitate its reuse and redevelopment in a comprehensive manner, with a focus on maritime and industrial uses.

Approval of the proposed discretionary actions would enable the City to acquire this significant parcel of land, and facilitate its reuse in a manner that would allow the preservation of the waterfront industrial uses on the northern portion, and the expansion of cruise terminal and complementary uses on the southern portion, while improving public access to the waterfront. The purpose of the Proposed Action is to:

- Sustain and enhance Red Hook's maritime identity. Establishing and maintaining opportunities for maritime businesses on Piers 7 through 9B, including water-dependent cargo and related operations, would facilitate this. In addition, the cruise operations would be expanded to Pier 10 (in addition to the current Pier 12), and active maritime uses would be encouraged in Atlantic Basin (such as marine, maritime support services and waterborne transport).
- Create new economic development opportunities and jobs. This would be achieved by creating a node of activity around Atlantic Basin, which would encourage the development of a dynamic mixed-use area that reflects both the urban fabric of the upland area and the maritime waterfront. Uses in this node of activity around Atlantic Basin could include maritime support/light maritime uses, open space, markets, light industrial and related retail, and ancillary uses to support maritime/cruise uses in the Basin (such as a small hotel with conference/meeting space).
- Provide waterfront access. The Proposed Action would facilitate the creation of waterfront access, and establishing view corridors wherever possible, particularly at Atlantic Basin. In addition, the Proposed Action would connect points of waterfront access with the proposed Brooklyn Waterfront Greenway. The proposed expansion of the Brooklyn Waterfront Greenway would be facilitated by the proposed street mapping actions (widening of existing streets and mapping new streets), which would allow the establishment of a 25-foot wide greenway/bikeway along the entire upland edge of the Project Site.
- Improve the transportation and street network. This would be accomplished by developing ferry/water taxi transit nodes, broadening north-south linkages through the extension (and mapping) of Conover street north of Pioneer Street. Moreover, the proposed extension of Conover Street would allow the future creation of a one-way traffic couplet along Conover and Van Brunt Streets, which would more efficiently disperse traffic in the Red Hook area.

- Strengthen the connection between upland neighborhoods and the water's edge. The Proposed Action would facilitate the extension of the surrounding grid pattern into key project area zones, thereby reestablishing street linkages. The Proposed Action also seeks to establish gateway entrances to the project area at Hamilton Avenue and at Atlantic Avenue; and to develop appropriate transitions between the project area and Brooklyn Bridge Park, Coffey Street area, and Governor's Island.

Reasonable Worst-Case Development Scenario (RWCDS)

In order to assess the potential effects of the Proposed Action, a reasonable worst-case development scenario (RWCDS) for both "future No-Action" (No-Build) and "future With-Action" (Build) conditions will be analyzed for an analysis year, or Build Year of 2014. A Build year of 2014 is assumed as it provides an 8-year analysis period. During that time it is reasonable to expect that the infrastructure improvements, including the extension of Conover Street, would be implemented. In addition, several uses including a passenger cruise ship terminal and hotel are expected to be constructed, which are expected to induce and invigorate additional development within the project area. The Build scenario identifies the amount, type, and location of development that is expected to occur by 2014 as a result of the Proposed Action. The No-Build scenario identifies similar development projections for 2014 absent the Proposed Action. The incremental difference between the Build and No-Build scenarios serves as the basis for impact analyses.

As noted above, Pier 12 has already been developed as a passenger cruise terminal. As this terminal has been completed subsequent to the initiation of the preliminary planning process for the Proposed Project, its development would be included in the analysis of the No-Action condition. For analysis purposes, it is assumed that the remainder of the Project Site (Piers 7-11) would not be re-developed in the absence of the Proposed Project. It should also be noted that a small area of the Project Site might ultimately be utilized to accommodate warehousing facilities for Governor's Island. However, as the program for future development on Governor's Island has not yet been determined, the RWCDS for the Proposed Action considers some general warehousing space on Parcel A, which could be utilized by Governor's Island.

Projected Development – Future With-Action Condition

A reasonable worst-case development scenario has been developed for environmental analysis purposes, which seeks to reflect the current planning guidelines, the City's goals for the site, and the community's vision for the area. Based on the guiding principles established by the City and Brooklyn Community Board 6, the RWCDS combines a mix of uses, including a second cruise ship terminal on Pier 10, continuation of marine terminal activities on Piers 7 through 9B, and a mix of warehousing/light industrial and commercial and retail uses throughout the Project Site. The RWCDS also assumes residential development on one parcel.

In identifying the RWCDS, the following criteria were considered:

- The City will control the disposition of the majority of the Project Site, which will be conducted to implement a proposed development program in accordance with guiding principles and planning guidelines, which were established jointly by the City and Brooklyn Community Board 6;
- The majority of the Project Site located to the north of Degraw Street will retain its existing zoning designation with the exception of a small area along the west side of Columbia Street;

- The proposed zoning changes to the remainder of the Project Site would maintain manufacturing zoning classifications in the area and would not increase the maximum floor area ratio (FAR) permitted;
- Many of the proposed development parcels contain existing easements and would support uses that have parking needs, which would restrict the development potential of the sites;
- In the current market for industrial space, there is demand primarily for one-story industrial buildings, or similar buildings with accessory office space.

For analysis purposes, the Project Site has been divided into 13 parcels (A through M), as illustrated in Figure 4 above. Table 1 shows the reasonable worst case development scenario assumptions for each parcel, and the following provides a brief description of the programmatic elements assumed for each of the 13 parcels:

Parcel A: This approximately 49-acre parcel would be dedicated entirely to marine terminal and industrial/manufacturing uses. It is anticipated that Pier 7 would include a brewery, and an associated 40,000 sf beer garden. Piers 8, 9A and 9B would be utilized for warehouse/distribution, a general cargo pier for containers and break bulk cargo and other similar uses. The uses on this parcel would be predominantly maritime in nature, with warehousing and shipment functions. The approximately 623,200 sf of floor area in the three existing pier sheds are assumed to be re-used for these uses, while the remainder of the lot area is assumed to continue being utilized by marine terminal/container/storage activity.

Parcel B: Passenger cruise ship terminal on Pier 10, as well as an approximately 250-room hotel with approximately 40,000 sf of conference/meeting facilities, and approximately 2 acres of open space are assumed to occupy this parcel.

Parcel C: For this parcel, the RWCDs assumes approximately 71,400 sf of light industrial, warehousing and office uses.

Parcel D: For analysis purposes, this small parcel is assumed to be occupied by space for artists and galleries, with an estimated 24,000 sf.

Parcel E: As shown in Table 1, the RWCDs assumptions for this parcel consist of approximately 34,700 sf of retail uses, and a total of 152,400 sf of light industrial, warehousing and office uses.

Parcel F: This parcel is assumed to be occupied by up to approximately 147,200 sf of light industrial and warehousing uses.

Parcel G: This parcel, which is the only parcel located directly on Atlantic Basin, would accommodate a variety of uses that would create a Dynamic Maritime Marketplace concept, including retail, markets, restaurants, performing arts, education (a 25,000 sf trade school), arts and crafts, light industrial, office, maritime (marine services, ship repair, fueling, boat lift, ferry, etc), recreation, a marina with up to 200 slips, and open space uses. Some of those uses would re-use the existing 168,000 sf shed on Pier 11.

TABLE 1: Reasonable Worst Case Development Scenario (RWCDs) - Future With-Action Conditions

Parcel	Lot Size	Existing Zoning	Existing Floor Area (est.)	Proposed Zoning	Max FAR Allowed	Maximum Floor Area Allowed (zsf)	Proposed Use***	Proposed Program												TOTAL SF	NET INCREMENT (compared to existing floor area)	Proposed Open Space/ Circulation (acres) (4)			
								Retail/ Public Markets (sf)	Restaurant/ Entertainment (sf)	Office (sf)	Marine Terminal (sf)	Light Industrial/ Manufacturing (sf)	Recreation Space (built) (sf)	Schools/ Education (sf)	Performing Arts (sf)	Arts & Crafts/ Artists Space/ Gallery (sf)	Hotel (sf/rooms)	Conference/ Meeting Space (sf)	Residential sf/units				Maritime (1) (sf)	Marina (sf)	Cruise Ship Terminal (sf)
A*	2,115,840	M2-1 M1-1	623,200 (existing pier sheds)	No change	2.0 1.0	3,940,401	Pier 7: Brewery, warehouse/distribution, beer garden Pier 8, 9A, 9B: warehouse/distribution; general cargo pier - container/ break bulk, lumber; passenger and freight transportation		40,000 (2)		623,200 (See Footnote #3 below)									663,200	40,000				
B	809,510	M2-1	0	M1-4	2.0	1,619,020	Second Cruise Ship Terminal, Hotel/meeting space, Open space								162,500 250 rooms	40,000 within hotel				190,000	392,500	392,500	2.0 waterfront open space (estimate)		
C	35,660	M2-1	0	M1-4	2.0	71,320	light industrial/warehousing/office			35,700		35,700									71,400	71,400			
D**	12,010	M2-1	0	M1-4	2.0	24,020	artists space/gallery							24,000							24,000	24,000			
E	152,040	M2-1	0	M1-4	2.0	304,080	retail/industrial support/office/light industrial	34,700		76,200		76,200									187,100	187,100			
F	73,600	M2-1	0	M1-4	2.0	147,200	light industrial/warehousing					147,200									147,200	147,200			
G	671,200	M2-1	168,000	M1-4	2.0	1,342,400	retail/ performing arts/ markets/ maritime/ restaurants/ arts & crafts/gallery / office/ light industrial/ schools/education / recreation / open space/ circulation/ greenway	70,000	48,000	30,000		47,000	50,000	25,000	70,000	110,000			80,000	4,000 & 200 slips		534,000	366,000	2.1 estimate for Atlantic Basin esplanade	
H	23,520	M2-1	0	No change	2.0	47,040	1 story café/retail		23,500												23,500	23,500			
I	22,730	M2-1	0	No change	2.0	45,460	1 story café/retail		22,700												22,700	22,700			
J	73,600	M2-1	0	M1-4	2	147,200	ground floor retail, light industrial/warehousing	50,400				96,800									147,200	147,200			
K	88,560	M2-1	62,500	M1-4	2.0	177,120	retail/ restaurant/ light industrial/ artists studios/ arts & crafts/ office/ maritime	10,000	10,000	30,000		47,100			30,000			50,000			177,100	114,600			
L	641,840	M2-1	190,000	M1-4	2.0	1,283,680	Existing Cruise Ship Terminal (Pier 12)													190,000	190,000	0			
M	238,900	M2-1 M1-1	61,700	M1-4/R6A	2.0 M/C 3.0 R/CF	477,800 M/C 716,700 R/CF	Retail/ office/ residential/ open space	37,700		61,700 estimated for 2 existing bldgs							350,000 350				449,400 350 units	387,700 350 units			
	4,959,010		1,105,400			9,626,741 +up to 238,900	RWCDs - preliminary	202,800	144,200	233,600 (including existing bldgs)	623,200	450,000	50,000	25,000	70,000	164,000	162,500 250 rooms	40,000 meeting space within hotel	350,000 350	130,000	4,000 & 200 slips	380,000	3,029,300 350 units 250-room hotel	1,923,900 350 units 250-room hotel	4.1

* approximately 291,279 sf of parcel A are zoned M1-1.

** Only the City-owned parcel along Conover Street

*** Accessory parking would be provided on all development parcels.

(1) Maritime use category includes: marine services, ship repair, fueling, boat lift, ferry, etc.

(2) 40,000 sf beer garden is assumed on Pier 7. Beer garden is assumed to be developed in the future without the proposed project.

(3) Floor area shown is for three existing pier sheds, which are assumed to be re-used. The remainder of the lot area of Parcel A (approximately 1,482,590 sf) is assumed to continue being utilized by marine terminal/container/storage activity.

(4) Does not include 25-foot-wide greenway to be established along the upland edge of the Project Site, along Columbia, Degraw, and newly mapped Conover Streets.

Site B Assumptions:

Assume 40,000 sf of meeting space, and a 250-room hotel, estimated at approximately 650 sf per room (which include circulation and mechanical space as well as accessory retail and restaurant facilities).

Site M Assumptions:

Assume 1000 gsf per residential unit

Parcels H and I: These two small parcels, located at the back of two existing buildings on Imlay Street, are assumed to accommodate cafes/restaurants.

Parcel J: This parcel is assumed to be occupied by approximately 50,400 sf of retail, and up to 96,800 sf of light industrial/warehousing uses.

Parcel K: Artists studios, arts and crafts, retail, restaurant, office and maritime uses are assumed to occupy this parcel, totaling up to approximately 177,100 sf.

Parcel K: Artists studios, arts and crafts, retail, restaurant, office and maritime uses are assumed to occupy this parcel, totaling up to approximately 177,100 sf.

Parcel L: This parcel is occupied by the new cruise ship terminal on Pier 12, and would remain unchanged under future With-Action conditions.

Parcel M: The RWCDS assumes that the two existing office buildings between Kane and Warren Streets, which are currently occupied by offices for the Port Authority and the Waterfront Commission, would remain. These offices are estimated to consist of approximately 61,700 sf. The remainder of the parcel is assumed to be developed with approximately 37,700 sf of ground floor retail and approximately 350 dwelling units (assuming 1,000 gsf per unit).

As shown in Table 1, the RWCDS summarized above is projected to result in a total of approximately 202,800 sf of retail/public market uses, 144,200 sf of restaurant uses, 171,900 sf of office uses (excluding 61,700 sf of existing offices), 623,200 sf of marine terminal uses (three pier sheds), 450,000 sf of light industrial/manufacturing uses, 50,000 sf of indoor recreation space, a 25,000 sf trade school, 70,000 sf of performing arts space, 164,000 sf of arts and crafts/artists space/galleries, a 250-room hotel with approximately 40,000 sf of conference/meeting facilities, 130,000 sf of maritime uses, a passenger cruise ship terminal, approximately 350 residential units, and a marina with up to 200 slips. Accessory parking would be provided on all parcels to accommodate demand. In addition, approximately 4.1 acres of open space/circulation will be provided throughout and adjacent to the Project Site, in addition to a 25-foot wide greenway that would be facilitated along the upland edge of the Project Site. The components of the RWCDS are summarized in Table 2 on the following page. Based on standard employee and resident ratios, this RWCDS is estimated to introduce approximately 3,930 new employees, and up to approximately 770 residents to the area.

Table 2: Summary of Uses Anticipated as Part of the Reasonable Worst Case Development Scenario (RWCDS)

RWCDS Projected Uses *	Estimated Total Square Feet (sf)
Retail/Public Markets	202,800
Restaurant/Entertainment	144,200
Office (additional only, not including 61,700 sf in two existing buildings)	171,900
Marine Terminal **	623,200
Light Industrial/Manufacturing	450,000
Hotel	162,500 (250 rooms)
Conference/Meeting Space (in hotel)	40,000
Arts & Crafts/Artists Space/Galleries	164,000
Trade School	25,000
Performing Arts	70,000
Maritime***	130,000
Residential	350,000 (350 units)
Recreation (indoors)	50,000
Passenger Cruise Ship Terminal (Pier 10)	190,000
Marina	4,000 (200 slips)
TOTAL FLOOR AREA*	2,777,600
<u>Open Space</u>	194,100
<p>* Excludes existing uses to remain, namely the existing cruise ship terminal on Pier 12 (190,000 sf), and the two existing office buildings on Columbia Street (61,700 sf total).</p> <p>** Floor area shown is for three existing pier sheds, which are assumed to be re-used. The remainder of the lot area of Parcel A (approximately 1,452,640 sf) is assumed to continue being utilized by marine terminal/container/storage activity.</p> <p>*** Maritime uses include marine services, ship repair, fueling, boat lift, ferry, etc.</p>	

D. SCOPE OF WORK FOR AN EIS

As the RWCDS associated with the Proposed Action 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 rezoning, and other Proposed Actions. The section on approval procedures will explain the Uniform

Land Use Review Procedure (ULURP) process, its timing, and hearings before the Community Board, the Brooklyn 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.

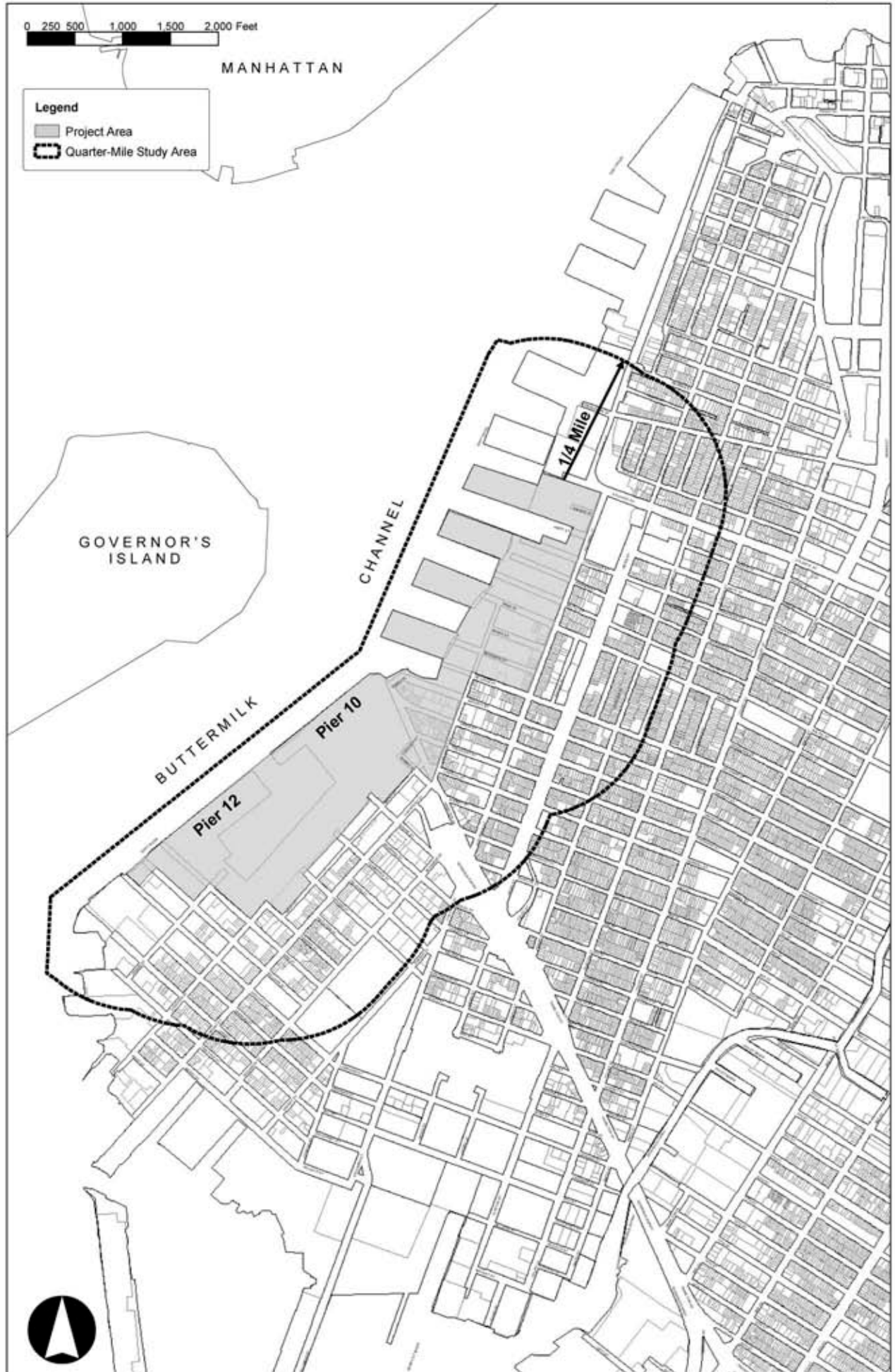
TASK 2. LAND USE, ZONING, AND PUBLIC POLICY

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 projected development scenario), and the neighboring areas where indirect impacts may be felt. For the purpose of environmental analysis, the study area will extend approximately a quarter-mile from the boundaries of the Project Site, as shown in Figure 5. Tasks include:

- Provide a brief development history of the project area and surrounding study area.
- Provide a description and map of existing land uses and zoning in the project area and the surrounding study area. Other public policies that apply to the study area will also be described, including the Red Hook Peninsula Urban Renewal Plan and the Red Hook 197-a Plan. This task will be closely coordinated with Task 3, "Socioeconomic Conditions," which will provide an analysis of the Proposed Action's effect on businesses and employment in the study area. Recent development trends in the land use study area 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 area. Based on discussions with the New York City Department of City Planning (NYCDCP), the Community Board, and other public agencies, describe recent land use trends in the study area and major factors influencing those land use trends.
- Prepare a list of future development projects in the quarter mile study area 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 area in coordination with NYCDCP. Based on these changes, assess future conditions in land use and zoning without the Proposed Action.
- Describe proposed zoning changes, and the potential land use changes based on the Proposed Project's reasonable worst case development scenario.
- Assess effects of the Proposed Project 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 Project 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 analysis 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. For each area of concern, if it has been determined that a socioeconomic impact is likely or cannot be ruled out based on the preliminary screening assessment, then a detailed analysis will be conducted, as described below.

Population Characteristics

- Based on the U.S. Census of Population and Housing, describe the 2000 population characteristics of the project area and the study area.
- Discuss population trends in the future without the Proposed Action.
- Estimate population associated with the proposed RWCDs and assess impacts on population, if any.

Housing Characteristics

- Using Census data and other information, such as reports on housing value and median rents, describe the 2000 housing characteristics of the project area and the study area.
- Assemble and discuss information on housing market conditions, including identification of presence of any unique or predominant population groups or presence of populations particularly vulnerable to economic changes, using Census data and other sources.
- Discuss housing trends in the future without the Proposed Action.
- Estimate housing changes associated with the proposed RWCDs and assess impacts on housing, if any.

Economic Characteristics

- Describe existing economic activity in the project area (using most recently available data), including the number and types of businesses and employment by key sectors.
- Describe the physical characteristics of the existing commercial and manufacturing buildings in the project area and surrounding areas, including the general size of the structures, configurations, and condition. Determine the approximate vacancy rate and rent levels for buildings in the study areas. This will be based on visual inspections, discussions with the Borough Office of DCP, and discussions with real estate brokers.
- Describe trends in commercial and manufacturing use in the future without the action.
- Estimate net new employment and other economic activity in the study area under the RWCDs.

Direct Residential Displacement

There are no residential buildings located on the Project Site. As the Proposed Action is not expected to directly displace any residential dwelling units on the Project Site, a detailed analysis of direct residential displacement is not warranted.

Direct Business Displacement

- Estimate displacement of commercial and manufacturing businesses and employment based on sites identified for likely development.
- A detailed assessment of the potential for direct business displacement will be performed as necessary, using guidance set forth in the Socioeconomic Conditions chapter of the *CEQR Technical Manual*.
- Assess the impact of displacement, if any. Identify likely relocation areas nearby, if necessary.

Indirect Business Displacement

Given the scale of the anticipated development, a detailed assessment of the potential for indirect or secondary business displacement in the area may be required. Related tasks include:

- Analyze long-term trends in employment in the study area.
- Describe the physical conditions and characteristics of commercial and industrial buildings in the study area.
- Describe recent development trends in the City as a whole, including major initiatives by various City and State agencies to retain employment within the five boroughs.
- Describe real estate market conditions and recent real estate trends in Brooklyn and within the project study area through a combination of interviews with real estate brokers and available real estate industry reports.
- Identify major employers in the project study area, and where possible, identify the amount of space that each occupies.
- Identify major projects that may exist in the future without the Proposed Action, including planned new construction, expansions, and conversions.
- Assess the potential for the Proposed Actions' reasonable worst-case development scenario to instigate indirect displacement of existing businesses in the project study area as a result of: (1) introducing a new type of economic activity that would change the existing economic patterns; (2) adding to the concentration of one economic sector that would change the existing economic patterns; (3) introducing economic activity that would lead to higher commercial rents or lower property values; (4) directly or indirectly displacing residents, workers, or visitors who form the base of existing businesses in the area.

Indirect Residential Displacement

The analysis of indirect residential displacement will determine the potential for significant adverse impacts with respect to indirect residential displacement. The objective of an indirect residential displacement analysis is to determine whether the Proposed Project would increase property values and thus rents throughout the study area, making it difficult for some residents to afford their homes. Generally, if a project would introduce or accelerate a trend of changing socioeconomic conditions and if the study area contains populations at risk, then the Proposed Project may have an indirect residential displacement impact. The indirect residential displacement analysis will:

- Provide a description of the existing population and housing characteristics and residential real estate market trends of the study area.
- Project population and housing market trends in the future without the Proposed Project.
- Determine whether the Proposed Project would add a substantial new population with different socioeconomic characteristics compared with the size and character of the existing population, or a substantial amount of more costly housing
- Determine whether the Proposed Project would displace uses that have had a blighting effect on residential property values in the area.
- Determine whether the Proposed Project would introduce a critical mass of nonresidential uses such that the surrounding area becomes more attractive as a residential neighborhood.

- Estimate the residential population associated with the Proposed Project and impacts on the existing and anticipated population, if any.
- Estimate the numbers of residents in housing vulnerable to displacement, and assess the potential for impact.

Economic Benefits

- Additional economic effects can be expected from the Proposed Project's anticipated development components, including new permanent jobs, sales tax revenues for the City and state. The analysis will also assess the benefits of the Proposed Project 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 retail space. 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.

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. Community facilities other than open space (see Task 5) will be examined in this chapter. The Proposed Action would add up to approximately 350 new residential units to the area. The targeted income levels for those units have not been determined at this time.

As discussed in the EAS for the Proposed Action, a detailed analysis of public elementary/middle schools is warranted. However, the Proposed Action does not trigger the CEQR threshold for analysis of libraries, outpatient health care facilities, or police and fire protection services. For publicly funded day care centers, the CEQR threshold for detailed analysis is whether the Proposed Action would generate more than 50 children eligible for publicly funded daycare (*CEQR Technical Manual*, Table 3C-1 and Table 3C-4). As the income mix for the projected residential units has not yet been determined, the need for a detailed analysis of day care facilities cannot be determined at this time. Should the RWCDs exceed the threshold levels for affordable units, a detailed analysis would be provided in accordance with the guidelines presented in the *CEQR Technical Manual*.

Public Schools

The CEQR thresholds for detailed analysis of public schools is an action anticipated to generate 50 or more elementary/middle school students or 150 high school students. A screening analysis determined that the Proposed Action would exceed the screening threshold for elementary/middle schools, but not high schools. Therefore, detailed analysis of elementary/middle schools would be provided in the EIS. The analysis will include:

- Identify and locate the public primary and intermediate schools serving the study area within an approximate half-mile distance from the Project Site. Existing capacity, enrollment, and utilization data for all public elementary and intermediate schools within the study area and the school district as a whole would be provided for the current or most recent school year, noting any specific shortages of school capacity.
- Identify conditions that would exist in the future without the Proposed Action, taking into consideration projected changes in future enrollment and plans to alter school capacity either through administrative actions on the part of the NYC Department of Education or as a result of the construction of new school space.

- Analyze future conditions with the Proposed Action, adding students likely to be generated by the Proposed Project to the projections for the future without the action. Proposed project impacts will be assessed based on the difference between the future Build projections and the future No-Build projections for enrollment, capacity and utilization in 2014.

TASK 5. OPEN SPACE

The RWCDs could add up to approximately 2.78 million sf of light industrial, retail, commercial, hotel, maritime and other miscellaneous uses, and up to approximately 350 new residential units. As such, the RWCDs would add an estimated 770 new residents and approximately 3,930 workers to the project area, who would increase the demands for existing local parks and recreational facilities. The Proposed Action would also facilitate the provision of new open spaces and allow for the extension of the proposed Brooklyn Waterfront Greenway through the Project Site. Therefore, the Proposed Action needs to be evaluated for its potential indirect impacts on open space resources within the study area. A detailed open space analysis will be conducted according to the following tasks:

- As the Proposed Action would introduce new workers and residents to the area, the analysis will consider both passive and active open space resources, requiring two study areas. Existing publicly accessible passive open space will be inventoried within two study areas: ¼-mile radius from the Project Site (commercial study area) and ½-mile radius from the Project Site (residential study area). Active open spaces would also be inventoried for the ½-mile residential study area. Both study areas would be adjusted for census tract boundaries. The condition and use of existing facilities will be described based on the inventory. The percentage of active and passive open space will also be calculated.
- Prepare a demographic analysis of the commercial open space study area worker and residential population, and residential population in the residential open space study area, including information available from the 2000 Census.
- Based on the inventory of facilities, and resident and worker populations, calculate the open space ratios for both study areas and compare to City guidelines to assess adequacy. This is expressed as the amount of open space acreage per 1,000-user population. Open space ratios will be calculated for active and passive open space, as well as the ratio for the aggregate open space.
- Assess expected changes in future levels of open space supply and demand in the Analysis year based on other planned development projects within the study area. Also take account of any new open space and recreational facilities expected in the study area, such as the Brooklyn Bridge Park. Open space ratios will be developed for future without the action conditions and compared with existing ratios to evaluate changes in future levels of adequacy.
- Based on the population of workers and residents added by the Proposed Project, assess the effects on open space supply and demand using CEQR criteria. Any new open space facilities proposed as part of the project would also be taken into account. The assessment of impacts due to the Proposed Action will be based on a comparison of open space ratios with the Proposed Action and open space ratios in the future without the action. In addition to the quantitative analysis, qualitative analysis will be performed to determine if the changes resulting from the Proposed Action will result in a substantial change or an adverse effect to open space conditions.

TASK 6. SHADOWS

The RWCDs envisions construction of some new buildings, a few of which would be limited in height to 70 feet (those located in the proposed MX district), but others would be subject to the standard height and setback regulations. Based on the locations of the Project Site and the RWCDs, it does not appear that any of the thirteen proposed parcels are located adjacent to, or across the street from, existing publicly accessible open spaces, or light-sensitive historic resources. Therefore, a detailed shadow analysis is probably not warranted. A shadows screening analysis will be performed, using the methodology recommended in the *CEQR Technical Manual*.

- 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 and, in coordination with the open space task, identification of publicly accessible open spaces, including existing and planned open spaces, as well as the proposed open space. 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 buildings.
- Based on the results of the shadows screening, identify anticipated project-generated shadow increments on publicly accessible open spaces or historic resources with sun-sensitive features. Prepare shadow diagrams for each development site that has the potential to create such increments. The hours that project shadows will fall on sun-sensitive resources will be calculated for March 21, May 6, June 21, and December 21. The duration of the shadow increment on the open space or the historic resource with sun-sensitive features will be calculated, and the effects of the incremental shadows will be assessed.

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 New York City 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 the Proposed Project would result in new in-ground disturbance, the action has the potential to result in impacts to archaeological resources.

The Project Site does not contain any designated historic architectural resources. However, the northern boundary of the Project Site is located approximately one-half block away from the southwestern boundary of the Brooklyn Heights Historic District, which is designated by LPC and is listed on the S/NR and is a National Historic Landmark. The northern boundary of the Project Site is also located approximately one-half block away from the Atlantic Avenue Tunnel (S/NR), which runs underground along Atlantic Avenue between Columbia Street and Boerum Place.

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 400-foot 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, which are limited to the lots comprising the Project Site.

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 history of land use, 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.
- In coordination with the land use task, assess probable impacts of development resulting from the Proposed Action 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.
- In coordination with the land use task, assess probable impacts of the Proposed Project 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 Project would facilitate new development on the Project Site, and would also map new streets. As such, the Proposed Project would change the urban design and visual character of the Project Site and most likely alter the urban design character of the Atlantic Basin area of Brooklyn. 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 RWCDs, 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 Project, including the effects of the new streets proposed 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 new development that has the potential to alter certain constituent elements of the affected area's neighborhood character, including land use patterns, socioeconomic conditions, 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 quarter 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

Given the site's proximity to Buttermilk Channel, the EIS will provide an assessment of natural resources. Any existing natural resources on or in the vicinity of the Project Site would be identified, including any significant fish habitats in this section of the river. The Proposed Project's potential impacts on identified natural resources would be assessed, including both short-term construction effects and any potential long-term effects, including any new outfalls, expected run-off, etc. A discussion of any related permits that may be required would be provided.

- 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 East River, 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 will be based on existing NYSDEC maps, including aerial photography, to discern the limits of tidal wetlands. If any wetland resources would be disturbed as part of the Proposed Project, the EIS will describe the extent of and remediation and restoration required.
- Based on published sources, a description of the avian resources that are common to the East River corridor will be presented. The focus of this effort will be waterbirds.
- While there are limited issues with respect to terrestrial resources since most of the upland is developed, the Project Site will be characterized based on a review of aerial photography and a one-day field visit.
- 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.
- A projection will be made of natural resources conditions through the Build year.
- An assessment of potential impacts from the Proposed Project will be presented analyzing any potential water quality and river disturbance issues, impacts to any fish and bird habitats, and terrestrial resources. A stormwater analysis will be performed that will specify how stormwater flows would be treated, attenuated, and managed, and a analysis of appropriate Best Management Practices (BMP's) to be implemented will also be included in the EIS. Impact issues that would be expected are new outfalls and improvements to bulkhead conditions. Any potential impacts on rare or endangered species will be identified. The need for any additional approvals, such as Federal approvals, will also be described. It is assumed for this analysis that minimal in-water disturbance would occur and be limited to the proposed marina.

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. The lands along the Brooklyn waterfront have a long history of industrial activities, some which may have used chemicals and generated toxic by-products that could have entered the soil and groundwater. In addition, landfilling activities along the shoreline often made use of ash and other waste materials from industrial processes. Construction activities may disturb the soil, releasing hazardous dust and fumes. Moreover, the Proposed Action would result in new residential and commercial development in areas currently zoned for manufacturing, and therefore has the potential to result in significant hazardous materials impacts.

The hazardous materials chapter for the EIS, which will be based on a Phase I Environmental Site Assessment (ESA) to be prepared for the site, will include a detailed discussion of current environmental conditions on the Project Site and will examine how the Proposed Action will affect these conditions. The hazardous materials chapter will include a discussion of the Proposed Project's potential to result in significant adverse hazardous materials impacts and will include a description of possible mitigation measures that might be necessary to avoid significant impacts.

- 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 would 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 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 sitewide 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.
- Where the preliminary assessment indicates that hazardous materials may be present at the Project Site, assess the potential impacts on human health and the environment during and after construction.
- As appropriate, prior to remediation measures, testing and soil sampling should be performed to determine potential significant adverse impacts to human health and the environment.
- 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 recommended. In the event that testing and soil sampling should be required, in addition to a Phase II protocol and a Health and Safety Plan (HASP) defining the scope and methodology of the testing must be prepared and submitted to NYCDEP for their review and approval.
- All appropriate Remedial Action Plans (RAPs) and Construction HASPs would be approved by NYCDEP to properly mitigate potential soil and groundwater impacts at the Project Site.

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.

A preliminary evaluation was undertaken for the Proposed Action in the Brooklyn Piers 7-12 EAS dated September 6, 2006, including completion of the WRP Consistency Assessment Form. The Consistency Assessment Form indicated that the Proposed Action requires further assessment of several policies, including 1, 2, 3.3, 7.2, 8 and 9.1, and possibly 10. 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 the Proposed Project's anticipated uses (including a second cruise terminal, hotel, maritime, residential and light industrial/warehousing uses) 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 Project includes street mapping and demapping actions, there will be coordination with New York City Department of Environmental Protection Bureau of Water and Sewer (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 Project 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 RWCDS 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.

Storm Water

- Describe the existing storm water drainage system on the Project Site and estimate the amount of storm water presently generated by the site.
- Assess the effects of any changes to the stormwater runoff due to the development of the proposed RWCDS 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 development site will be described based on information obtained from NYCDEP. The existing flows to the Red Hook 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 RWCDs.
- The impacts of the 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 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 estimated energy usage.

TASK 14. TRAFFIC AND PARKING

The Proposed Action would facilitate the reuse of the Project Site for a second cruise terminal, hotel, maritime, commercial, residential and light industrial/warehousing uses, which would generate additional vehicular travel and increase demand for parking, as well as pedestrian traffic and transit riders. These new trips have the potential to affect the area's transportation systems. In addition, the Proposed Action adds a new street system to support the projected development. Therefore, the traffic and transportation studies will be a focus of the EIS, including four significant issues: (1) the size of the traffic study area and the number of intersections to be addressed both immediately adjacent to the Project Site and along the major routes leading to it; (2) the likelihood that the Proposed Project and the amount of development envisioned in the RWCDs will generate significant impacts requiring significant levels of mitigation; (3) potential increase in the parking demand; and (4) an increased level of transit use and pedestrian demands. The fourth issue is addressed in Task 15, "Transit and Pedestrians" below.

Traffic

Based on preliminary estimates, the Proposed Project is expected to generate an aggregate of more than 50 additional (net) vehicular trips, with the highest traffic concentration in the weekday 8-9 AM, 1-2 PM midday, and 5-6 PM peak hours, as well as in the Saturday 1-2 PM midday peak hour (refer to transportation planning assumptions in Appendix A). This scope of work considers the weekday AM, midday, and PM peak periods and the Saturday midday period for detailed studies, focusing on those intersections handling the highest concentrations of project-generated demand. Based on the preliminary assumptions for the Proposed Project, it is anticipated that approximately 36 intersections would be analyzed in detail for potential traffic impacts (refer to Figure 6).

- Define a traffic study area to account for the principal travel corridors to/from the Project Site. This scope assumes that approximately 36 traffic intersections would be analyzed, as illustrated in Figure 6 and listed on the following page:

Existing Intersections

- Atlantic Avenue at Furman Street
- Atlantic Avenue at Columbia Street
- Atlantic Avenue at BQE Eastbound entry/exit ramp
- Atlantic Avenue at Hicks Street



LEGEND

- Study Area Intersection
- └ ATR Location
- - - - Future Street System

- Study Area
- Project Area

- Columbia Street at BQE Westbound entry/exit ramp
- Columbia Street at Congress Street
- Columbia Street at Kane Street
- Columbia Street at Degraw Street
- Columbia Street at Sackett Street
- Columbia Street at Union Street
- Columbia Street at Summit Street
- Hicks Street (Northbound) at Congress Street
- Hicks Street (Northbound) at Kane Street
- Hicks Street (Northbound) at Sackett Street
- Hicks Street (Northbound) at Union Street
- Hicks Street (Southbound) at Congress Street
- Hicks Street (Southbound) at Kane Street
- Hicks Street (Southbound) at Sackett Street
- Hicks Street (Southbound) at Union Street
- Van Brunt Street at Degraw Street
- Van Brunt Street at Sackett Street
- Van Brunt Street at Union Street
- Van Brunt Street at Hamilton Avenue (Westbound)/Summit Street
- Van Brunt Street at Hamilton Avenue (Eastbound)
- Van Brunt Street at Bowne Street
- Van Brunt Street at Delavan Street
- Van Brunt Street at Pioneer Street
- Conover Street at Pioneer Street
- Imlay Street at Bowne Street
- Imlay Street at Pioneer Street
- Hamilton Avenue (Westbound) at Woodhull Street
- Furman Street at Old Fulton Street

Future Intersections

- Conover Street at Sackett Street
 - Conover Street at Union Street
 - Conover Street at Summit Street
 - Conover Street at Bowne Street
- Conduct traffic counts at traffic analysis locations via a mix of automatic traffic recorder (ATR) machine counts and manual intersection turning movement counts. Figure 6 also shows ATR locations as well as the traffic analysis locations. ATRs will provide 24-hour traffic volumes for a full week at selected arterial locations. Traffic counts will be conducted during the AM, midday, PM and Saturday midday peak periods. Where applicable, compile available information from both recent and current studies of the area.
 - Conduct travel speed and delay runs (using the average speed technique) and vehicle classification counts along key routes in the study area as support data for air quality and noise analyses. These speed-and-delay runs and vehicle classification counts will be conducted in conjunction with the traffic volume counts.
 - Inventory physical data at each of the analysis intersections needed for capacity analyses, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, typical parking regulations, and signal phasing and timing data.
 - Determine existing traffic operating characteristics at each analysis intersection including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per traffic movement, and per intersection approach. *2000 Highway Capacity Manual*

procedures will be used. Allowances for any on-going construction or temporary road closures will be made.

- The future No-Action projects in the area and associated future No-Action traffic volumes will be determined. Traffic volumes will be determined, v/c ratios and levels of service will be calculated, and problem intersections will be identified. The future traffic volumes from these sites will be estimated using EISs, U.S. Census data, and other sources. In addition to traffic from all future No-Action projects, an annual growth rate of 1.0% will be applied in the No-Action condition of the traffic analysis to account for general background growth. Mitigation measures accepted for all No-Action projects and other NYCDOT initiatives, including the planned operational changes to Furman Street between Old Fulton Street and Atlantic Avenue, will be included in the future No-Action network.
- The trips generated by the Proposed Project, and the modes of transportation used for these trips will be determined. Data from existing cruise terminals as well as secondary source data from other EISs and professional sources will be used to estimate the travel demand forecast for all modes of transportation, including bicycles. New trips will be assigned to the respective travel modes in each peak hour.
- Site plan layouts for the Proposed Project will be included in the EIS, and the EIS will include trip assignment maps for each of the proposed analysis peak hours.
- Determine the volume of vehicle traffic expected to be generated by the Proposed Action, assign that volume of traffic in each analysis period to the approach and departure routes likely to be used, and prepare traffic volume networks for the future With-Action condition for each analysis period.
- Determine the resulting v/c ratios, delays, and LOS for the future With-Action condition, and identify significant traffic impacts in accordance with *CEQR Technical Manual* criteria.
- Identify and evaluate traffic mitigation measures, as appropriate, for all significantly impacted locations in the study area. This includes potential mitigation for the street system, including possible roadway modifications, new signal installations, signage, signal changes, and parking regulation changes.

Parking

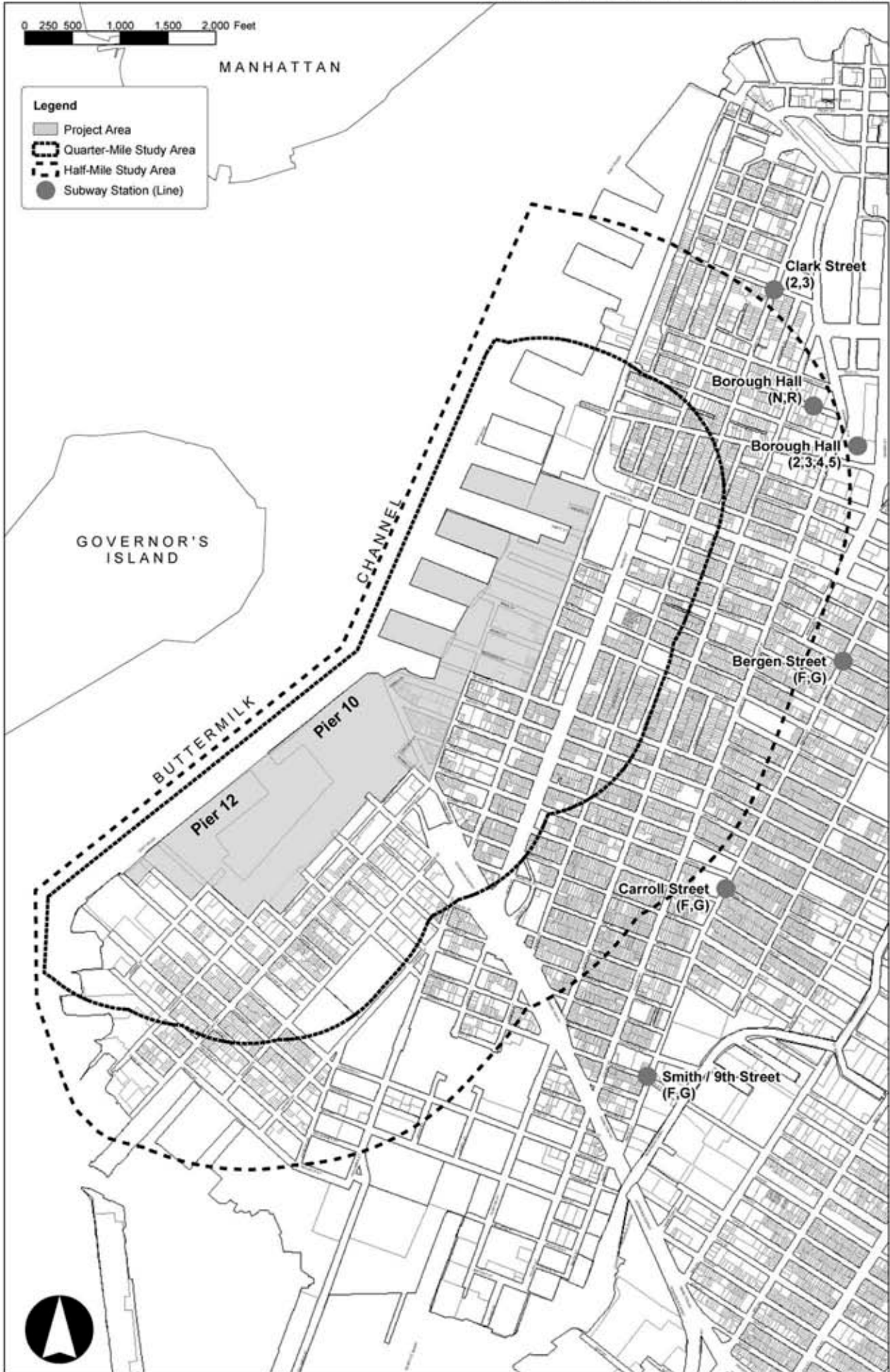
The parking studies in the EIS will focus on the amount of parking to be provided as part of the proposed RWCDs, and its ability to accommodate projected parking demand associated with the project components. As part of this task, net parking accumulation profiles for each of the uses comprising the Proposed Project will be developed. Area-wide on-street parking inventories will also be conducted in the immediate vicinity of the site to determine the general area's capacity to accommodate additional parking. In addition, any changes to parking supply resulting from the Proposed Action, such as the addition of curbside parking associated with the new street segments to be mapped as part of the Proposed Action, will also be considered.

TASK 15. TRANSIT AND PEDESTRIANS

Subway

There are no subway stations in the immediate vicinity of the Project Site. The nearest subway stations are the Smith/9th Street, Carroll Street and Bergen Street stations on the F and G lines, the Borough Hall Station complex (M, R and 2, 3, 4, 5 lines), and the Clark Street Station (2, 3 lines), all of which are located more than one-half mile away from the boundaries of the Project Site, as shown in Figure 7. As those five subway stations are distributed linearly along the Project Site, it is expected that the incremental ridership at any single station would not exceed 200 trips in any given peak

Subway Stations in Vicinity of Project Site



hour, the CEQR threshold for detailed subway station analysis. However, given the direct subway-to-bus connections that would facilitate access to the Project Site from the Borough Hall station complex and the Carroll Street station, Project-generated subway trips at those two stations may exceed the 200 trip CEQR threshold during the weekday AM and PM peak hours. A detailed subway trip assignment will be prepared for the Proposed Project and presented in the EIS. If the CEQR threshold is triggered at any given subway station, then a detailed subway analysis would also be provided in the EIS, which would include the following:

- A quantitative analysis of the impact of the Proposed Project on those subway stations that are found to exceed the CEQR threshold of 200 Project-generated subway trips will be prepared for the weekday AM and PM peak hours. The station elements (street stairs and fare control areas) to be analyzed are those most likely to be used by demand from the Proposed Project. The peak hour transit trips from the Proposed Project will be estimated and assigned to the individual subway lines and station elements in the vicinity of the Project Site. The station impact analysis will include existing and No-Action conditions, as well as future With-Action conditions. Any potential impacts on the analyzed subway station will be identified using CEQR impact criteria. Transit mitigation, if any, will be determined in conjunction with the lead agency and NYC Transit.

Bus

The Project Site is accessible by bus service however, with several bus routes in the vicinity of the Project Site, including the B61 bus route (which travels along Columbia and Van Brunt Streets), the B71 bus route (which travels along Union and Sackett Streets), the B77 bus route (which connects the southern end of Conover Street to the Smith/9th Street subway station), and the B63 bus route (which terminates at the foot of Atlantic Avenue). As shown in Appendix A, the RWCDS is expected to generate a net increase of more than 200 bus trips, the threshold for detailed transit analysis, in the weekday AM and PM peak hours. As such, bus modes will be examined in these two peak commuting periods to determine existing, future No-Action, and future With-Action conditions.

- A quantitative analysis of the local bus system in the study area will be performed for the EIS. Bus routes serving the study area include the B61 bus route, which travels along Columbia and Van Brunt Streets, the B71 bus route, which travels along Union and Sackett Streets, the B77 bus route, which connects the southern end of Conover Street to the Smith/9th Street subway station, and the B63 bus route, which terminates at the foot of Atlantic Avenue. The analysis will include documenting existing weekday AM and PM peak hour route services and peak load point ridership, determining conditions in the future without the Proposed Action and assessing the effects of new project-generated peak hour trips for the specific bus routes anticipated to serve the Project Site. Transit mitigation, if any, will be determined in conjunction with the lead agency and NYC Transit.

Pedestrians

The Proposed Action would facilitate the extension of the proposed Brooklyn Waterfront Greenway into the study area, by establishing a 25-foot-wide greenway/bikeway along the entire upland edge of the Project Site. New pedestrian trips are also expected to be generated by the RWCDS, and pedestrian analyses will be provided in the EIS for the weekday AM and PM peak periods, including some pedestrian safety analyses.

- Prepare a quantitative analysis of pedestrian conditions in the vicinity of the Project Site. As part of this study, principal pedestrian access corridors to the Project Site will be identified in coordination with NYCDOT, and pedestrian characteristics on the public sidewalks adjacent to the Site will be evaluated.

- The pedestrian analysis will include crosswalk, corner, and sidewalk analyses, and will include the analysis of selected uncontrolled crossings within the proposed greenway. Existing and No-Action conditions will be prepared for the weekday AM and PM peak hours, the increment of demand generated under the Proposed Action identified, and analyzed quantitatively for impacts.
- This task also includes a review of high-accident pedestrian intersections in the area and an assessment of the Proposed Project on pedestrian safety.

TASK 16. AIR QUALITY

The Proposed Action would facilitate the reuse of the Project Site for a second cruise terminal, hotel, maritime, residential and light industrial/warehousing uses, which would generate additional vehicular and maritime travel, and construction of new buildings and public spaces. The air quality studies for the Proposed Action will include both mobile and stationary source analyses. The mobile source air quality impact analysis will have to address two distinct issues:

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

The stationary source air quality impact analysis will have to determine the effects of emissions from on-site activities, such as any proposed heating, ventilating, and air conditioning (HVAC) systems, on pollutant levels (i.e., sulfur dioxide, carbon monoxide, particulate and/or nitrogen dioxide concentrations). The analysis will also qualitatively assess potential effects from the operation of marine vessels (cruise ships, tugboats) while docked or traveling near the Project Site.

A survey will be performed to determine whether existing industrial/manufacturing uses are within the 400-foot study area around the Project Site, or whether any large emission sources, such as power plants or cogeneration facilities, are within 1,000 feet of the Project Site. The NYCDEP's Bureau of Environmental Compliance (BEC) files will be examined to determine if there are permits for any industrial facilities that are identified. A review of federal and state permits will also be conducted. Based upon this information a determination will be made of whether further analysis is necessary.

The number of project-generated trips will likely exceed the City Environmental Quality Review (CEQR) Technical Manual screening threshold of 100 vehicles at a number of 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, the Proposed Action would provide new parking facilities; therefore, an analysis to examine the potential for CO impacts from these facilities will be performed.

In addition, it is considered likely that an analysis of particulate matter (PM₁₀ and PM_{2.5}) from mobile sources will be necessary due to the commercial traffic volumes generated by the Proposed Action. 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_{2.5} impacts and determining when mitigation is necessary. These criteria and screening level thresholds would be

used to determine whether a quantified PM_{2.5} analysis is required, and for evaluating the potential PM_{2.5} 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, and, if necessary, where significant project impacts are predicted to occur, in conjunction with the traffic studies, cost effective, feasible traffic measures will be developed to alleviate those impacts.

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, we will analyze multiple receptor sites. For analysis purposes, it is assumed that up to three intersections will require analysis for CO, and one intersection will require analysis for PM₁₀/PM_{2.5}.
- 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 PM₁₀/PM_{2.5} 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 (2000-2004) of meteorological data from the nearest National Weather Surface station (La Guardia or JFK 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 1 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 Action and the future conditions with the Proposed Action. CO concentrations will be determined for up to three peak periods. Calculate maximum 24-hour and annual PM₁₀/PM_{2.5} concentrations for the future conditions without the Proposed Action and the future conditions with the Proposed Action. No field monitoring will be included as part of these analyses.
- Assess the potential CO impacts associated with the proposed parking facilities. Information on the design of the parking facilities will be employed to determine potential off-site impacts from these vented emissions for the project's Build year. A temperature of 43°F will be assumed in the analysis. Cumulative impacts from on-street sources and emissions from the parking facilities and stationary sources will be calculated, where appropriate. Compare future CO pollutant levels with standards and applicable de minimis criteria, to determine potential significant adverse project impacts.
- Examine mitigation measures. Analyses will be performed to examine and quantify ameliorative measures to 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.

Stationary Source Analyses

- A stationary source screening analysis will be performed to determine the potential for significant pollutant concentrations from fossil-fueled heating, ventilating, and air conditioning (HVAC) systems. The screening analyses will use the procedures outlined in the *CEQR Technical Manual*.
- A field survey will be performed to determine if there are any manufacturing or processing facilities within 400 feet of the Proposed Action. The NYCDEP's Bureau of Environmental Compliance (BEC) files will be examined to determine if there are permits for any industrial facilities that are identified. A review of federal and state permits will also be conducted. Based upon this information a determination will be made of whether further detailed analysis is necessary.

TASK 17. NOISE

For the Proposed Project, there are two major areas of concern regarding noise:

- What effect will the Proposed Project have on noise levels in the adjacent community; and
- What noise levels will occur in the Proposed Project buildings.

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, taxis, and trucks along with noise generated by aircraft flyovers, mechanical equipment, and people going about their normal business all contribute to the total ambient noise levels.

The noise analysis to be performed will satisfy CEQR noise criteria. Existing and future noise levels, both with and without the Proposed Project, will be examined to determine conformance with CEQR criteria. In conformance with the *CEQR Technical Manual* requirements, aircraft noise will be 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. The measurement program and analyses will be performed in a manner to satisfy these requirements. In terms of the effects of the Proposed Project on community noise levels, the CEQR noise criteria considers a 3-5 dBA increase in noise a significant impact. To achieve a 3 dBA increase in noise level from traffic, there would have to be approximately a doubling of traffic (and/or a significant increase in the number of trucks). In the unlikely event that the project has a significant community noise impact, mitigation measures will have to be examined. These would include methods of spreading project-generated traffic over more roadways (i.e., additional approach/departure paths to the Project Site), and methods of reducing interior noise levels at any nearby sensitive receptor sites.

In terms of noise levels in the proposed building, the CEQR criteria requires that any new or reconditioned buildings that fall within their review jurisdiction have sufficient acoustical treatment to provide interior noise levels that do not exceed 45 dBA. Generally, this can be accomplished using standard building construction with double-glazed windows and air conditioning.

The proposed work program would include the following tasks:

- Select appropriate noise descriptors. Appropriate noise descriptors to describe the noise environment and the impact of the Proposed Project would be selected. The L_{10} , and $L_{eq(1)}$ levels will be examined.

- Select receptor locations for detailed analysis. These sites would include sensitive locations or representative locations in the study area. A maximum of 16 noise receptors sites will be selected. Of these 16 receptor sites, a maximum of 8 sites will just be used for building attenuation purposes and a maximum of 8 sites will be used for impact purposes. Receptor sites will be selected on each of the streets adjacent to the Project Site, at nearby sensitive receptor locations, and along major feeder streets to and from the Project Site.
- Determine existing noise levels. Existing noise levels will be determined primarily by field measurements. Measurements will be made during four time periods--the weekday morning peak, weekday midday, weekday evening peak, and Saturday midday. Measurements will be made using a Type I noise analyzer and would include measurements of L_{eq} , L_1 , L_{10} , L_{50} , and L_{90} noise levels. Where necessary, measurements will be supplemented by mathematical model results to determine an appropriate base of existing noise levels.
- Determine future noise levels without the Proposed Project for the future analysis year. At each impact receptor location identified above, noise levels without the Proposed Action would be determined using existing noise levels, and proportional modeling techniques or the traffic noise model (TNM) model if the dominant source of noise is from mobile sources. Otherwise acoustical modeling would be performed to determine future noise levels. A passenger car equivalent screening analysis will be performed to determine if the use of the TNM model is necessary.
- Determine future noise levels with the Proposed Project for the future analysis year. At each impact receptor location identified above, noise levels with the Proposed Project for the analysis years would be determined using existing noise levels, and proportional modeling techniques or the TNM model.
- Compare noise levels with standards, guidelines, and other criteria, and impact evaluation. Existing noise levels and future noise levels with and without the Proposed Action will be compared with various noise standards, guidelines, and other noise criteria, including CEQR noise impact criteria.
- Determine compliance with CEQR interior noise level requirements. An analysis will be performed to determine the level of building attenuation necessary to achieve compliance with CEQR interior level requirements.
- Examine mitigation measures. Recommendations of measures to attain acceptable interior noise levels and to reduce noise impacts to within acceptable levels will be made, if needed.

TASK 18. CONSTRUCTION IMPACTS

The construction schedule for the Proposed Action 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.
- Economics. This section will estimate the cost of construction of the project including site preparation costs and economic activity, employment and tax benefits realized by the city and state during construction.
- Transportation. This section will consider any losses in lanes, walkways, and other above and below grade transportation services, and increases in vehicles from construction workers.

Potential temporary impacts to these transportation systems will be discussed, and construction period impacts to subway services 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 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. 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, including NYCDOT, NYCDEP, NYCLPC, NYSDEC, MTA, and other City and State agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 21. 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 DEIS will analyze several alternatives. At this time, this scope assumes that, at a minimum, a No-Action Alternative and a No-Impact Alternative (in which there is a change in density or program design in order to avoid the potential impacts associated with the Proposed Project) will be analyzed in the EIS. For technical areas where impacts have been identified, the alternatives analysis will determine whether these impacts would still occur under each alternative, and also determine the level of mitigation needed when compared to the Proposed Project.

TASK 22. 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 23. 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

Transportation Planning Assumptions



BROOKLYN PIERS 7-12 TRANSPORTATION PLANNING ASSUMPTIONS

The Proposed Project encompasses 13 parcels on Piers 7 through 12 on the Brooklyn waterfront in Red Hook which would create space for retail, restaurants, offices, marine terminals, light industrial or manufacturing, recreation, and a trade school. In addition, areas for performing arts, galleries, a hotel with conference/meeting space, residential units, maritime activities, a marina, a greenway, and a second cruise ship terminal would also be created. In total, the Proposed Project will comprise more than 2.7 million gross square feet of new development on the Project Site.

Specifically, the site would consist of 202,800 sf of retail and public markets, 144,200 square feet of restaurant and entertainment facilities, approximately 171,900 sf of new office space, and an approximately 623,200 sf designated for marine terminal uses including warehousing and distribution facilities. In addition, 580,000 sf of light industrial and maritime will be developed, 50,000 sf for indoor recreation, 25,000 sf for a trade school, 70,000 for performing arts, and 164,000 sf of gallery and artists' space. A hotel of approximately with 250 rooms is proposed with approximately 40,000 sf of convention/meeting space, and 350 apartment units. A marina would contain 200 slips in Atlantic Basin while open space and greenway would comprise approximately 4.1 acres, and a new 190,000 sf building would accommodate a second cruise ship terminal on Pier 10 in Red Hook.

This memo presents the transportation planning assumptions for the proposed project. These planning assumptions would be the basis for assessing the transportation effects to be described in the EIS.

Project-Generated Demand

Planning Assumptions

In order to estimate the trips generated by the proposed project, and the modes of transportation used for these trips, various sources of data were used. These include ITE trip generation rates, 2000 census journey-to-work data, data collection of existing uses in the area, and secondary sources such as environmental studies for similar projects.

Table 1 shows the preliminary transportation planning assumptions used in the forecast for the proposed new development in the weekday AM (8-9), Midday (1-2), and PM (5-6) peak hours, and the Saturday Midday (1-2) peak hours. The three weekday peak hours were selected for analysis to represent worst-case conditions for this mainly industrial/commercial/maritime project. The Saturday midday peak hour is considered primarily due to the demand expected from the second cruise terminal. Table 1 provides the daily generation rates, preliminary mode choice, as well as the hourly and directional patterns for the various uses that comprise this Proposed Project.

Table 1: Preliminary Transportation Planning Assumptions

Land Use:	Local Retail		Restaurant		Office		Marine Terminal (Sheds Only)		Light Industrial/ Maritimes		Indoor Recreation Space		Trade School		Artist Space/Gallery		Performing Arts		Hotel		Conference Center		Residential		Marina		Open Space		Cruise Ship Terminal							
Size/Units:	202,800 gsf		144,200 gsf		171,900 gsf		623,200 gsf 780 employees		580,000 gsf		50,000 gsf		25,000 gsf		164,000 gsf		70,000 sf 2,000 seats		250 rooms		40,000 gsf		350 DU		200 slips		4.10 acres		1 ship							
Trip Generation:	(1)		(3)		(5)		(7)		(8)		(9)		(10)		(16)		(11)		(4)		(13)		(14)		(15)		(16)		(17)							
Weekday	205		74		18		4.09		14.67		44.70		26.60		205		2.19		9.4		76.00		8.075		6.23		220		4100							
Saturday	205		74		0.9		1.05		2.78		17.70		2.60		205		2.19		7.4		50.74		7.678		13.47		220		4100							
	per 1,000 sf		per 1,000 sf		per 1,000 sf		per employee		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per seat		per room		per 1,000 sf		per du		per slip		per acre		veh trip /day cruise ship							
Temporal Distribution:	(1)		(3)		(5)		(7)		(8)		(9)		(10)		(16)		(11)		(4)		(12)		(14)		(15)		(16)		(17)							
AM	3.1%		1.0%		11.8%		13.1%		9.1%		4.8%		7.2%		3.1%		0.0%		7.5%		3.0%		9.1%		2.7%		7.0%		8.5%							
MD	19.0%		10.0%		14.5%		14.1%		11.5%		14.1%		10.7%		11.0%		14.4%		10.3%		14.4%		10.3%		9.0%		17.0%		10.6%							
PM	9.6%		7.9%		13.7%		15.2%		9.5%		13.2%		12.6%		9.6%		10.0%		12.8%		10.2%		10.7%		6.4%		14.0%		1.8%							
SatMD	9.5%		6.6%		15.0%		10.0%		9.5%		14.1%		12.6%		9.5%		11.0%		7.5%		12.5%		8.2%		8.4%		17.0%		10.6%							
Modal Splits:	(1)		(4)		(6)		(7)		(7)		(9)		(10)		(16)		(11)		(4)		(12)		(14)		(15)		(16)		(17)							
Auto	2.0%		2.0%		30.0%		12.0%		2.0%		51.0%		51.0%		2.0%		10.0%		10.0%		2.0%		19.0%		30.0%		56.0%		20.0%		75.0%					
Taxi	3.0%		3.0%		5.0%		1.0%		1.0%		2.0%		2.0%		1.0%		3.0%		38.0%		10.0%		10.0%		14.0%		1.0%		10.0%		14.0%					
Subway	4.0%		2.0%		5.0%		67.0%		5.0%		28.0%		28.0%		7.0%		5.0%		57.0%		20.0%		10.0%		5.0%		59.0%		5.0%		3.0%					
Bus	6.0%		6.0%		5.0%		12.0%		7.0%		7.0%		7.0%		40.0%		21.0%		4.0%		10.0%		25.0%		5.0%		5.0%		4.0%		5.0%					
Walk/Ferry/Other	85.0%		87.0%		55.0%		8.0%		85.0%		12.0%		12.0%		83.0%		44.0%		10.0%		83.0%		19.0%		40.0%		15.0%		5.0%		87.0%					
	100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%					
In/Out Splits:	(1)		(3)		(5)		(7)		(8)		(9)		(10)		(16)		(11)		(4)		(12)		(14)		(15)		(16)		(17)							
AM	50%		50%		94.0%		6.0%		96%		4%		72%		28.0%		88%		12.0%		50%		50.0%		88%		0.0%		0.0%		39.0%		61.0%			
MD	50%		50%		62.0%		38.0%		39%		61%		50%		50.0%		50%		50.0%		100.0%		0.0%		54.0%		46.0%		47.0%		53.0%		51.0%		49.0%	
PM	50%		50%		70.0%		30.0%		5%		95%		35%		65.0%		12%		88.0%		75.0%		25.0%		44.0%		56.0%		50%		50.0%		50%		50.0%	
Sat MD	50%		50%		59.0%		41.0%		60%		40%		64%		36.0%		47%		53.0%		49.0%		51.0%		57.0%		43.0%		50%		50.0%		100.0%		0.0%	
Vehicle Occupancy:	(1)		(3)		(5)		(7)		(7)		(9)		(10)		(16)		(11)		(4)		(12)		(14)		(15)		(16)		(17)							
Auto	2.00		2.2		1.42		1.30		1.30		2.00		1.50		2.00		2.7		1.6		2.0		3.0		1.14		2		2.8		3.5					
Taxi	2.00		2.3		1.42		1.30		1.30		2.00		1.50		2.00		2.7		1.4		2.0		3.0		1.40		2		2.8		4.0					
Truck Trip Generation:	(2)		(2)		(2)		(2)		(2)		(2)		(2)		(16)		(14)		(2)		(y)		(2)		(2)		(18)		(18)							
	0.35		3.6		0.29		0.67		0.67		0.19		0.29		0.35		0.01		0.10		0.35		0.02		0.06		0.02		0		320					
	per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		Weekday/Weekend		per DU		per slip		per 1,000 sf		trips daily					
AM	7.7%		6.0%		9.6%		14.0%		14.0%		6.0%		9.6%		7.7%		6.0%		12.2%		7.9%		12.2%		6.0%		15.3%		19.5%							
MD	11.0%		6.0%		11.0%		9.0%		8.6%		11.0%		11.0%		11.0%		6.0%		8.7%		14.7%		8.7%		8.7%		6.0%		19.5%							
PM	1.0%		1.0%		2.0%		1.0%		1.0%		1.0%		1.0%		1.0%		1.0%		0.0%		1.1%		1.0%		1.0%		1.7%		19.5%							
Sat MD	-		-		-		-		-		-		-		-		-		-		14.7%		1.0%		0.0%		-		-							
	In		Out		In		Out		In		Out		In		Out		In		Out		In		Out		In		Out		In		Out					
AM/MD/PM	50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		50.0%		AM 70.0% MD 30.0% PM 30.0%			

Notes :

- (1) Weekday rate and vehicle occupancy based on Pushkarev & Zupan, "Urban Space for Pedestrian," 1975. Modal split from 2001 CEQR Technical Manual.
- (2) Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
- (3) Trip rate based on Chelsea Piers FEIS. MD temporal distribution based on ITE code (931).
- (4) Brooklyn Bridge Park FEIS.
- (5) Weekday rate based on Pushkarev & Zupan, "Urban Space for Pedestrian," 1975. Saturday rate is based on Coliseum FEIS.
- (6) Modal split for AMPM is based on Downtown Brooklyn model split survey of office employees, as per NYCDOT memorandum, June 21st 1995. Midday office mode is based on Downtown Brooklyn EIS (April 2004)
- (7) Area based on two 176,800 shed and a 269,600 shed with 1 employee/800 gsf. Marine Terminal employee trip rate is based on ITE Land Use Code 150(Warehouse) . Mode split from Greenpoint-Williamsburg FEIS.
- (8) Warehouse Trip rate is based on ITE Land Use Code (110) factored to person trip rate. Mode split from Greenpoint-Williamsburg FEIS.
- (9) Weekday rate is based on Atlantic Avenue and Court Street EIS. Weekend rate is based on ratio of weekday and Saturday rate of ITE Land Use Code (495)
- (10) Trip rate and temporal distribution are based on Metrotech FEIS, 1987 (University). Saturday rate based on ratio of weekday to Saturday rate in ITE code (540) applied to weekday trip rate.
- (11) Based on Seventh Regiment Armory Environmental Assessment, Using 52,550 gsf as base from the EAS to scale up the number attendants and seats.
- (12) Based on Marriott Hotel Transportation Survey, AKRF, August 1999. Modal split adjusted based on Marriott Hotel Transportation Survey
- (13) Hudson Yard EIS appendix for Convention factor to person trips. Modal split based on 70% autoshare with 80/20 auto/taxi split based on Laguardia Hampton Inn EAS
- (14) Weekday Trip Rate and Temporal Distribution: Pushkarev & Zupan, "Urban Space for Pedestrian," 1975. Saturday Rate and Temporal Distribution: ITE Land Use Code (220) apartment rate variation between weekday and Saturday.
Residential modal split is based on 2000 census journey-to-work data.
- (15) Based on Brooklyn Bridge Park FEIS
- (16) Based on West Chelsea High Line Open Space FEIS
- (17) Based on PHA survey data for Crown Princess Cruises ships on June 23, 2006.
- (18) Based on New York Passenger Ship Terminal st Pier 12

In Table 1, trip generation represents the number of person trips to a certain destination based on that destination's usage. The temporal distribution serves as the percentage of daily trips that occur in a given peak hour. For example, for neighborhood retail uses, 3.1% of all weekday trips occur during the AM peak hour while 9.6% occur during the PM peak hour. The modal split represents the percentage breakdown of the different modes of transportation people use to arrive at a destination. For example, 85% of people will walk to a neighborhood retail site during the AM peak hour while 2.0% may choose to drive. During a respective peak hour, the in/out split is the percentage of people who will arrive at or leave a certain site. Vehicle occupancy is the number of people riding in a single automobile or taxi. The truck generation rate is the number of trucks a site will attract as a result of that site's designated usage. These factors are taken into consideration with the purpose of developing a travel demand forecast.

Demand Forecast

Based on these planning assumptions, Table 2 provides the overall resulting trip generation and weekday and Saturday peak hour demands for each mode of transportation. As an example, in the weekday PM peak hour the proposed project would generate 1,356 vehicles per hour, as well as 1,424 subway trips, 906 bus trips and 7,229 walk/ferry/other trips. As shown in Table 2, the proposed restaurant component would generate its highest demand in the Weekday Midday period, whereas demand generated by the office, industrial, and maritime components would be minimal on Saturday compared to weekdays.

As seen in Table 2, the cruise ship terminal generates a number of person and vehicle trips. However, these trips would occur on days when passengers are arriving for or departing from a cruise ship at its respective terminal. In addition, subways would be utilized the most during the AM and PM peak hour as people travel to and from offices or light industrial areas. As a result of direct subway-to-bus connections, during the AM and PM peak hours subway stations at Borough Hall and Carroll Street may exceed the 200 trip threshold indicated by CEQR. A detailed subway trip assignment will be prepared for the Proposed Project and presented in the EIS. Should the CEQR threshold be triggered, a detailed subway analysis will be provided at the respective subway station. The F and G trains stop at Carroll Street while the M,N,R,W,2,3,4, and 5 trains stop at Borough Hall. During the midday peak hour, many trips will be taken to surrounding areas such as neighborhood retail and restaurants. Since these areas are in close proximity a large number of walking trips will occur during this period.

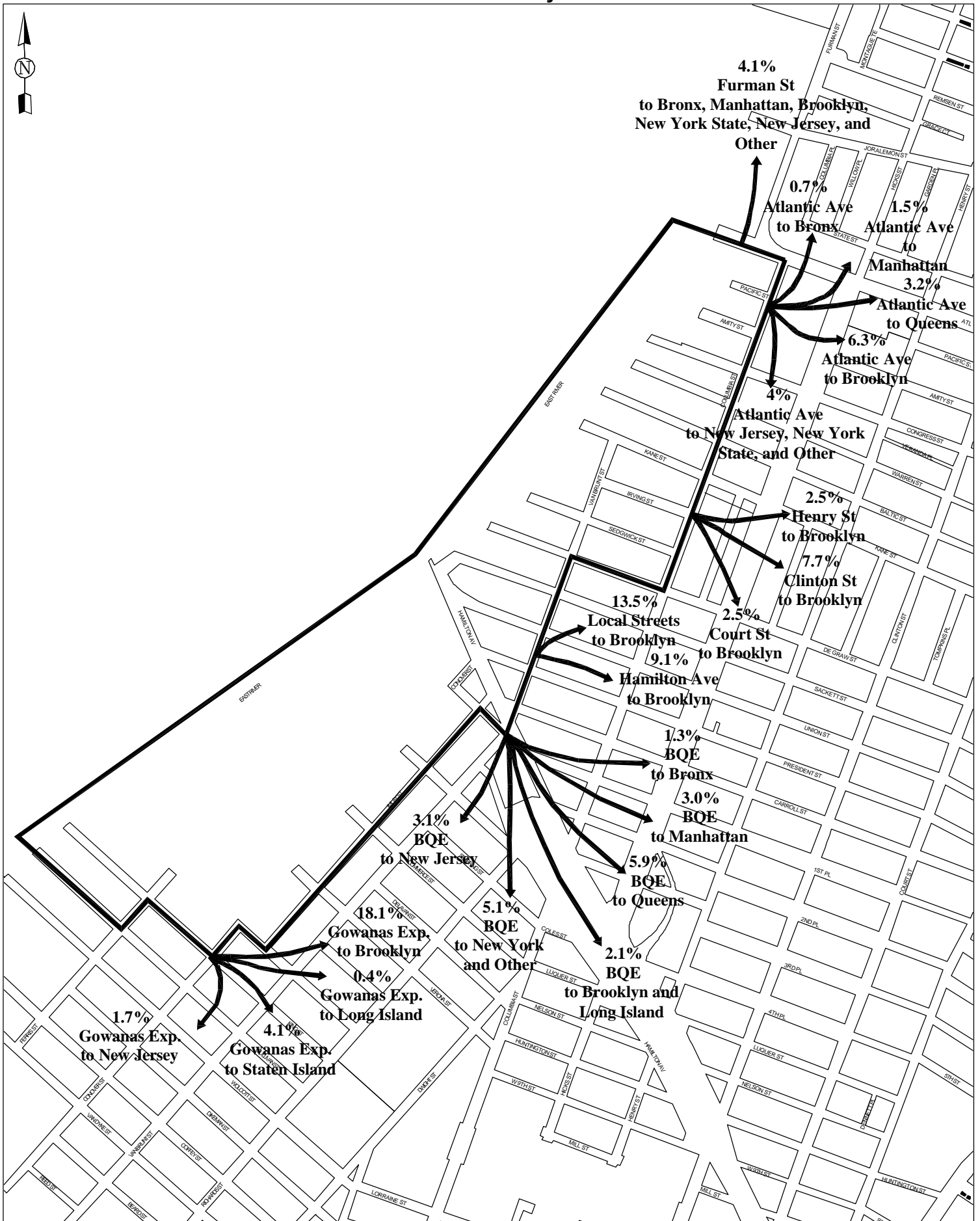
Trip Distribution/Assignment

The demand generated by the proposed project would be assigned to the area roadways and transit facilities in order to assess any transportation impacts of the proposed project. The attached Figure 1 illustrates the estimated percentage distribution of the project-generated vehicular trips among the various street networks and arterials in the study areas. This distribution is a pattern including days on which passengers are boarding or de-boarding cruise ships and is based on 2000 census data, including journey-to-work data for the office and residential components, and population distribution (i.e., occupied housing units) for the retail component and patterns for the waterfront uses. The distribution dictates the proposed study area, as seen in Figure 2, and the corresponding intersections to be analyzed.

Table 2: Demand Forecast Summary

Land Use:	Local Retail		Restaurant		Office		Marine Terminal (Sheds Only)		Light Industrial/ Maritime		Indoor Recreation Space		Trade School		Artist Space/Gallery		Performing Arts 70,000 sf		Hotel		Conference Center		Residential		Marina		Open Space		Terminal		Total	
Size/Units:	202,800	gsf	144,200	gsf	171,900	gsf	623,200	gsf	580,000	gsf	50,000	gsf	25,000	gsf	164,000	gsf	2,000	seats	250	rooms	40,000	gsf	350	DU	200	slips	4.10	acres	1	ship		
Peak Hour Trips:																																
AM	1,289		107		365		418		774		107		48		1,042		0		176		91		257		34		63		349		5,121	
MD	7,899		1,067		449		450		978		125		71		6,388		482		338		313		133		112		153		436		19,395	
PM	3,991		843		424		485		808		295		84		3,228		438		301		310		302		80		126		74		11,789	
Sat MD	3,950		704		23		82		153		125		8		3,194		482		139		254		232		226		153		435		10,159	
Person Trips:																																
AM	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto	13	13	30	2	42	2	153	60	347	47	4	6	5	0	10	10	0	0	21	32	46	5	10	41	8	17	2	1	329	356	1,612	
Taxi	19	19	5	0	4	0	6	2	14	2	0	1	1	0	16	16	0	0	7	11	11	1	1	2	1	2	0	0	228	247	617	
Subway	26	26	5	0	235	10	84	33	191	26	2	3	26	2	31	31	0	0	7	11	4	0	30	121	1	1	1	1	0	0	908	
Bus	39	39	5	0	42	2	21	8	48	7	18	25	9	1	31	31	0	0	7	11	21	2	3	10	1	1	1	1	8	9	400	
Walk/Ferry/Other	548	548	55	4	28	1	36	14	82	11	19	28	5	0	433	433	0	0	27	43	0	0	8	31	1	1	30	25	8	9	2,427	
Total	644	644	100	6	351	15	300	117	682	93	43	63	46	3	521	521	0	0	69	108	82	8	52	205	12	22	34	28	573	621	5,964	
MD	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto	79	79	198	122	3	5	115	115	10	10	7	6	3	4	64	64	92	0	55	47	82	93	14	13	56	28	4	4	513	342	2,228	
Taxi	118	118	33	20	2	3	4	4	5	5	1	1	1	1	96	96	183	0	18	16	21	23	1	1	8	4	1	1	356	237	1,379	
Subway	79	79	33	20	9	14	63	63	34	34	3	3	19	22	192	192	96	0	18	16	7	8	40	38	4	2	2	2	0	0	1,092	
Bus	237	237	33	20	12	19	16	16	34	34	27	23	7	8	192	192	19	0	18	16	37	41	3	3	4	2	3	3	13	9	1,279	
Walk/Ferry/Other	3436	3436	364	223	149	233	27	27	406	406	30	25	3	4	2,651	2,651	92	0	73	62	0	0	10	10	4	2	67	67	13	9	14,479	
Total	3950	3950	662	405	175	274	225	225	489	489	68	58	33	39	3195	3195	482	0	182	157	147	165	68	65	76	38	77	77	895	597	20,457	
PM	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto	40	40	177	76	3	48	87	161	49	363	22	7	4	5	32	32	42	42	59	32	40	134	39	21	36	24	3	3	14	130	1,764	
Taxi	60	60	30	13	0	4	3	6	2	14	2	1	1	1	48	48	83	83	20	11	10	33	2	1	5	3	1	1	10	90	646	
Subway	80	80	30	13	14	270	48	88	27	199	11	4	21	27	97	97	44	44	20	11	4	12	116	62	2	2	2	2	0	0	1,424	
Bus	120	120	30	13	3	48	12	22	7	50	89	30	8	10	97	97	9	9	20	11	18	60	10	5	2	2	2	3	0	3	906	
Walk/Ferry/Other	1696	1696	325	139	2	32	20	38	12	85	97	32	4	5	1,339	1,339	42	42	78	42	0	0	29	16	2	2	49	60	0	3	7,229	
Total	1996	1996	590	253	21	403	170	315	97	711	221	74	37	47	1614	1614	220	219	196	105	71	239	197	106	48	32	57	69	25	227	11,988	
Sat MD	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto	39	39	125	87	2	1	27	15	37	41	6	6	0	0	0	0	92	0	15	27	78	64	23	23	75	95	4	4	511	341	1,777	
Taxi	59	59	21	14	0	0	1	1	1	2	1	1	0	0	0	0	183	0	5	9	20	16	1	1	10	13	1	1	355	236	1,010	
Subway	79	79	21	14	9	6	15	8	20	23	3	3	3	2	0	0	96	0	5	9	7	6	68	68	5	6	2	2	0	0	561	
Bus	118	118	21	14	2	1	4	2	5	6	24	25	1	1	0	0	19	0	5	9	35	29	6	6	5	6	3	3	13	9	490	
Walk/Ferry/Other	1679	1679	229	159	1	1	6	4	9	10	27	28	0	0	0	0	92	0	19	36	0	0	17	17	5	6	67	67	13	9	4,179	
Total	1975	1975	416	289	14	9	52	29	72	81	61	64	5	4	0	0	482	0	49	90	140	114	116	116	100	127	77	77	892	595	8,017	
Vehicle Trips :																																
AM	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto (Total)	6	6	14	1	30	1	118	46	267	36	2	3	3	0	5	5	0	0	13	20	23	3	9	36	4	9	1	0	94	102	856	
Taxi	10	10	2	0	2	0	5	2	11	2	0	1	1	0	8	8	0	0	5	8	6	1	1	1	1	1	0	0	57	62	205	
Truck	3	3	1	1	2	2	29	29	27	27	0	0	0	0	2	2	0	0	2	2	0	0	1	1	0	0	0	0	34	15	186	
Total	19	19	17	2	34	4	152	77	305	65	2	4	5	0	15	15	0	0	20	30	29	4	11	38	5	10	1	0	185	178	1,247	
MD	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto (Total)	39	39	90	55	2	4	88	88	8	8	4	3	2	3	32	32	34	0	34	29	41	47	12	11	28	14	1	1	146	98	996	
Taxi	59	59	14	9	1	2	3	3	4	4	1	1	1	1	48	48	68	0	13	11	11	12	1	1	4	2	1	1	89	59	529	
Truck	4	4	1	1	3	3	19	19	17	17	1	1	0	0	3	3	0	0	1	1	0	0	0	0	0	0	0	0	19	44	159	
Total	103	103	106	65	6	9	110	110	28	28	5	4	3	4	83	83	102	0	48	42	52	58	13	12	32	16	2	2	254	201	1,684	
PM	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto (Total)	20	20	80	34	2	34	67	124	38	279	11	4	2	3	16	16	15	15	37	20	20	67	34	19	18	12	1	1	4	37	1,050	
Taxi	30	30	13	5	0	3	3	5	1	11	1	0	0	1	24	24	31	31	14	8	5	17	1	1	2	2	1	1	3	23	290	
Truck	0	0	0	0	0	0	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	16	
Total	50	50	93	40	2	37	71	131	41	292	12	4	3	4	41	41	46	46	51	27	25	84	36	19	20	14	2	2	8	64	1,356	
Sat MD	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out		
Auto (Total)	20	20	57	39	1	1	21	12	28	32	3	3	0	0	0	0	34	0	9	17	39	32	20	20	37	48						

Preliminary Piers 7-12 Traffic Distribution with Cruise



Preliminary Piers 7-12 Study Area



LEGEND

- Study Area Intersection
- └ ATR Location
- Future Street System
- Study Area
- █ Project Area