Chapter 2: Analytical Framework

A. OVERVIEW

The New York City Planning Commission (CPC), serving as the lead agency for the environmental review, has determined that the proposed project requires the preparation of an Environmental Impact Statement (EIS). This EIS has been prepared in accordance with 6 NYCRR 617.9(b) and Sections 6-08 and 6-12 of Executive Order No. 91 of 1977 as amended (City Environmental Quality Review [CEQR]). This chapter outlines the procedural framework utilized to comply with environmental review regulations and provides an overview of the analytical framework to guide the EIS technical analyses presented in subsequent chapters of this document.

B. ENVIRONMENTAL REVIEW PROCESS

The discretionary actions required for the proposed project are subject to several land use review processes. The rezoning and land use actions are subject to Uniform Land Use Review Procedure (ULURP), requiring approval of the CPC and the City Council. CPC is the CEQR lead agency, and several additional agencies are involved or interested agencies in the environmental review, including the New York City Department of Housing Preservation and Development (HPD), the Housing Development Corporation (HDC), the New York City Department of Environmental Protection (DEP), the New York City Department of Transportation (DOT), the New York City Landmarks Preservation Commission (LPC), the New York City Department of Parks and Recreation (DPR), the New York City School Construction Authority (SCA), the U.S. Army Corps of Engineers (USACE), the New York State Department of Environmental Conservation (NYSDEC), and the State Historic Preservation Officer (SHPO).

CITY ENVIRONMENTAL QUALITY REVIEW

Responding to the State Environmental Quality Review Act (SEQRA) and its implementing regulations, New York City has established rules for its environmental review process known as CEQR. The CEQR process provides a means for decision-makers to systematically consider environmental effects along with other aspects of project planning and design, to evaluate reasonable alternatives, and to identify and, when practicable, mitigate significant adverse environmental impacts. CEQR rules guide environmental review through the following steps:

- **Establishing a Lead Agency**. Under CEQR, the "lead agency" is the public entity responsible for conducting the environmental review. Usually, the lead agency is also the entity primarily responsible for carrying out, funding, or approving the proposed project. CPC is the CEQR lead agency for this application.
- **Determination of Significance**. The lead agency's first charge is to determine whether the proposed project might have a significant impact on the environment. To do so, CPC

prepared an Environmental Assessment Statement (EAS). Based on the information contained in the EAS, CPC determined that the project might result in significant adverse environment impacts and issued a Positive Declaration on June 30, 2007.

- **Scoping**. Along with its issuance of a Positive Declaration, CPC issued a draft Scope of Work for the EIS on June 30, 2007. This draft scope was widely distributed to concerned citizens, public agencies, and other interested groups. "Scoping," or creating the scope of work, is the process of focusing the environmental impact analyses on the key issues that are to be studied. A public scoping meeting was held for the proposed project on July 31, 2007, and additional comments were accepted during a 10-day period ending August 10, 2007. Modifications to the draft Scope of Work for the project's draft Environmental Impact Statement (EIS) were made as a result of public and interested agency input during the scoping process. A Final Public Scoping Document for the project (which reflected comments made on the draft scope, as well as updates to the project as the program was further refined), was issued on December 30, 2009.
- **Draft Environmental Impact Statement**. In accordance with the Final Public Scoping Document, a Draft EIS was prepared. Upon review of the DEIS and determination that the document has fully disclosed the project program, its potential environmental impacts, and recommended mitigation, CPC issued a Notice of Completion on December 30, 2009 and the DEIS was circulated for public review.
- **Public Review**. Publication of the DEIS and issuance of the Notice of Completion signal the start of the public review period. During this time, which extends for a minimum of 30 days, the public has the opportunity to review and comment on the DEIS either in writing or at a public hearing convened for the purpose of receiving such comments. Where the CEQR process is coordinated with another City process that requires a public hearing, such as ULURP, the hearings may be held jointly. In any event, the lead agency must publish a notice of the hearing at least 14 days before it takes place and must accept written comments for at least 10 days following the close of the hearing. All substantive comments received at the hearing or during the comment period become part of the CEQR record and are summarized and responded to in the Final Environmental Impact Statement (FEIS). A public hearing on the DEIS was held by CPC at 22 Reade Street on April 28, 2010, and written comments were received during the public comment period, which closed on May 10, 2010. Chapter 28 of this FEIS, "Response to Comments on the Draft Scope of Work and DEIS," summarizes and responds to substantive comments made on the DEIS. Response to comments on the Draft Scope of Work is also included Chapter 28 of this FEIS.
- **Final Environmental Impact Statement**. After the close of the public comment period for the DEIS, CPC prepared an FEIS. This document includes a summary restatement of each substantive comment made about the DEIS and a response to each comment. The Notice of Completion for this FEIS was issued on May 28, 2010.
- **Findings**. To demonstrate that the responsible public decision-maker has taken a hard look at the environmental consequences of a proposed project, any agency taking a discretionary action regarding a project must adopt a formal set of written findings, reflecting its conclusions about the significant adverse environmental impacts of the proposed project, potential alternatives, and potential mitigation measures. The findings may not be adopted until 10 days after the Notice of Completion has been issued for the FEIS. Once findings are adopted, the lead and involved agencies may take their actions (or take "no action").

C. ANALYTICAL APPROACH TO THE EIS

In general, this document uses methodologies, and follows and supplements the guidelines set forth in the 2001 *CEQR Technical Manual*, where applicable. Subsequent to the publication of the DEIS, the City released the 2010 *City Environmental Quality Review (CEQR) Technical Manual* (May 17, 2010) which updates the methodologies presented in the 2001 *CEQR Technical Manual*. The analyses within this FEIS have been assessed in accordance with the 2001 *CEQR Technical Manual*, except for those technical areas where the 2010 CEQR methodologies would result in potentially more conservative project-related impacts. In particular, the transit analysis and the community facilities analysis have been revised to utilize the new 2010 CEQR methodologies.

For each technical analysis in the EIS, the assessment includes a description of existing conditions, an assessment of conditions in the future without the proposed project (the "No Action" condition) for the year that the action would be completed, and an assessment of conditions for the same year with the completion of the proposed project (the "future with the proposed project" condition).

In conformance with standard CEQR methodology for the preparation of an EIS, this EIS contains:

- A description of the proposed project and its environmental setting;
- The identification and analysis of any significant adverse environmental impacts of the proposed project;
- An identification of any significant adverse environmental impacts that cannot be avoided if the proposed project is developed;
- A discussion of reasonable alternatives to the proposed project;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the proposed project should it be developed; and
- The identification and analysis of practicable mitigation to address any significant adverse impacts generated by the proposed project.

D. STUDY AREAS

Study areas relevant for each analysis category are defined. These are the geographic areas most likely to be potentially affected by the proposed project for a given category. Appropriate study areas differ depending on the type of analysis. It is anticipated that the principal direct effects of the proposed project would occur within the project site, while secondary effects could occur in the surrounding study area(s). The specific methods and study areas are discussed in the individual technical analysis chapters.

E. ANALYSIS YEAR

An EIS analyzes the effects of a proposed project on its environmental setting. Since typically a proposed project, if approved, would take place in the future, the action's environmental setting is not the current environment but the environment as it would exist at project completion, in the future. Therefore, future conditions must be projected. This prediction is made for a particular year, generally known as the "analysis year" or the "Build year," which is the year when the proposed project would be substantially operational. It is expected that the proposed project

would be competed and occupied by 2020. Therefore, a 2020 analysis year is the basis of this EIS. Conditions in the No Action scenario have been evaluated against conditions in the future with the proposed project for 2020.

F. DEFINING BASELINE CONDITIONS

EXISTING CONDITIONS

This EIS provides a description of "existing conditions" for 2009 and assessments of the No Action Condition and of the future with the proposed project. The assessment of existing conditions establishes a baseline—not against which the proposed project is measured, but from which future conditions can be projected. Data from the New York City Department of Finance's Real Property Assessment Database (RPAD) has been used to update the census population to reflect new development in the study area since 2000.

The prediction of future conditions begins with an assessment of existing conditions because these can be measured and observed. Studies of existing conditions are generally selected for the future reasonable worst-case conditions. For example, the periods when the greatest numbers of new vehicular, pedestrian, and transit trips to and from a project site would occur are measured for the traffic analysis. The project impacts are then assessed for those same traffic peak periods.

Recently, Kent Avenue has been reconfigured in terms of traffic flow direction and geometric configuration in the study area. Specifically, since late September/early October 2009 the traffic flow direction on Kent Avenue has been changed from two-way north-south operation to one-way northbound operation between Clymer and North 14th Streets. In addition to the traffic flow direction change, new northbound-southbound bicycle lanes were installed on the west side of Kent Avenue in October 2009. Other geometric changes for the reconfigured Kent Avenue include a new loading/unloading lane on the east side of the roadway, followed by a northbound moving lane of traffic and a floating parking lane that separates the moving traffic lane from the bicycle lanes.

The DEIS included a qualitative assessment of potential traffic impacts with the reconfiguration of Kent Avenue. This FEIS has been updated to include a detailed quantitative analysis of traffic conditions with the reconfiguration of Kent Avenue. Baseline traffic data were collected in February 2010 for reconfigured Kent Avenue.

The transit analyses in this FEIS have been revised to incorporate the recently approved Metropolitan Transportation Authority (MTA) service changes. The changes predominantly affect the assignment of project-generated transit riders.

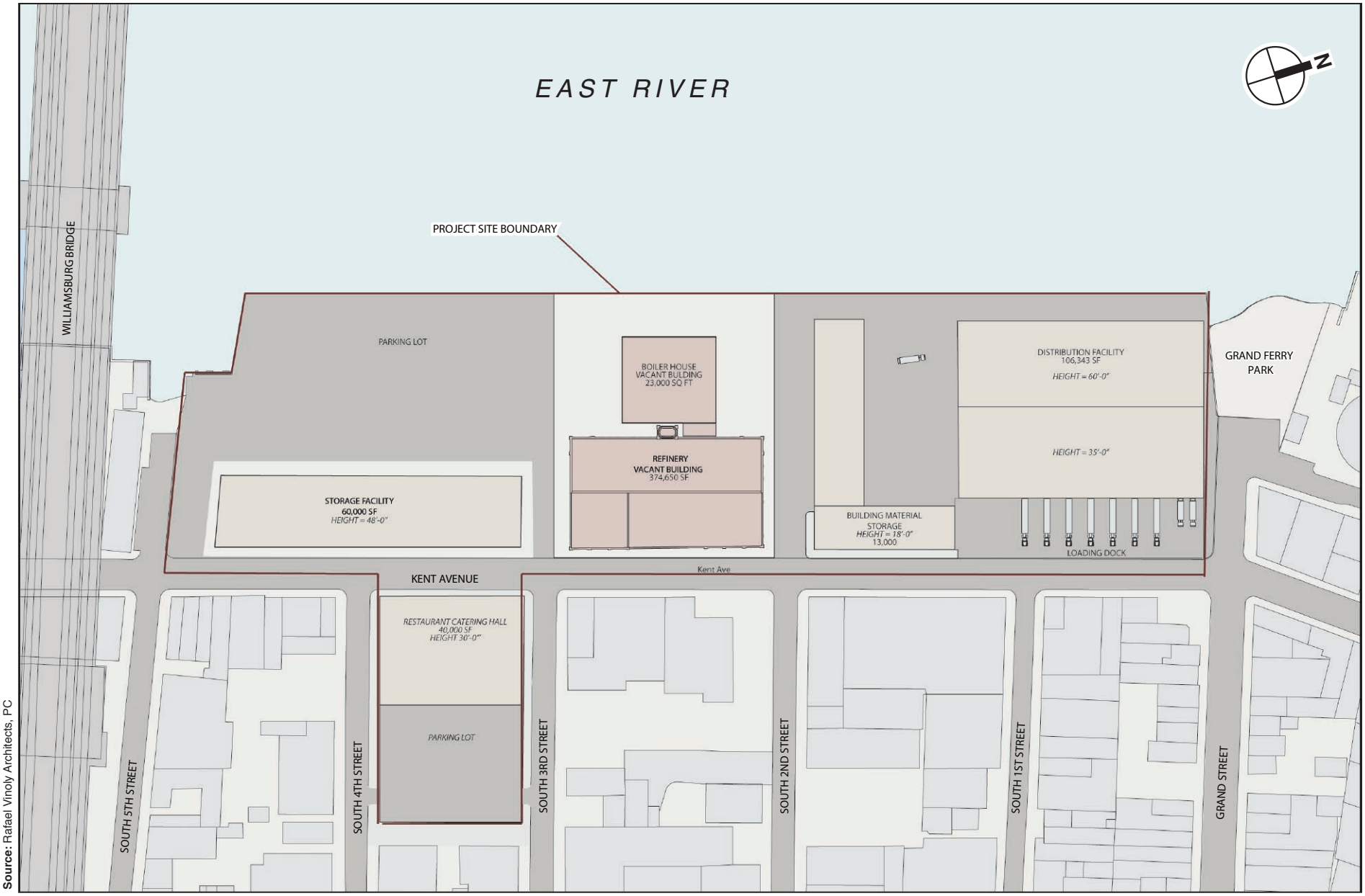
DEFINITION OF THE FUTURE WITHOUT THE PROPOSED PROJECT

The No Action condition provides a baseline condition that is evaluated and compared with the incremental changes due to the proposed project for the same 2020 analysis year as the proposed project. The EIS impact analyses are based on projections of future conditions absent the proposed project on both the project site and the surrounding study area.

PROJECT SITE

Absent the proposed project, the applicant would develop the project site with uses permitted under the existing M3-1 zoning. As shown on Figure 2-1, the No Action condition includes the retention of the Refinery complex, which would remain vacant due to the high cost of adaptive

12.17.09



Source: Rafael Vinoly Architects, PC

NOT TO SCALE

No Action Development on the Project Site

Figure 2-1

reuse, development of a storage facility on the waterfront parcel between South 3rd and South 5th Streets, a building materials storage yard along the waterfront between South 2nd and South 1st Streets, and a new distribution facility along the waterfront immediately south of Grand Ferry Park. On the upland portion of the site, a new two-story building with a catering hall/restaurant on the upper floor and parking on the ground floor would be constructed. The Boiler House, which is located between the Refinery and the waterfront, would also remain as a vacant building due to the high cost of demolition. Under the No Action scenario, all buildings on the site except for the Refinery and the Boiler House would be demolished. The adaptive reuse of the Refinery poses a number of challenges due to the fact that it was designed and constructed for the specialized processes of sugar refining. Therefore, the cost of reusing the Refinery would be prohibitive under the project site's existing zoning. However, as a landmark, the Refinery needs basic maintenance to prevent its deterioration, and the revenues from the development described above would be necessary for this maintenance. Because it would not involve any alterations to the landmarked Refinery, this development would not require any approvals from LPC. Construction activities on areas of the project site within 90 feet of the Refinery would comply with the procedures set forth in the New York City Department of Buildings' (DOB) *Technical Policy and Procedure Notice* (TPPN) #10/88, which outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction.

The total development program for this scenario includes approximately 106,300 square feet (sf) of industrial distribution space, approximately 60,000 sf of storage space, 40,000 sf of catering hall/restaurant space, and 61,000 sf of land used for building material storage (as well as 5,000 sf of office space for this use).

STUDY AREA

This EIS analyzes and incorporates other projects anticipated to be completed that would affect conditions in the study area in 2020. The future baseline—the No Action condition—assumes that none of the discretionary approvals proposed as part of the proposed project would be adopted. Development in the No Action condition would be limited to those projects that are developed independent of the proposed project.

Development projects projected or underway within approximately ½ mile of the project site, which is the study area selected for the Land Use analysis, are listed in Table 2-1 and presented on Figure 2-2. Table 2-2 shows projected development sites identified in the 2005 *Greenpoint-Williamsburg Rezoning FEIS*. The reasonable worst case development scenario of that FEIS analyzed a Build year of 2013, by which time it was anticipated that most of the development resulting from that rezoning would have occurred. Therefore, the projected development analyzed in that FEIS is included in the "Future Without the Proposed Project" analyses of this EIS. It should be noted that the EIS analyses are very conservative in the assumption that all anticipated developments, as well as the full projected buildout of the Greenpoint-Williamsburg rezoning, would be realized by the proposed project's 2020 Build year.

This list of anticipated development projects includes projects that were planned prior to the current economic slowdown and, although some of those projects are on hold, they are assumed to still be moving forward in the future when market conditions improve. Therefore, this projected background growth is conservatively inclusive.

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No Action Developments

Figure 2-2

Table 2-2 lists the projected development sites from the Revised Affordable Housing Bonus Incentive Alternative of the *Greenpoint-Williamsburg Rezoning FEIS* that fall within the ½-mile study area.

Table 2-1
No Action Development Projects within ½-Mile Study Area

Map No.*	Name/Address	Residential Units	Retail (sf)	Other
1	Kedem Winery	450	26,413	0.5-acre public esplanade, 225 parking spaces
2	Domsey, 421-471 Kent Avenue	540	--	120 parking spaces
3	Rose Plaza, 470-490 Kent Avenue	801	28,126	0.77-acre public esplanade; 436 parking spaces
4	29 South 3rd Street	24	--	15 parking spaces
5	Wythe Avenue between South 2nd and South 3rd Streets	80	--	--
6	184 Kent Avenue	256	27,000	--
7	Northside Piers	900	--	--
8	North 5th Street and Berry Street	40	--	--
9	80 Metropolitan Avenue	123	--	--
10	North 1st Street between Kent and Wythe Avenues	41	--	--
11	349 Metropolitan Ave	35	--	--
12	South 4th Street between Driggs and Roebling	46	--	--
13	Block bounded by Berry Street, Bedford Avenue, North 3rd Street, and North 4th Street	195	--	--
14	144 North 8th Street	42	--	--
15	Block 2396, Lot 12	4	--	--
16	Block 2404, Lot 19	8	--	--
17	Navy Yard	--	--	250,000 sf industrial space; 289,000 sf media production space; 600,000 sf B&H warehouse
18	Block 2133, Lots 13, 18	9	--	--
19	Block 2137, Lot 14	69	--	--
20	Block 2139, Lot 44, 45	5	--	--
21	Block 2169, Lot 47	3	--	--
22	Block 2303, Lot 19	32	--	--
23	Block 2318, Lot 3	6	--	--
24	Block 2342, Lot 16	23	--	--
25	Block 2344, Lot 16, 25	39	--	--
26	Block 2358, Lot 11, 28	36	--	--
27	Block 2368, Lot 32, 33	16	--	--
28	Block 2369, Lot 1	6	--	--
29	Block 2378, Lot 17	20	--	--
30	Block 2381, Lot 14	19	--	--
31	Block 2382, Lot 33	41	--	--
32	Block 2383, Lot 9	26	--	--
	TOTAL	**3,935**	**81,539**	

Notes: *Refer to Figure 2-2.
Sources: NYC Department of City Planning; New York City Department of Buildings; AKRF field visits.

Table 2-2
No Action Greenpoint-Williamsburg FEIS
Projected Sites within ½-Mile Study Area

Projected Development Site No.*	Residential Units	Retail Floor Area (sf)
161	38	--
185	67	--
191	12	--
199**	1,312	30,000
203	23	4,500
207	0	4,000
208	29	--
218	60	--
220	4	--
224	84	--
227	11	--
230	17	--
235	253	10,000
236	59	--
240	37	--
295	0	15,810
160.1	47	18,000
186	12	--
206	35	--
259	40	--
331	18	--
TOTAL	**2,158**	**82,310**

Notes: *Refer to Figure 2-2.
** The development known as "The Edge," which is currently under construction, is located on Projected Development Site 199 of the *Greenpoint-Williamsburg FEIS*.
Projected development sites where development has already been completed are not included on this list, as they are instead represented under existing conditions.
Sources: *Greenpoint-Williamsburg Rezoning Final Environmental Impact Statement*, 2005.

The analyses of the No Action condition for some technical areas, such as traffic, add a background growth factor, as a further conservative measure, to account for a general increase in activity unrelated to known projects in addition to anticipated future projects. The analyses of the No Action condition must also consider other future changes that will affect the environmental setting. These could include technology changes, such as advances in vehicle pollution control and roadway improvements, and changes to City policies, such as zoning regulations.

G. ASSUMPTIONS FOR THE IMPACT ANALYSES

In considering the potential environmental impacts of the proposed project, this EIS analyzes the program as defined in Chapter 1, "Project Description." This development program represents the "reasonable worst-case development scenario" (RWCDS) for the project site. The RWCDS represents the scenario that could result in maximum potential impacts from the proposed project. The applicant currently intends to build 2,200 residential units on the project site, of which 660 would be affordable to low- and moderate-income households. However, based on an average unit size of approximately 1,000 gross square feet (gsf) within 2.44 million gsf of residential floor area, it is assumed for analysis purposes in this EIS that the project could include up to 2,400 residential units, 30 percent of which would be affordable to low- and moderate-income households. The proposed project would also include up to 127,537 gsf of

retail/commercial space, up to 146,451 gsf of community facility space, and 98,738 gsf of commercial office space, as well as approximately four acres of publicly accessible open space.

The proposed actions described in Chapter 1, "Project Description," would create a zoning envelope within which development could occur, and the proposed project as described represents an illustrative development within this envelope. In order to conservatively account for potential impacts, certain chapters in this EIS analyze the full zoning envelope rather than the illustrative proposed project. Chapter 7, "Shadows," analyzes the shadow impact of the entire proposed zoning envelope in order to account for the maximum potential extent of the shadows. The analyses in Chapter 19, "Air Quality," are also based on the proposed zoning envelope.

It is anticipated that the development could also be served by water taxi service and/or shuttle bus service to transit locations, and the implementation of these would be explored as demand is created by the proposed project's development. While the project could accommodate a water taxi service, it would require its own approval process for dock designs and operations, and the design and location have not been specified at this time. For EIS impact analyses, it is conservatively assumed that neither the ferry nor the shuttle buses would be in place.

To ensure that the proposed project, when constructed, is consistent with the drawings shown on the site plan approved by CPC and the City Council pursuant to ULURP, that access to the project is at the locations analyzed in the EIS, and that the mix of uses in the project is substantially consistent with the proposed project as described above and as analyzed in the EIS, the applicant will execute and record a Restrictive Declaration at the time all land use-related actions required to authorize the project's development are approved.

As described in Chapter 23, "Mitigation," the applicant will enter into an agreement with SCA to provide an option to locate an approximately 100,000-square-foot public elementary and intermediate school within the community facility space in the Refinery complex. Because a school use instead of another community facility use could result in impacts different from those analyzed in the DEIS, this FEIS provides a qualitative discussion of the possible impacts of locating a public school in the Refinery complex. This discussion is provided in the "Public School Option" section of each analysis where the school could have potential impacts. The public school option would not have the potential to result in impacts in the following analyses, and therefore no discussion of the school is provided: Chapter 3, "Land Use, Zoning, and Public Policy;" Chapter 4, "Socioeconomic Conditions;" Chapter 7, "Shadows;" Chapter 11, "Natural Resources;" Chapter 12, "Hazardous Materials;" Chapter 13, "Waterfront Revitalization Program;" Chapter 19, "Air Quality;" Chapter 22, "Public Health;" Chapter 26, "Growth-Inducing Aspects of the Proposed Project;" and Chapter 27, "Irreversible and Irretrievable Commitments of Resources."

H. MITIGATION

Mitigation measures for all significant adverse impacts identified in this EIS are described in Chapter 23, "Mitigation." CEQR requires that any significant adverse impacts identified in the EIS be minimized or avoided to the fullest extent practicable, balanced against social, economic, and other considerations. In the DEIS, options for mitigation were presented for public review and discussion, prior to the lead agency's selecting one for implementation.

Where significant adverse impacts from the proposed project are identified in this FEIS, specific mitigation measures to minimize or eliminate the significant adverse impacts are defined and evaluated. Where necessary, measures to further mitigate significant adverse impacts were

further refined and evaluated between the DEIS and FEIS. This FEIS includes a description of all practicable mitigation measures to be implemented with the proposed project in Chapter 23, "Mitigation." The earliest phase that mitigation would be required for each identified significant adverse impact is also discussed in Chapter 23.

Where feasible mitigation is not available or practicable, this FEIS discloses the potential for unavoidable significant adverse impacts.

I. ALTERNATIVES

Chapter 24, "Alternatives," assesses a range of alternatives to the proposed project. SEQRA requires that a description and evaluation of the range of reasonable alternatives to a proposed action be included in an EIS at a level of detail sufficient to allow a comparative assessment of the alternatives to a proposed action. Alternatives and the rationale behind their selection are important in the disclosure of environmental effects of a proposed action. Alternatives provide options to the proposed action and a framework for comparison of potential impacts and project objectives. If the environmental assessment and consideration of alternatives identify a feasible alternative that eliminates or minimizes significant adverse impacts, the lead agency may want to consider adopting that alternative as the proposed action. CEQR also requires consideration of a "No Action Alternative" that evaluates environmental conditions that are likely to occur in the No Action condition. The alternatives analyzed in this EIS were identified, in part, based on comments received during the scoping process and include the examination of a "No Action," or as-of-right, alternative that assumes the continuation of the existing M3-1 zoning on the site and the demolition and redevelopment of portions of the site under that zoning; a reduced density alternative that would reduce the project's unmitigated significant adverse impacts; an alternative in which the proposed project includes cogeneration for energy production; and an alternative in which an approximately 112,000-square-foot hotel with 150 rooms occupies several floors of the Refinery. Construction of a hotel on the project site would likely require additional discretionary actions in the future. Two new alternatives have been included in the FEIS: (1) A Reduced Parking Alternative, which considers the same development program as the proposed project but with no special permit for accessory parking spaces in the northern parking facility (located beneath Sites A and B); and (2) a Reduced Site A Alternative that assesses the environmental effects of reduced heights on the northernmost waterfront buildings (Site A) and with no special permit for accessory parking in the northern parking facility. ✷