1.0 Introduction

1.1 Introduction

This document is the Draft Environmental Impact Statement (DEIS) for the Port Authority of New York & New Jersey's (Port Authority) proposed Goethals Bridge Replacement (GBR) Project, (also referred to as the "Proposed Project"). This DEIS has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended. As the Proposed Project requires a US Coast Guard (USCG) Bridge Permit for the construction of a bridge across the Arthur Kill, a navigable water of the United States, the USCG serves as the lead Federal agency for the required NEPA process.

The DEIS presents, among other information, the following; 1) the Project's purpose and need; 2) the alternatives screening process and analyses conducted to identify project alternatives for detailed evaluation in this DEIS; 3) existing conditions for a variety of environmental resources in the vicinity of the Goethals Bridge; 4) the environmental impacts associated with each of the identified project alternatives, in comparison to the future projected no-build conditions; 5) proposed mitigation measures for potentially adverse impacts that cannot be avoided; and 6) the agency and public involvement process used throughout the DEIS preparation.

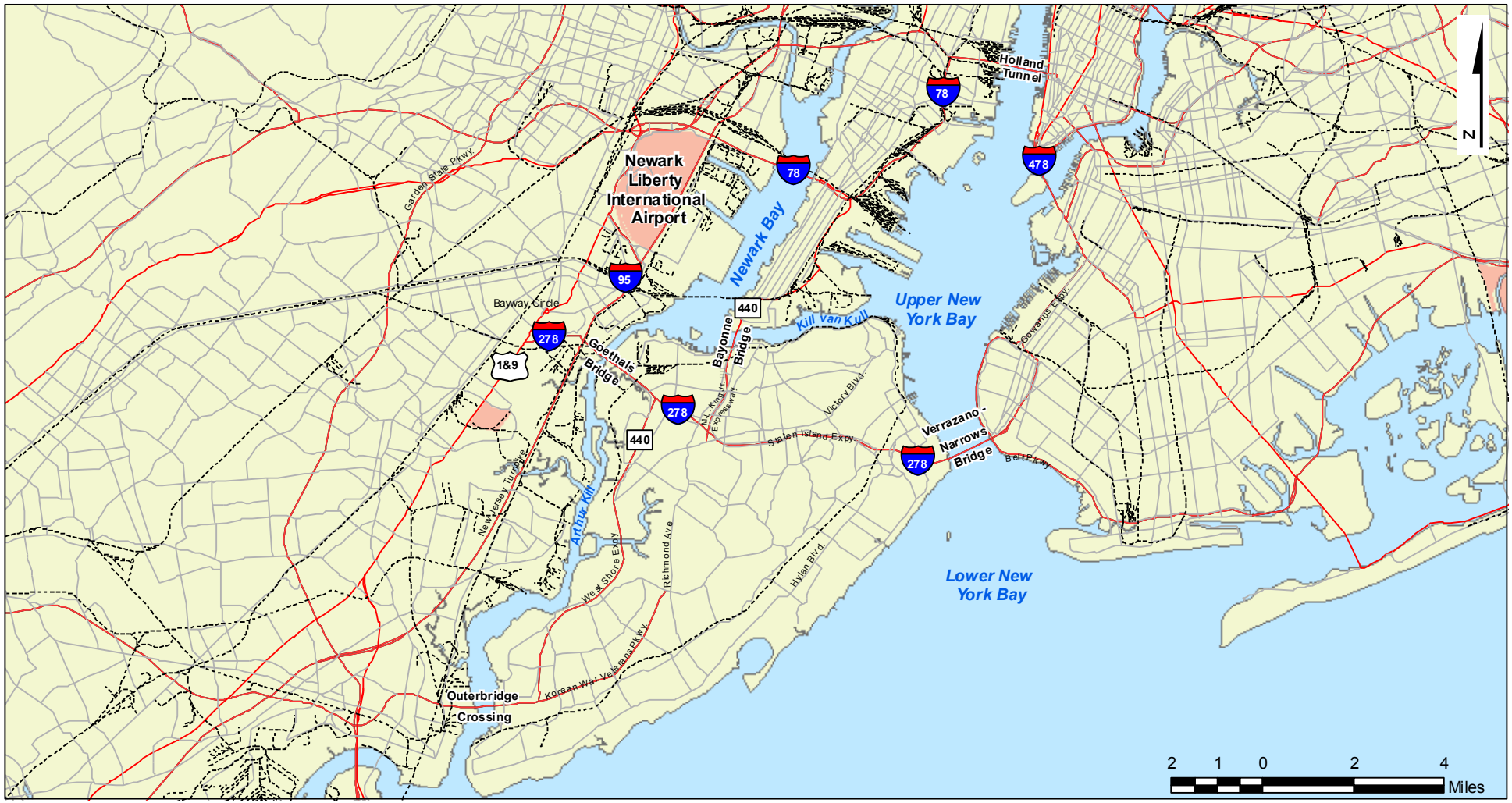
1.2 Project Background

The Goethals Bridge provides a direct connection between the Borough of Staten Island, New York and the City of Elizabeth, New Jersey and is an important link in the Port Authority's bi-state system of bridges and tunnels, as well as the entire New York / New Jersey metropolitan area's regional highway network. The Port Authority owns and operates the Goethals Bridge, Outerbridge Crossing and Bayonne Bridge (Staten Island Bridges system) which provide direct access between the Borough of Staten Island and New Jersey, as well as the more northerly crossings of the Hudson River, including the George Washington Bridge and the Holland and Lincoln tunnels, which provide access between the Borough of Manhattan and New Jersey.

The three Staten Island Bridges, in conjunction with the Verrazano-Narrows Bridge, operated by the Triborough Bridge and Tunnel Authority between Staten Island and Brooklyn, New York, comprise the Southern Corridor, one of the four main travel axes within the greater New York / New Jersey metropolitan area.[1] Motorists also use these Southern Corridor Crossings when traveling between central or southern New Jersey and Brooklyn, Queens, or points on Long Island, as these crossings provide the most direct route for vehicular movement of people and goods between these origins and destinations.

The Goethals Bridge is a primary path of travel within the Southern Corridor, serving as a link along Interstate 278, which begins at U.S. Route 1/9 in Linden, New Jersey, and continues across northern Staten Island as the Staten Island Expressway, and then continues into Brooklyn and Queens before it eventually terminates at I-95 in the Bronx. It also provides a direct connection to the New Jersey Turnpike (Interstate 95) at Interchange 13 in New Jersey and access via I-278 to the West Shore Expressway, the major north-south highway on Staten Island. Goethals Bridge is the central-most bridge of the three Staten Island Bridges, crossing the Arthur Kill in northwestern Staten Island, with the Outerbridge Crossing of the Arthur Kill located approximately eight aerial miles to the south near the southern tip of Staten Island and the Bayonne Bridge crossing the Kill van Kull at a point approximately three aerial miles to the northeast along the northern shore of Staten Island (see Figure 1.2-1).

[1] The other three trans-Hudson corridors include: the Northern Corridor (consisting of the Tappan Zee Bridge, which is owned and operated by the New York State Thruway Authority and the George Washington Bridge); the Midtown New York City Corridor (the Lincoln Tunnel); and the Downtown New York City Corridor (the Holland Tunnel).



Legend

Roads

- Highways
- Secondary Roads
- Airports
- Railroad

Goethals Bridge Replacement EIS

FIGURE 1.2-1
Regional Location

United States Coast Guard

The Goethals Bridge, built in the 1920s, was completed in 1928. Opening day was June 29, 1928, on the same day as the opening of the Outerbridge Crossing. This event marked the completion of the first two bi-state development projects by the then-recently-created Port Authority. Both bridges were built to accommodate increasing bi-state automobile and truck traffic following World War I.

When the Goethals Bridge and the other Staten Island Bridges were first designed and constructed, traffic conditions were very different from the conditions that exist today. Primarily facilitating movements between New Jersey and Staten Island, the bridges were not heavily used initially. However, the opening of the Verrazano-Narrows Bridge in 1964 created a highly used travel corridor from New Jersey through Staten Island to Brooklyn, Queens, and the rapidly developing counties of Nassau and Suffolk on Long Island. The opening of the Verrazano-Narrows Bridge also resulted in rapid growth of Staten Island in the ensuing years. These factors led to marked growth in traffic volumes on the Goethals Bridge.

The existing Goethals Bridge, originally designed for narrower vehicles and local traffic movements, has become increasingly deficient in accommodating the expanding markets it serves. As early as the mid-1980s, the Port Authority recognized that the bridge had become functionally and physically obsolete as original design features based on then-current codes and standards no longer met current standards. In addition, deteriorated traffic conditions and relatively higher accident levels on the bridge were attributed to ever-increasing traffic volumes, including truck traffic; these conditions had also been projected to continue to deteriorate in future years. In response to these conditions, the Port Authority undertook a screening analysis of potential alternative improvements for the Staten Island Bridges, and an environmental review of the alternatives that appeared to best address identified needs at that time was undertaken in the early 1990s.

As a result of those studies, the Port Authority proposed the construction of a parallel bridge operating in conjunction with the existing bridge to enhance the bridge's capacity to meet the future transportation needs of the region, as well as the bridge's obsolescence. This proposal became known as the Staten Island Bridges Program – Modernization and Capacity Enhancement Project. A Notice of Intent (NOI) was published in the *Federal Register* by the USCG for a proposed twinning of the Goethals Bridge. Subsequently, a DEIS was completed in 1995 and a Final Environmental Impact Statement (FEIS) was completed in 1997. However, a Record of Decision (ROD) for the project was not issued due to various unresolved issues.

Although the project was stalled for several years, the need for modernization of the Goethals Bridge continued. The Port Authority reassessed the condition of the existing Goethals Bridge, its operational constraints and improvement needs. In addition to the various needs that had been identified during the early 1990s, the Port Authority determined that rehabilitation of the existing bridge, which is necessary to enhance structural integrity, would incur increasing life-cycle costs associated with long-term maintenance and repair. Additional factors underlying the current need for a modernized bridge include the following: 1) to provide current bridge/roadway standards and address design deficiencies; 2) to provide system redundancy, especially in the post-9/11 era; 3) to improve traffic service as the traffic operations on the bridge continue to worsen; 4) to provide safer operating conditions and reduce accidents; 5) to provide for safe and reliable truck access for regional goods movement; and 6) to provide for potential future transit in the corridor. These needs are discussed in greater detail in Section 2.0 of this DEIS.

As a result of reassessing the project and identifying the current needs of the bridge, the Port Authority wished to seek a total replacement of the existing Goethals Bridge in order to best meet the need for the bridge modernization. Preliminary discussions with the USCG then led to a USCG determination that a new EIS should be prepared for the Proposed Project. A Notice of Intent (NOI) to prepare an EIS for the proposed replacement of the Goethals Bridge was published in the *Federal Register* on August 10, 2004.

1.3 Description of the Port Authority's Proposed Project

The Port Authority's Proposed Project consists of a new cable-stayed bridge to replace the existing bridge, as well as removal of the existing bridge either after or during construction of the new bridge, depending on the specific alternative chosen. Potentially, the new bridge would consist of the following components:

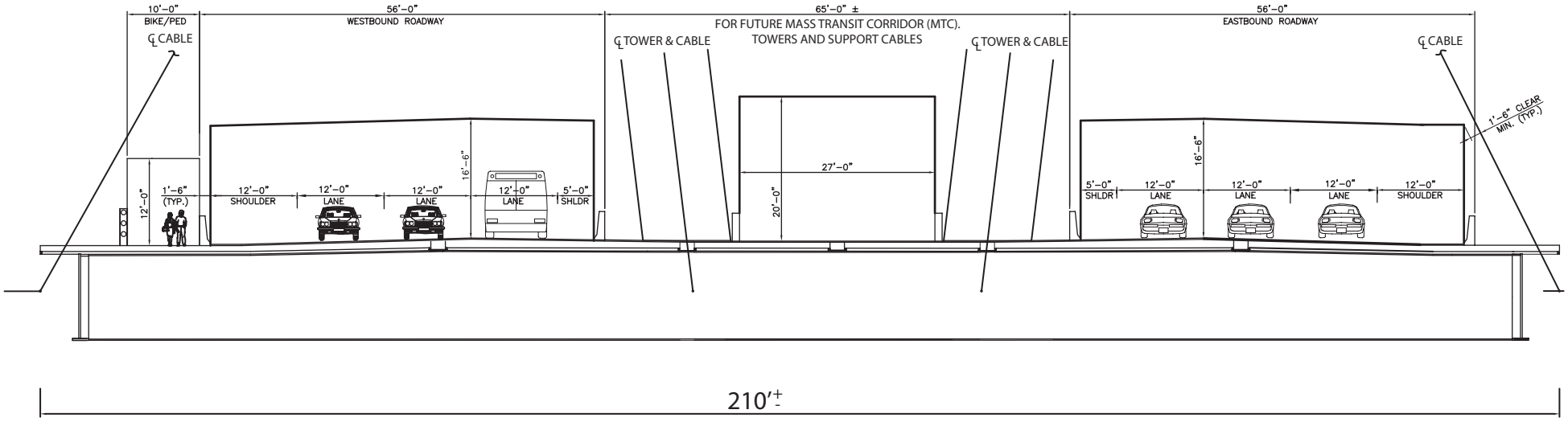
- six 12-foot-wide travel lanes, three on each roadway deck (i.e., one roadway for eastbound traffic and one roadway for westbound traffic);
- a 12-foot-wide outer shoulder on each roadway;
- a 5-foot-wide inner shoulder on each roadway;
- a minimum 10-foot-wide sidewalk/bikeway along the northern edge of the westbound roadway; and
- a central area to be maintained between the eastbound and westbound roadway decks with sufficient width to accommodate the provision of future transit service, should future conditions warrant inclusion of such service during the service life of the bridge.[2]

As indicated in the cross-sectional view of the proposed new bridge (see Figure 1.3-1), the total out-to-out width of the main span of the bridge would be approximately 210 feet. Part of that width is comprised of a 65-foot-wide central area between the eastbound and westbound decks which accommodates the towers and support cables, as well as the 27-foot-wide potential mass transit corridor. Navigational clearance under the new bridge is proposed to be a minimum of 135 feet above mean high water (MHW), which is unchanged from the clearance of the existing bridge. The top elevation of the two bridge towers is proposed to be 272 feet above mean sea level (MSL).

While more detailed information is presented in Section 3.3, other elements of the Proposed Project include:

- new approach spans with similar dimensions as the bridge itself on both the New Jersey and the New York ends of the new bridge;
- a 50-foot wide buffer on both sides of the replacement bridge and its approach spans, including a 25-foot wide right-of-way;
- permanent right-of-way fencing at ground level along both sides of the proposed replacement bridge approach spans, except through open waters;
- a permanent access road located generally below the proposed replacement bridge approach spans for purposes of construction, maintenance and security;
- replacement of the Travis Branch railroad bridge over I-278 in Staten Island in order to accommodate the wider roadway;
- relocation and/or re-alignment of either or both, Goethals Road North and Gulf Avenue in Staten Island, depending on the alignment alternative to be selected; and

[2] The inclusion of a potential mass transit corridor between the two roadway decks of the bridge has been proposed in response to one of the identified Project Needs as presented in Section 2.0 of this EIS. The 27-foot-wide mass transit corridor is designed to provide sufficient horizontal and vertical clearances for either express bus or light-rail services, depending on which system may be warranted in the future as ridership forecasts dictate. It is anticipated that a separate environmental review process would be required for implementation of an actual mass transit system at a time when more specific plans and logical termini beyond the Port Authority's property limits would be conceptualized based on future ridership forecasts that would warrant the implementation of such transit services.



Goethals Bridge Replacement EIS
Figure 1.3-1 Conceptual Main Span's Cross-Section of the Proposed Goethals Bridge Replacement
United States Coast Guard

- construction staging areas of approximately five acres on each side of the Arthur Kill, which are required for storage of the materials, pre-assembly activities and office space for the construction effort.[3]

Although the Port Authority, as the Project Sponsor, has not yet identified its preferred alignment alternative, four alignment alternatives are being considered; two of the alternatives entail the construction of a bridge on a completely new alignment located north or south of the existing bridge, while the other two entail construction of a bridge within and extending north or south of the existing bridge's alignment. These conceptual alignment alternatives and related design components are discussed in detail in Section 3.0 of this DEIS.

The existing bridge, including its main truss span, its New Jersey and New York approach spans and hollow abutments, would be entirely demolished and removed, either after construction of the new bridge is completed or partially completed, depending on the specific alignment alternative.

The Port Authority intends to self-finance the Proposed Project and anticipates that the construction period for the new bridge and demolition of the existing bridge would range between 52 and 78 months, depending on the specific alignment alternative and the type of superstructure (i.e., steel girder, pre-cast/stressed concrete, or segmental concrete) to be selected for the main bridge span and its approaches. The Port Authority hopes to initiate construction in 2011 and to open the new bridge to traffic in late 2015.

1.4 Environmental Review Process

For purposes of review under NEPA, the USCG is responsible for identifying and assessing the environmental consequences of the several Proposed Project alternatives (as well as the No-Build Alternative), and proposed mitigation measures. The U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the Federal Highway Administration (both the New York and New Jersey divisions), are all cooperating agencies in the preparation of this DEIS. The Port Authority, as the project sponsor, has defined its proposal and has provided data and information to assist the USCG in its assessment of impacts and benefits of the project alternatives.

1.4.1 Scoping Process

On June 3, 2004, the Port Authority submitted a Letter of Intent to File a Bridge Permit Application to the USCG. In response to this letter, the USCG published a Notice of Intent (NOI) to prepare a DEIS in the *Federal Register* on August 10, 2004. The USCG held one agency scoping meeting and two public scoping meetings in the Fall of 2004. The purpose of these meetings was to initiate the public involvement process for this study by seeking comments on the purpose and need for the proposed bridge replacement, the project alternatives to be considered, and types of environmental studies to be undertaken, as well as input on issues that should be addressed in the DEIS. Prior to the agency scoping meeting, a Draft Scoping Document was prepared and distributed to federal, state, and local agencies, exhibiting the following key information:

- the Proposed Project's purpose and need;
- the preliminary alternatives and the method for selection of alternatives to be evaluated in the DEIS;
- the definition of study areas for various environmental resources;

[3] While such staging areas would not be sited within wetlands, their upland locations would be further advanced as part of the Final EIS once an environmentally preferred alignment and respective construction/contracting methods would be identified.

- the technical disciplines addressed in the DEIS and the methods to be used for characterization of existing conditions and assessment of impacts and mitigation; and
- an overview of the public participation and agency coordination program.

In addition, a Public Scoping Information Packet (a shorter version of the Draft Scoping Document recapping the same key information listed above) was distributed to public libraries and individuals on a project mailing list prior to the two sets of public scoping meetings.

The agency scoping meeting was held on September 14, 2004 at the USCG offices in lower Manhattan. The public scoping meetings were held in the afternoon and evening on October 5 and 6, 2004 at the Staten Island Hotel and Elizabeth City Hall, respectively. In addition to the oral comments received at the agency and public scoping meetings, written comments were accepted for 30 days after the public scoping meetings, with the comment period closing on November 5, 2004. The comments, suggestions, and questions generated by the scoping meetings are being addressed in the EIS process.

In addition to the scoping meetings, the USCG conducted a public participation program to further solicit input from affected agencies as well as the general public. The main goals of the program were to establish an ongoing forum of communication with stakeholders, agencies, and the general public, and to educate the public on the environmental review process and the role of government, stakeholders, and the general public. Details of the public participation program for the Proposed Project are provided in Section 6.0 of this DEIS.

1.4.2 DEIS Contents and Format

The DEIS is a legally prescribed, full-disclosure document describing the environmental impacts projected to be associated with each of the alternatives of the Proposed Project. The alternatives considered in detail in the DEIS are the No-Build Alternative, as well as four Build Alternatives: i.e., the New Alignment South; the New Alignment North; the Existing Alignment South; and the Existing Alignment North.

The contents of the DEIS are consistent with NEPA requirements and address all pertinent analysis areas. This introduction is followed by a presentation of the Proposed Project's Purpose and Need in Section 2.0. A discussion of the alternatives screening process utilized to identify the four Build Alternatives to be studied in greater detail in this DEIS, as well as conceptual details regarding the specific alignment alternatives and other related design components that have been considered is included in Section 3.0. Section 4.0 presents descriptions of the existing conditions related to all resources comprising the affected environment. Section 5.0 presents the impacts of the No-Build Alternative and the proposed four Build Alternatives, including temporary construction and permanent operations-related impacts, as well as recommended mitigation measures. Section 6.0 discusses public and agency involvement. Section 7.0 describes the required permits and approvals necessary for implementation and completion of the Proposed Project. Section 8.0 lists the preparers of this DEIS. Section 9.0 presents a list of the agencies, individuals, and organizations to whom this DEIS was distributed. Lastly, Section 10.0 contains a bibliography of sources used to develop this DEIS.

Appendices referenced throughout the DEIS are presented as a separate bound document or available electronically via CD-ROM. These appendices provide greater detail on various aspects of the environmental resources and studies undertaken for the DEIS.

1.5 Port Authority Sustainable Design

In July 2006, the Port Authority adopted a policy "to reduce adverse environmental impacts of the design, construction, operation and maintenance and occupancy or leasing of new or substantially renovated

buildings and facilities, reconstruction projects, and programs."[4] The policy applies both to Port Authority and tenant capital projects.

To reduce the environmental impacts of capital projects, the Port Authority's policy references the "Sustainable Design Guidelines," which emphasize and strive for a balance among the following goals: (1) energy conservation and efficiency; (2) conservation of water and other natural resources; (3) waste reduction; and (4) healthy indoor environments. The guidelines also seek to benefit the region's economy by encouraging the use of locally manufactured materials and by supporting emerging regional markets in renewable energy and clean technologies.

The Proposed Project will be designed to address and implement, where practical, feasible and appropriate, the Port Authority's current sustainable design guidelines.[5]

1.6 EIS Compliance with State and Local Requirements

As discussed in Section 1.1, this DEIS has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969. Although compliance with NEPA requirements is the primary reason for preparation of this document, it is also the intent of the environmental impact documentation to satisfy applicable state and local requirements[6].

1.6.1 New York State

In New York State, most projects or activities undertaken, funded or approved by a state agency or unit of local government, and all discretionary approvals (e.g., environmental permits) from a New York State agency or unit of local government, are subject to the requirements of the New York State Environmental Quality Review Act (SEQRA). [Statutory authority: McKinney's ECL 8-0103; 8-0109]. The environmental documentation process pursuant to SEQRA is akin to that under NEPA and is frequently referred to as a "mini-NEPA process", although it is a separate process. However, the SEQRA regulations provide that when a draft and final EIS have been duly prepared under NEPA, a [State] agency may make their findings[7] based on the federal EIS provided that it sufficiently addresses the necessary issues that must be considered when making that decision.

1.6.2 City of New York

Actions taken by the City of New York ("City") are subject to SEQRA. In addition, a local environmental requirement, City Environmental Quality Review (CEQR), provides for environmental review of actions taken by the City. Although City and Federal decisions on the same project pursuant to CEQR and NEPA, respectively, are independent of each other, coordination and joint planning processes are encouraged in order to avoid duplication between NEPA and state and local requirements[8].

New York City actions associated with the Proposed Project that are subject to SEQRA and CEQR include changes to the City Map and disposition of City-owned land, both of which would undergo the Uniform Land Use Review Procedure (ULURP). Coordination with the Mayor's Office of Environmental Coordination, NYC Department of City Planning and other City agencies has been ongoing in an effort to

[4] The Port Authority of New York & New Jersey, Office of the Executive Director, AP 45-2 – Sustainable Design (Effective July 13, 2006).
[5] Port Authority of New York & New Jersey Engineering Department, *Sustainable Design Project Manual*, June 1, 2007.
[6] As stated in CEQ regulations (40 CFR 1506.2 - *Elimination of duplication with State and local procedures*).
[7] As stated in SEQRA regulations (6 NYCRR 617.11-15).
[8] As stated in the New York City CEQR Technical Manual (Chapter 1 - *Procedures and Documentation*, Section 300 - *CEQR-NEPA Coordination*).

ensure that this NEPA EIS will adequately satisfy the City's environmental documentation requirements for this Proposed Project.

1.6.3 New Jersey

New Jersey Executive Order No. 215 as revised and updated, requiring the preparation of environmental impact statements and assessments for State initiatives is not applicable to projects which will require a full environmental impact statement pursuant to the National Environmental Policy Act[9].

[9] As stated in E.O. No. 215 of September 1989, §7(f).