



U. S. Department
of Transportation

New York Airports District Office
159-30 Rockaway Blvd, Suite 111
Jamaica, NY 11434

**Federal Aviation
Administration**

January 13, 2015

Mr. Ed Knoesel
Aviation Department
The Port Authority of New York and New Jersey
4 World Trade Center
150 Greenwich St., 18th Floor
New York, New York 10006

Re: Newark Liberty International Airport (EWR)
Infrastructure Renewal – Electrical Distribution
Environmental Determination

Dear Mr. Knoesel:

The Federal Aviation Administration (FAA) has recently approved the Environmental Assessment and Finding of No Significant Impact (EA/FONSI) for the Infrastructure Renewal – Electrical Distribution project at Newark Liberty International Airport, New Jersey. A copy of the FONSI signed by the Approving Official and the EA signature page signed by the Responsible FAA Official are attached.

This Federal environmental approval is a determination by the Approving Official that the requirements imposed by applicable environmental statutes and regulations have been satisfied by a FONSI. However, it is not an approval of any other Federal action relative to the project proposal.

In compliance with Council on Environmental Quality (CEQ) regulations 1501.4(e)(1) and 1506.6, we require that your office make the final EA with Signature Page and FONSI available to the affected public, and announce such availability through appropriate media in the area. The announcement shall indicate the availability of the document for examination and note the appropriate location of general public access where the document may be found (i.e., your office, local libraries, public buildings, etc.). We request that a copy of such announcement be sent to us when it is issued.

Finally, your attention is directed to the mitigating measures that were made a condition of approval of the FONSI. Please be reminded that these measures must be taken by the airport sponsor in order to meet the terms of the EA/FONSI.

The process of making these environmental determinations is that of a partnership between yourself, as airport sponsor, and the other contributing parties, both public and private. We thank you for your effort and cooperation.

Please contact our office if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. M. Urlass".

Steven M. Urlass, Deputy Manager
Airports Division
Eastern Region

Enclosures (2)

cc: A. Yousef, PANYNJ

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Location

Newark Liberty International Airport (EWR)
Newark, New Jersey

Proposed Federal Action

The proposed federal action is the Airport Layout Plan (ALP) approval for the construction of a new electrical switching station, installation of electrical transmission lines, and electrical duct bank runs at Newark Liberty International Airport (EWR) to increase the reliability of critical infrastructure.

Project Description

The proposed action involves the construction of a new electrical switching station to be installed by PSE&G in the southern portion of Parking Lot P-1 and necessary supporting utility infrastructure work to be constructed by the Port Authority of NY & NJ. The proposed action includes the following:

- Construction of a new 345kV/26kV switching station in the southernmost portion of Parking Lot P-1. The switching station site would be approximately two acres and consist of transformers, breakers, a diesel generator, lightning masts, and gas insulated switchgear (GIS). The GIS would be housed in a building on-site and the entire facility would be enclosed by a wall that would limit visibility of the facility by the general public.
- Installation of two underground transmission lines, originating off-airport, that would cross the airport and terminate at the new switching station.
- Installation of: three 3'x 3' underground concrete duct banks of approximately 3,500 linear feet (LF); one 3'x 3' underground concrete duct bank of approximately 1,000 LF; approximately 2,200 LF of underground water lines, storm sewer, and sanitary sewer lines; and an underground duct bank for future fiber optic wiring and connections for telecommunication services. Alignment details can be found in the attached November 2014 Environmental Assessment.
- Reconstruction of the North Bridge (N38) and South Bridge (N39) for utility support and construction staging, as well as the associated necessary roadway pavement work.
- Widening of the existing Basilone Road Bridge to carry the proposed conduits from the new switching station to the east side of the Peripheral Ditch.

Background

Within the last few years, electrical service to EWR has been disrupted at least three times resulting in significant disruption to the airport and its operation. Since the existing electrical system has limitations related to the system age and capacity, EWR needs increased reliability of

its electrical service to prevent future disruptions. The roadway, bridge and other utility construction are necessary for the electrical infrastructure and are also included in the project to maximize construction efficiency and to minimize disruption to tenants and travelers.

Purpose and Need

The purpose and need of the proposed action is to provide increased reliability of the electrical infrastructure and transmission system to prevent disruption of electrical service to EWR.

Alternatives

In addition to the no action alternative, alternate locations and alternative switching station designs were considered. The proposed action was selected because of space requirements, access to transmission circuits, proximity to electrical loads, and to meet the project purpose and need.

Discussion

The attached November 2014 Short Environmental Assessment Form (EA) addresses the effects of the proposed action on the quality of the human and natural environment, and is made a part of this Finding. The following impact analysis highlights the more thorough analysis presented in the document.

Floodplains

Executive Order 11988 requires federal agencies to avoid, to the extent possible, the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains wherever there is a practicable alternative.

According to current Federal Emergency Management Agency (FEMA) interim Advisory Base Flood Elevations (ABFE) dated December 7, 2012, January 12, 2013, and January 15, 2013, the project area is located in Advisory Flood Hazard Zone A, which is the area subject to storm surge flooding from the 1% annual chance coastal flood (the 100-year flood).

The proposed action would encroach upon the 100-year floodplain. Because the majority of the airport is located within the floodplain, there is no feasible and prudent alternative that avoids the floodplain. Pursuant to FAA's Desk Reference for Airports Actions, a "significant encroachment" on the floodplain would not occur because: the probability of loss of human life is low; the proposed action would be designed to minimize future extensive damage or costs; and there would be no notable adverse impacts on the floodplain's natural and beneficial features.

Based on the above, it can be concluded that there would be no significant adverse impacts to floodplains as result of the proposed action.

Air Quality

EWR is located in the New Jersey-New York-Connecticut Intrastate Air Quality Control Region (AQCR). The New Jersey-New York-Connecticut AQCR does not meet the federal standard for the 8-hour concentration of ozone. The area also operates under a maintenance plan for carbon monoxide (CO).

A General Conformity Rule (GCR) analysis was conducted with a construction emissions inventory. The results of these analyses predict that the construction emissions levels from the project will be below the established threshold levels. Thus, emissions levels associated with the project will be *de minimis* and a formal conformity determination is not required. Consequently, the proposed action will not have a significant impact on air quality.

Hazardous Materials

During construction, soils would be excavated for the installation of duct banks, water and sewer lines and foundation work for new structures. If any stained soils are encountered and field assessments reveal that the soils are suspected of being contaminated, samples would be obtained and analyzed. Soils with elevated levels of pollutants would be disposed of off-site in accordance with federal and state regulations. If any soil or other material removed during construction is determined to be hazardous, the material would be disposed of at an approved hazardous waste disposal facility.

Construction Impacts

Limited short-term effects resulting from construction may occur. Specific effects could include noise from construction equipment on the site, fugitive dust, soil erosion, and sedimentation. These impacts will be limited by requiring the contractor to comply with all contract provisions for environmental protection. These short-term construction impacts will not persist beyond the construction period, and no significant long-term construction impacts are expected as a result of this project.

Other Impact Categories

The impacts of the proposed Federal action on air quality, noise, land use compatibility, social, induced socioeconomic impacts, water quality, DOT Section 4(f), biotic communities, endangered species, coastal zones, floodplains, coastal barriers, prime and unique farmland, energy supply and natural resources, light emissions, solid waste impacts, construction impacts, environmental justice, and cumulative impacts were evaluated in the EA. It is the FAA's finding that the proposed action will not have any significant effect on any of the above noted categories.

Public Involvement

A Notice of Public Availability was published in the *Star-Ledger* and *Bergen Record* on September 4, 2014. The EA was available to any person who requested to review a copy from September 4, 2014 through October 3, 2014. No public comments were received.

Mitigation Measures

1. Construction contract provisions shall contain the provisions of AC 150/5370-10A, "Standards for specifying construction of Airports" item P-156, temporary air, water pollution, soil erosion and siltation control and AC 150/5320-5B, "Airport Drainage."
2. All necessary permits for construction of the proposed action and associated mitigation shall be obtained prior to construction.

CONCLUSION AND APPROVAL:

After careful and thorough consideration of the facts contained herein, the undersigned finds the federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 (a) of the National Environmental Policy Act of 1969 (NEPA) and it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA.

Recommended:

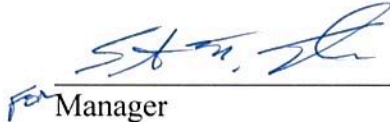


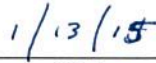
Environmental Specialist
New York Airports District Office



Date

Approved:


for _____
Manager
New York Airports District Office



Date

Disapproved:

Manager
New York Airports District Office

Date



FEDERAL AVIATION ADMINISTRATION

EASTERN REGION
AIRPORTS DIVISION

**Short Environmental
Assessment Form
for
AIRPORT DEVELOPMENT
PROJECTS**



Airport Name: Newark Liberty International Airport Identifier: EWR

Proposed Project: Infrastructure Renewal – Electrical Distribution

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA official.

A handwritten signature in blue ink, appearing to read "Steve [unclear]", written over a horizontal line.

Responsible FAA Official

A handwritten date in blue ink, "1/13/15", written over a horizontal line.

Date

This form is to be used only for limited types of projects. It is strongly recommended that you contact your local Environmental Protection Specialist (EPS) before completing this form. See instructions page.

APPLICABILITY

This Form can be used if the proposed project meets the following criteria:

- 1) It is not categorically excluded (see paragraphs 303 and 307-312 in FAA Order 1050.1E) or
- 2) It is normally categorically excluded but, in this instance, involves at least one extraordinary circumstance that may significantly impact the human environment (see paragraph 304 and the applicable section in Appendix of 1050.1E) or
- 3) The action is one that normally requires an EA at a minimum (see paragraph 506 in FAA Order 5050.4B) and
- 4) The proposed project must fall under one of the following categories of Federal Airports Program actions:
 - (a) Approval of a project on an Airport Layout Plan (ALP).
 - (b) Approval of federal funding for airport development.
 - (c) Requests for conveyance of government land.
 - (d) Approval of release of airport land.
 - (e) Approval of the use of Passenger Facility Charges (PFC).
 - (f) Approval of development or construction on a federally obligated airport.

If you have questions as to whether the use of this form is appropriate for your project, contact your local EPS BEFORE using this form.

Complete the following information:

Project Location

Airport Name: Newark Liberty International Airport **Identifier:** EWR
Airport Address: 1 Conrad Road
City: Newark **County:** Essex & Union **State:** NJ **Zip:** 07114

Airport Sponsor Information

Point of Contact: Edward C. Knoesel, Senior Mgr., Environmental and Noise Programs, Aviation Technical Services
Address: Port Authority of New York & New Jersey, 233 Park Avenue South, 9th Floor
City: New York **State:** NY **Zip:** 10003
Telephone: (212) 435 3747 **Fax:** (212) 435 3825
Email: eknoesel@panynj.gov

Evaluation Form Preparer Information

Point of Contact: Adeel Yousuf, Airport Environmental Specialist, Aviation Technical Services
Address: Port Authority of New York & New Jersey, 233 Park Avenue South, 9th Floor
City: New York **State:** NY **Zip:** 10003
Telephone: (212) 435 3784 **Fax:** (212) 435 3825
Email: ayousuf@panynj.gov

1. Introduction/Background:

Public Service Electric & Gas (PSE&G) currently provides electric power to the Central Terminal Area (CTA) of the airport via distribution feeders terminating in a 26kV air breaker station located at Building 343. Due to age and increasing loads at the airport, the capacity and reliability of the existing station have become constrained. It is essential that the airport maintain reliable and economical electrical power to provide for safe, secure and efficient airport operations. PSE&G has determined that its best alternative would be to construct a new switching station of higher capacity, to accommodate existing demand as well as forecast long-term growth, and to provide increased reliability within the electrical distribution grid. The new switching station is being constructed as part of a major PSE&G program to improve service reliability in the northern New Jersey region. The existing 26kV air breaker station will remain to provide partial emergency backup to the CTA electrical system.

The Proposed Action consists of the construction of a new 345kV/26kV switching station to be built by PSE&G in the southern portion of Parking Lot P-1. In order to support the operation of this switching station, the PANYNJ (the Authority) will install additional electrical duct bank runs and all existing electrical infrastructure will be returned to a state of good repair. Redundant connections to the switching station would be constructed to provide for increased reliability. Finally, adjacent and supporting infrastructure work, where required due to the construction of the duct banks, or planned in the near term in the construction

work area, would be performed simultaneously to take advantage of construction efficiencies and cost savings. The construction of the new switching station is a project that would increase reliability for critical infrastructure at Newark Liberty International Airport.

2. Project Description (List and clearly describe **ALL** components of project proposal including all connected actions). **Attach a map or drawing of the area with the location(s) of the proposed action(s) identified:**

The Proposed Action would consist of the following elements:

To Be Undertaken by PSE&G:

- Construction of a new 345kV/26kV switching station in the southernmost portion of Parking Lot P-1. The switching station site would be approximately 2 acres and consist of transformers, breakers, a 500kW diesel generator, lightning masts, and gas insulated switchgear (GIS). The GIS would be housed in a building on-site and the entire facility would be enclosed by a wall that would limit visibility of the switching station and its equipment to the general public.
- The new switching station would be fed by two underground 345kV transmission lines that would originate off-airport. The first transmission line, approximately 5,800 LF in length, would enter airport property in the southeast corner near Parking Lot P-8 and run along Earhart Drive to Basilone Road, where it would turn west, cross the Peripheral Ditch on the Basilone Road Bridge, then enter the switching station. The second transmission line, approximately 5,900 LF in length, would also enter airport property from the southeast and run along North Avenue East, then along South Directory Road to Basilone Road, where it would enter the switching station.

To Be Undertaken by the Authority:

- Installation of three 3'-0" x 3'-0" underground concrete duct banks of approximately 3,500 linear feet (LF) each along the eastern edge of Parking Lot P-1 from the proposed switching station and continuing north on Carson Road. One duct bank will continue west along Carson Road to Brewster Road, continue on Brewster Road and then proceed east toward Building 343. The second duct bank would continue under the Waverly Ditch toward Building 343. The first two duct banks will provide connectivity to the existing distribution feeders that service the CTA. The third duct bank would turn east and cross the Peripheral Ditch on the North Bridge, terminating in a manhole in Parking Lot P-3.
- Installation of one 3'-0" x 3'-0" underground concrete duct bank of approximately 1,000 LF from the proposed switching station to Basilone

Road, then east across the Basilone Road Bridge, terminating in a manhole in Earhart Drive.

- Installation of approximately 2,200 LF of underground water line, storm sewer and sanitary sewer within the Carson Road right-of-way where the electrical duct bank is to be installed, as well as installing an underground duct bank for future fiber optic wiring and connections for telecommunication services.
- Reconstruction of approximately 2,200 LF of at-grade roadway to connect Carson and Basilone Roads (the Carson Road extension). This would include all associated components such as curbing, roadway lighting, sidewalks and pavement markings; as well as a signalized intersection. The roadway connection will provide access to the new switching station.
- Reconstruction of North Bridge (N38) and South Bridge (N39) for utility support and construction staging as well as the associated necessary roadway pavement work. Based on current standards, these bridges are not structurally sufficient to carry the anticipated loads. The North Bridge will support the electrical duct banks as well as future traffic. The South Bridge is critical in the construction staging and phasing plans for the Proposed Action to maintain adequate traffic flow throughout the construction.
- Widening of the existing Basilone Road Bridge to carry the proposed conduits from the proposed switching station, as well as other utilities, to the east side of the Peripheral Ditch. This bridge carries Basilone Road over the Peripheral Ditch and connects South Directory Road to Earhart Drive.

3. Project Purpose and Need:

Purpose of the Proposed Action:

The airport, which is one of PSE&G's highest priority critical customer loads, is located approximately 13 miles southwest of Midtown Manhattan and serves a critical role in the New York-New Jersey metropolitan area. Within the last few years, electrical service to the airport has been disrupted at least three times, each of which caused significant disruptions and downtime at the facility. The airport needs increased reliability to prevent any future disruption of service.

The proposed modification, a 345kV transmission project, will provide greatly increased reliability and is part of a wider program being undertaken by PJM, the regional transmission organization, to upgrade the transmission infrastructure in the North East Region. Limitations exist in the current 26kV service to the CTA due to age and capacity. With the new design of switching station and transmission circuit sources, the limitations are eliminated and future load growth

is taken into account. Along with the new switching station, there will also be 30MW of dedicated backup available to the airport from the existing 26kV source (located at Building 343), in the event of a total failure of the future switching station.

The Authority would provide the electrical infrastructure necessary to redistribute power from the new switching station to on-airport users and will coordinate with PSE&G to ensure compliance with the Authority's security requirements with regard to protection of electric distribution systems. The Proposed Action will also include the associated roadway, bridge and other infrastructure work necessary to complete the project and to maximize the efficiencies of construction in the area.

Need for the Proposed Action:

PSE&G's proposed 345kV transmission project is needed to address a potential reliability issue in the northern New Jersey transmission zone, as well as to provide future transmission capacity in the region.

On the airport, the Proposed Action is necessary to address capacity and reliability issues associated with the existing 26kV air breaker station that has become constrained to provide adequate service to the CTA.

The proposed switching station is a PSE&G project that is part of a larger program needed to improve the region's electric service and reliability, as well as a means to support current and future airport operations.

The Authority's roadway, bridge and other utility construction activities included in the project are necessary to provide the connected electrical infrastructure as well as to maximize construction efficiency in the area of proposed work and to minimize disruption to airport tenants and travelers. Decisions regarding other projects at the airport do not affect the need for this project.

4. Describe the affected environment (existing conditions) and land use in the vicinity of project:

The airport is encircled by major highways, commercial and light manufacturing facilities and the Port Newark/Elizabeth Marine Terminal complex. Commercial and light manufacturing dominate the land uses of the area, generally surrounding the airport. Industrial and commercial uses exist to the west of U.S. Routes 1&9, including a number of hotels, parking facilities, car rental facilities, and an Anheuser Busch brewery. A medium density residential area is located between North Avenue East and McClellan Street southwest of the airport.

The Proposed Action would be located on airport property. Land use in the immediate vicinity of the project consists of several commercial buildings (car

rental facilities), parking lots, miscellaneous airport buildings and AirTrain infrastructure.

5. Alternatives to the Project: Describe any other reasonable actions that may feasibly substitute for the proposed project, and include a description of the “No Action” alternative. If there are no feasible or reasonable alternatives to the proposed project, explain why (attach alternatives drawings as applicable):

Proposed Action:

As described in Section 2 above, the Proposed Action consists of a proposed new switching station to be constructed by PSE&G in the southern portion of Parking Lot P-1, and the utility infrastructure work by the Authority necessary to support it. In addition, supporting infrastructure work, where required due to the construction of the duct banks, or planned in the near term in the construction work area, would be performed simultaneously to take advantage of construction efficiencies and cost savings. The work effort will meet the purpose and need of the Proposed Action as described above.

Other Alternatives:

Alternative designs and locations for the proposed switching station were considered by PSE&G and the Authority.

Alternative Switching Station Designs

Open Air Design: An open air design was evaluated. This design requires a larger footprint to accommodate equipment clearances. Due to space constraints on the airport, this design was eliminated from further consideration.

Gas-Insulated Switchgear (GIS) Design: A GIS design requires a smaller overall footprint than an open air design, which minimizes environmental and visual impacts. This design was selected for further consideration.

Alternative Locations

Locating the switching station on the airport provides engineering and economic advantages. Space requirements, access to transmission circuits and proximity to loads are other considerations for choosing a location. Other locations on the airport were evaluated, as follows.

Area North of the Fuel Farm: This location has adequate space and is located near the loads and transmission circuits. It was eliminated from further consideration due to its close proximity to the fuel tanks.

Parking Lot P-6: Parking Lot P-6, located in the northeast section of the airport, has sufficient space to accommodate the proposed switching station; however, it was eliminated from further consideration because it is located too far from the loads and transmission circuits.

There are no other viable location alternatives to the Proposed Action for supporting PSE&G's construction of a new switching station.

No-Build/No-Action Alternative:

Under the No-Build/No-Action Alternative, the Proposed Action would not be implemented and the environmental impacts associated with the build alternative would be avoided. If the Proposed Action is not approved, power to the CTA would continue to be provided via the existing air breaker station, which will exceed its allocated capacity in the foreseeable future. Demands on the existing station are continuing to increase as the use of ground power units, pre-conditioned air units and chillers increase. Power demands of redevelopment projects cannot be satisfied by the existing service arrangement. Service and reliability would degrade, maintenance costs would increase and a greater risk of power outages would compromise airport safety and security. For these reasons, the No-Build/No-Action Alternative was eliminated from further consideration.

6. Environmental Consequences – Special Impact Categories (refer to the Instructions page and corresponding sections in Appendix A of 1050.1E and the Airports Desk Reference for more information and direction. The analysis under each section must comply with the requirements and significance thresholds as described in the Desk Reference).

(A) AIR QUALITY (Please note this analysis must meet requirements for both NEPA review and Clean Air Act (CAA) requirements).

Clean Air Act

(a) Is the proposed project located in a nonattainment or maintenance area for the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act and does it result in direct emissions (including construction emissions)?(If **Yes**, go to (b), **No**, go to the NEPA section below.

The airport is located in the New Jersey-New York-Connecticut Intrastate Air Quality Control Region (AQCR). The New Jersey-New York-Connecticut Intrastate AQCR does not meet the federal standard for the 8-hour concentration of ozone. In the past, this area was also designated as a nonattainment area for carbon monoxide (CO); however, on May 20, 2002, the U.S. Environmental Protection Agency (USEPA) determined the area had attained the CO standard and the region was re-designated to attainment for CO. The area now operates under a maintenance plan for CO.

Although the New York-Northern New Jersey-Long Island metropolitan region has been designated as a nonattainment area for particulate matter with an

aerodynamic diameter of up to 2.5 micro meters (PM_{2.5}), the recent ambient monitored PM_{2.5} levels have shown compliance with the NAAQS. On June 15, 2010, USEPA issued a final rule effective December 15, 2010 with respect to a new designation of the New York-Northern New Jersey-Long Island metropolitan region. In the rule, USEPA determined that the region has attained the PM_{2.5} NAAQS. The PM_{2.5} baseline concentration levels at the monitoring site that is closest to the airport are well below the corresponding NAAQS.

(b) Is the proposed project an “exempted action,” under the General Conformity Rule or Presumed to Conform (See FRN, vol.72 no. 145, pg 41565)? (If **Yes**, cite exemption and go to NEPA section below; **No**, go to (c)).

No. The Proposed Action is not an “exempted action” under the General Conformity Rule or is presumed to conform under 72 FR 41565.

(c) Would the proposed project result in a net total of direct and indirect emissions that exceed the threshold levels of the regulated air pollutants for which the project area is in non-attainment or maintenance? (Attach emissions inventory). (If **Yes**, consult with ADO).

The annual emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) (as precursors of ozone), PM_{2.5} and its precursor SO₂, and CO for the construction of the Proposed Action will be well below the federal de minimis thresholds for each pollutant established by the General Conformity Rule. See Attachment D for the Air Quality emissions analysis.

NEPA

(a) Is the airport’s activity levels below the FAA thresholds for requiring a NAAQS analysis? (If **Yes**, document activity levels and go to Item 2, **No**, go to (b)).

No. The USEPA has determined that projects having de minimis emissions would not be likely to cause an exceedance of any NAAQS. The evaluation of the construction emissions for this project confirms that the net emissions due to the Proposed Action will be de minimis. Therefore, no further analysis to demonstrate attainment of the NAAQS is required for this proposed project; furthermore, the Proposed Action will not result in any delay in the attainment of any NAAQS, nor would the Proposed Action worsen any existing NAAQS violation.

(b) Do pollutant concentrations exceed NAAQS thresholds? (Attach emissions inventory).

Not Applicable.

(c) Is an air quality analysis needed with regard to state indirect source review?

The construction and operation of a new switching station and supporting infrastructure will be subject to a NJDEP Minor Facility – Preconstruction Permit (N.J.A.C. 7:27-8). Permit applications would be filed with NJDEP after FAA’s final determination.

(B) BIOTIC RESOURCES

Describe the potential of the proposed project to directly or indirectly impact plant communities and/or the displacement of wildlife. (This answer should also reference Section 19, Water Quality, if jurisdictional water bodies are present).

The airport is a highly developed and disturbed landscape that is primarily paved as runways, taxiways, parking areas or airport facilities and other buildings. From the perspective of landscape ecology, the entire airport has suffered significant habitat degradation and disruption. The existing undeveloped lands have been reduced to small, isolated patches, which do not resemble the native landscape. Most of the upland vegetative communities in the Project Area consist of landscaped mowed turf and ornamental landscaping. Because much of the project elements will be underground, upon completion of the Proposed Action, there would be no impact to biotic resources.

(C) COASTAL RESOURCES

(a) Would the proposed project occur in a coastal zone, or affect the use of a coastal resource, as defined by your state's Coastal Zone Management Plan (CZMP)? Explain.

No. Because the site of the Proposed Action is located more than 500 feet from the mean high water line and outside any regulated adjacent area and is located outside the Coastal Area Facilities Act (CAFRA) Zone (New Jersey's designated coastal zone), no impact to the coastal zone would occur under the Proposed Action.

(b) If **Yes**, is the project consistent with the State's CZMP? (If applicable, attach the sponsor's consistency certification and the state's concurrence of that certification).

Not Applicable.

(c) Is the location of the proposed project within the Coastal Barrier Resources System? (If **Yes**, and the project would receive federal funding, coordinate with the FWS and attach record of consultation).

No, the Proposed Action would not be located within the Coastal Barrier Resources System.

(D) COMPATIBLE LAND USE

(a) Would the proposed project result in other (besides noise) impacts that have land use ramifications, such as disruption of communities, relocation of residences or businesses, or impact natural resource areas? Explain.

No. The Proposed Action would be located entirely on airport property and would be compatible with surrounding land use. There would be no change in the airport's relationship with the area's existing zoning, surrounding area land use plans, and the land uses on the airport. No businesses or residences would be

affected by this proposed project, and there would be only minor impacts to wetlands and landscaped areas.

(b) Would the proposed project be located near or create a wildlife hazard as defined in FAA Advisory Circular 150/5200-33, “Wildlife Hazards On and Near Airports”? Explain.

No. With the exception of small isolated landscaped areas, the Proposed Action would be located on impervious areas. The Proposed Action would not be located near wildlife or create a wildlife hazard.

(E) CONSTRUCTION IMPACTS

Would construction of the proposed project increase ambient noise levels due to equipment operation; degrade local air quality due to dust, equipment exhausts and burning debris; deteriorate water quality when erosion and pollutant runoff occur; and/or disrupt off-site and local traffic patterns? Explain.

The proposed construction period will be between September 2015 and July 2018.

Biotic Resources

The proposed construction or widening of the three bridges would temporarily remove small areas of vegetation along the banks of the Peripheral Ditch. In addition, the reconstruction of the North Bridge would impact the landscaped areas located between Carson Road and the Budget Car Rental leasehold by removing several isolated trees and shrubs as well as some mowed turf. Finally, two of the proposed underground duct banks are proposed to run parallel to Carson Road – their construction would temporarily remove the roadside landscaping. These impacts would result in the possible displacement of transient wildlife to equivalent adjacent habitat. All impacts to biotic resources are temporary in nature. Disturbed areas would be restored to their pre-construction condition upon completion of construction.

Noise

The area around the airport has an existing high background noise level due to highway traffic and aircraft operations. The noise generated during construction activities would not be discernible from the airport’s normal background noise levels. There are no sensitive receptors located immediately adjacent to the proposed project site. Off-site impacts, from construction equipment and materials egress/ingress, would be temporary and are anticipated to be minimal.

Air Quality

Emissions and fugitive dust related to construction activity would be temporary and limited to the duration of the project. Dust would be minimized using methods contained in FAA Advisory Circular 150/5370-10F, *Standards for Specifying Construction of Airports*. In general, impacts would be typical of those from a medium-to-large scale construction project in Elizabeth or Newark.

Water Quality

Several measures would be implemented during construction that would minimize impact to water quality, such as those discussed under Item (S) Water Quality below. All actions would conform to state and federal water quality regulations. Construction contract specifications would contain the provisions of FAA Advisory Circular 150/5370-10F, *Standards for Specifying Construction of Airports*, Item P-156 *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*, and 150/5320-5D, *Airport Drainage Design*.

Local Traffic Patterns

Because the Proposed Action would be located entirely on airport property, no local off-site traffic patterns would be disrupted. On-airport traffic would be subject to detours during construction; however, impacts are expected to be minimal and would be limited by the implementation of a Maintenance and Protection of Traffic Plan.

(F) SECTION 4(f) RESOURCES

Does the proposed project have an impact on any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or an historic site of national, state, or local significance? (If **Yes**, contact FAA, contact appropriate agency and attach record of consultation).

No. The Proposed Action would be located completely within the confines of the airport and would not require the use of any public lands or historic sites.

(G) ENDANGERED AND THREATENED SPECIES

(a) Would the proposed project impact any federally or state-listed or proposed, endangered, or threatened species (ESA) of flora and fauna, or impact critical habitat? (Attach record of consultation with federal and state agencies as appropriate).

Based on correspondence from the NJDEP Natural Heritage Program (NHP, dated May 2, 2014), there are two state-endangered bird species, three state-threatened bird species, one state-threatened butterfly species and four bird species of special concern that have been identified in the vicinity of the Project Area (See Attachment A).

The Project Area has been disturbed and contains no intact native vegetation, only mowed lawn, ornamental landscaping, paved surfaces, and buildings. As a result, construction activities would not adversely impact wildlife, except for possible displacement of transient species to equivalent adjacent habitat. Because of these factors, any impact to wildlife or vegetation resulting from the Proposed Action is expected to be minor.

(b) Would the proposed project affect species protected under the Migratory Bird Act? (If **Yes**, contact FAA).

No. The Proposed Action would likely not affect any species protected under the Migratory Bird Act. The majority of the Project Area is comprised of impervious surfaces, with small isolated landscaped areas that do not provide suitable habitat for any protected species.

(H) ENERGY SUPPLIES, NATURAL RESOURCES AND SUSTAINABLE DESIGN

What effect would the proposed project have on energy or other natural resource consumption? (Attach record of consultations with local public utilities or suppliers if appropriate)

The Proposed Action does not increase energy consumption. PSEG is building the Switching Station to provide a more reliable power delivery arrangement while building in the capability to deliver additional power if airport modifications require it. There is no shortage of construction material necessary for the Proposed Action in the region.

(I) ENVIRONMENTAL JUSTICE

Would the proposed project have a disproportionate impact on minority and/or low-income communities? Consider human health, social, economic, and environmental issues in your evaluation. Explain.

No. There would be no residential or business displacement, no fiscal impact, no adverse impacts to children's health and safety, and no disproportionate impacts to low-income or minority populations as a result of the Proposed Action.

(J) FARMLANDS

Does the project involve acquisition of farmland, or use of farmland, that would be converted to non-agricultural use and is protected by the Federal Farmland Protection Policy Act (FPPA)? (If Yes, attach record of coordination with the Natural Resources Conservation Service (NRCS), including form AD-1006.)

No. The airport is located in a heavily urbanized area on a former marsh. The Proposed Action would not involve farmland acquisition or conversion, or the use of any FPPA properties.

(K) FLOODPLAINS

(a) Would the proposed project be located in, or would it encroach upon, any 100-year floodplains, as designated by the Federal Emergency Management Agency (FEMA)?

Yes. Prior to Superstorm Sandy, FEMA was in the process of updating specific Flood Insurance Rate Maps (FIRMs) in the project vicinity. These updated maps were set to be finalized in mid-2013. Because these updated FIRMs were not finalized, FEMA developed interim Advisory Base Flood Elevations (ABFEs) to support post-Sandy reconstruction efforts. ABFEs provide improved flood hazard data when the information on the FIRM no longer depicts an area's true flood risk. According to ABFEs dated December 7, 2012, January 12, 2013 and January 15, 2013, the Project Area is located in Advisory Flood Hazard Zone A, which is the area subject to storm surge flooding from the 1% annual chance coastal flood

(the 100-year flood). In the vicinity of the Project Area, the 1% annual advisory base flood elevation ranges between 12 and 13 feet NAVD 88.

The Proposed Action would not be a significant encroachment on the 100-year floodplain, as it would not result in the following impacts:

- High likelihood of loss of human life
- Substantial costs or damage including adversely affecting safe airport operations or interruption of aircraft services
- Notable adverse impact on the floodplain's natural and beneficial value.

(b) If Yes, attach the corresponding FEMA Flood Insurance Rate Map (FIRM) and describe the measures to be taken to comply with Executive Order 11988.

Executive Order 11988 requires federal agencies to avoid, to the extent possible, the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Since the majority of the airport is located within the 100-year floodplain, there is no practical alternative site location that avoids encroachment on floodplains. Due to the large storage capacity of the unconstrained floodplain, the minor displacement associated with the Proposed Action is not anticipated to adversely impact the floodplain resource. The minor floodplain displacements for equipment structural support and bridge piers would not increase the likelihood of potential property loss or human safety risks. The proposed switching station would be raised one-foot above the 100-year flood elevation in order to protect vital components and comply with New Jersey's Flood Hazard Area Control Act rules.

(L) HAZARDOUS MATERIALS

Would the proposed project involve the use of land that may contain hazardous materials or cause potential contamination from hazardous materials? (If **Yes**, attach record of consultation with appropriate agencies). Explain.

During construction, soils would be excavated for the installation of duct banks, water and sewer lines and foundation work for new structures. If any of the soils are suspected of being contaminated through a field assessment, samples would be obtained and analyzed for the USEPA target compound list/target analyte list of parameters. Soils with elevated levels of pollutants will be disposed off-site in accordance with federal and state regulations. If any soil or other material removed during construction is determined to be hazardous, the material would be disposed of at an approved hazardous waste disposal facility under the PANYNJ's RCRA hazardous waste ID number.

(M) HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL OR CULTURAL PROPERTY

(a) Describe any impact the proposed project might have on any properties in or eligible for inclusion in the National Register of Historic Places. (Include a record of your consultation and response with the State or Tribal Historic Preservation Officer (S/THPO)).

Research conducted at the State Historic Preservation Office (SHPO) revealed that there are no previously identified architectural resources located within the Project Area that are either listed on, or eligible to be listed on, the National or State Registers of Historic Places. Correspondence on consultation with SHPO on this project is contained in Attachment G.

(b) Describe any impacts to archeological resources as a result of the proposed project. (Include a record of consultation with persons or organizations with relevant expertise, including the S/THPO, if applicable).

The Project Area is situated in a former marsh. In 1928, about 68 acres were filled to a height of almost 20 feet above sea level for the initial airfield. A 1989 cultural resources survey conducted subsurface testing in two small areas proximate to the Project Area that were areas of naturally higher ground, unaffected by the prior filling of the marshland. No prehistoric or historic archaeological sites were identified during this effort and no further work was recommended. Recent research conducted at the SHPO and the New Jersey State Museum indicates that there are no eligible archaeological resources located within the Project Area. Correspondence on consultation with SHPO on this project is contained in Attachment G.

(N) INDUCED SOCIOECONOMIC IMPACTS

Would the proposed project cause induced, or secondary, socioeconomic impacts to surrounding communities, such as change business and economic activity in a community; impact public service demands; induce shifts in population movement and growth, etc.? Explain.

The Proposed Action would induce positive secondary impacts in the region because of temporary construction activity. These economic impacts would benefit surrounding communities during construction by increasing employment opportunities and expenditures on local services and materials. The Proposed Action would not result in property acquisition, residential relocation, division or disruption of established communities, or disruption of planned development.

(O) LIGHT EMISSIONS AND VISUAL EFFECTS

Would the proposed project have the potential for airport-related lighting impacts on nearby residents? Explain.

No. The Proposed Action would not result in any airport-related lighting impacts on nearby residents.

(P) NOISE

Will the project, when compared to the No-Build/No-Action alternative for the same timeframe, cause noise sensitive areas located at or above DNL 65 dB to experience a noise increase of at least DNL 1.5 dB? (Use AEM as a screening tool and INM as appropriate. See Airports Desk Reference, Chapter 17, for further guidance).

The evaluation of the Proposed Action does not require a noise analysis per FAA Order 5050.4B.

(Q) SOCIAL IMPACTS

Would the proposed project cause an alteration in surface traffic patterns, or cause a noticeable increase in surface traffic congestion or decrease in Level of Service?

During construction of the various project components, some degree of inconvenience on internal airport roadways would be unavoidable. However, the effects would be minimized by construction sequencing and scheduling and by the implementation of Maintenance and Protection of Traffic plans as required.

(R) SOLID WASTE

Would the operation and/or construction of the project generate significant amounts of solid waste? If **Yes**, are local disposal facilities capable of handling the additional volumes of waste resulting from the project? Explain.

During construction, solid waste would be generated by excavation and demolition activities. Construction and demolition debris generated by the Proposed Action may be recycled. In New Jersey, recyclable material is defined as a source-separated material which is subject to NJDEP approval prior to receipt, storage, processing or transfer at a recycling center, and which includes source-separated, waste concrete and asphalt. Disposal of these materials would be done in accordance with Union County's Solid Waste Management Plan and in compliance with the regulations of the state's *Solid Waste Management Act*, as well as the Authority's *Sustainable Infrastructure Guidelines*.

(S) WATER QUALITY

(a) Does the proposed project have the potential to impact water quality, including ground water, surface water bodies, and public water supply system or federal, state or tribal water quality standards? (If **Yes**, contact appropriate agency and include record of consultation).

The Proposed Action would have no adverse impact to the surface water quality at the airport as construction activity would not require any alteration to the Peripheral Ditch. The Basilone Bridge over the Peripheral Ditch would be widened by adding an approximately 31-foot wide deck to the south of the existing 26-foot wide structure. The new structure would be supported by six 14-inch diameter pipe piles and would also entail 28-foot x 6-foot abutments on both sides of the bridge in the riparian zone. The Proposed Action would not adversely impact the quantity or quality of stormwater runoff at the airport, nor would it alter the location or type of impervious surfaces. Stormwater runoff volume and

velocity would not change because of the Proposed Action. Finally, there would be no impact to groundwater or wastewater as a result of the Proposed Action.

(b) Is the project to be located over a designated Sole Source Aquifer? (If **Yes**, attach record of consultation with EPA).

No, the Proposed Action will not impact any designated Sole Source Aquifers.

(T) WETLANDS

(a) Does the proposed project involve federal or state regulated or non-jurisdictional wetlands? (Contact USFWS or state agency if protected resources are affected) (Wetlands must be delineated using methods in the US Army Corps of Engineers 1987 Wetland Delineation Manual. Delineations must be performed by a person certified in wetlands delineation).

There are no wetlands located within the area of proposed work. The only impact would be to the Peripheral Ditch, which is designated as a State Open Water (LOI No. 0000-02-0043.4). The ditch would be impacted by the demolition and replacement of the North Bridge and the South Bridge, as well as the widening of the Basilone Road Bridge. Minor impacts would result from filling (piers or riprap) and through shading from the new/widened structures. Efforts to minimize this anticipated impact will be undertaken during Final Design. All appropriate permits will be obtained from NJDEP before any work begins that would impact the Peripheral Ditch.

(b) If yes, does the project qualify for an Army Corps of Engineers General permit? (Document coordination with the Corps).

The Army Corps of Engineers does not have jurisdiction over any wetlands and waters in the project area as NJDEP has assumed responsibility for the Section 404 program in New Jersey. With respect to the Peripheral Ditch, a NJDEP Freshwater Wetlands Individual Permit will be obtained prior to initiating construction.

(U) WILD AND SCENIC RIVERS

Would the proposed project affect a river segment that is listed in the Wild and Scenic River System or National Rivers Inventory? (If **Yes**, coordinate with the jurisdictional agency and attach record of consultation).

No. The Proposed Action would not affect any designated Wild and Scenic Rivers.

(V) CUMULATIVE IMPACTS

Discuss impacts from past, present, and reasonably foreseeable future projects both on and off the airport. Would the proposed project produce a cumulative effect on any of the environmental impact categories above? Consider projects that are connected and may have common timing and/or location. For purposes of this Form, generally use 3 years for past projects and 5 years for future foreseeable projects.

The construction schedule of the Proposed Action, to span between September 2015 and July 2018, will overlap with construction of modifications and upgrades to the existing aviation fueling system being planned for the South Area of the airport and some initial landside and airside work associated with the Terminal A Redevelopment Program. With the exception of temporary construction-related impacts, the cumulative adverse environmental impact of the Proposed Action is expected to be minimal. Extensive preventive procedures will be put into place to avoid and minimize any potential adverse impacts during construction. The Proposed Action is consistent with the overall planning mission of the Authority and would not result in unmitigated adverse cumulative impacts. The cumulative impacts resulting from implementation of the Proposed Action have been assessed against other projects on the airport. The cumulative impacts analysis presented in this document includes a review of available environmental documents for other projects at the airport.

Newark Liberty International Airport, like any other airport in the country, requires regular maintenance and modernization. The Authority has and will continue to undertake an array of improvements at the airport to maintain and improve the safe and efficient movement of aircraft and travelers. As is evident from a review of the projects listed below, each has demonstrated independent utility and can go forward without regard to any or all of the other listed actions being adopted. Each is proceeding separately and has or will go forward based on its own merits. The Proposed Action has also demonstrated its independent utility. The projects listed below represent the Authority's most recent steps to maintain and to improve the airport's functionality and to enhance level of service.

The following is a summary of ongoing or recently completed projects and projects anticipated in the foreseeable future.

Past Actions

In the past five years (2008-2013) there were nine development or improvement projects undertaken at the airport, all of which were categorically excluded from the requirement to prepare an EA or an EIS (Projects eligible for a Categorical Exclusion are actions that, under normal circumstances, are not considered major federal actions and that have no measurable impacts on the environment). These projects were:

- Port Street and Brewster Road Improvements Phase 1
- Construction of Multi-Fuel Station and Carwash

- Rehabilitation of Taxiway A and Sections of Taxiways K, M, Q and PA
- Rehabilitation of Taxiways CC, P, W, Z and S
- Widening of Taxiway Fillets
- Installation of Ground Based Augmentation System Navigational Aid
- Upgrade of Runways 22R, 22L and 4L Navigation Aids
- Providing ADS-B Squitter Units for Vehicles
- Signature Flight Support FBO Terminal Improvements

Ongoing Actions

These eight ongoing actions have all been categorically excluded.

- Enlargement and Modernization of Terminal B
- Port Street and Brewster Road Improvements, Phase 2
- Terminal C In-Line Baggage Handling System
- Rehabilitation of Taxiways A, B, D, & PA
- Bollard Protection at Terminal Frontages
- Runway 22R Multiple Entrance Taxiways Construction
- Runway 4R-22L Rehabilitation and Improvements
- United Airlines Widebody Hangar and Taxiway S Construction
- Runway 4L-22R Rehabilitation and Improvements

Reasonably Foreseeable Future Projects

During the next five years (2015-2019) these 12 actions are planned to be undertaken. With the exception of the Aviation Fuel System modifications, which recently received a Finding of No Significant Impact; and the Terminal A Redevelopment Program, for which an Environmental Assessment is being prepared, the projects identified below have been categorically excluded from the requirement to prepare an EA or an EIS.

- Terminal A Redevelopment Program (EA underway)
- Infrastructure Renewal – Aviation Fueling System Modifications (FONSI issued)
- Infrastructure Renewal – 4th Electrical Substation at Terminal B
- Overnight Aircraft Parking and Demolition of Buildings 14, 95, and 332
- Runway 4R-22L Rehabilitation and Improvements
- Runway 11/29 Safety Area Improvements - Engineered Material Arresting System (EMAS) Installation
- Replacement of Guard Posts E-2 and D
- Taxiway P Rehabilitation and Improvements
- Rehabilitation of Taxiway Y (from “RM” to “S”)
- Rehabilitation of Taxiway Z (from Runway Edge to “UA”)
- Rehabilitation of Taxiway Z (from “P” to Runway 29)
- Rehabilitation of Taxiway R (from “B” to “Y”)

With the exception of the Terminal A Redevelopment Program and the Aviation Fueling System Modifications, all of the above have been categorically excluded. By definition, projects eligible for a categorical exclusion do not individually or cumulatively have significant adverse effects on the environment. Even when impacts are determined to be individually insignificant, the impacts can be collectively significant when taking place over a period of time. Therefore, the cumulative effects of environmental impacts were considered only for those categories determined to have impacts due to the Proposed Action.

Given the history of intense urbanization that has occurred in the region and because no potentially significant adverse impacts have been linked to the Proposed Action in this Short-Form EA, it is unlikely that the incremental impact of the Proposed Action would cause or contribute to a significant adverse impact on the environment when added to future projects or actions involving the airport. If the Proposed Action is approved and implemented, it would be incumbent on NEPA analyses undertaken for future projects to look back on this Short-Form EA as a past project and to reevaluate the potential for cumulative impacts.

7. PERMITS

List all required permits for the proposed project. Has coordination with the appropriate agency commenced and what is the expected time frame of receiving a permit?

The following permits and approvals would be required prior to initiating construction.

- NJDEP Flood Hazard Area Individual Permit
- NJDEP Freshwater Wetlands Individual Permit (State Open Water)
- NJDEP Water Quality Certificate
- NJDEP Construction Dewatering General Permit (NJ0134511)
- NJDEP Construction Activity Stormwater Permit Authorization (NJG0088323)
- NJDEP Water Supply Allocation Permit
- NJDEP Treatment Works Approval
- NJDEP Category 1 Air Permit
- NJDCA Plan Release
- NJDOT Highway Occupancy Permit
- Passaic Valley Sewage Commission Sewer Use Permit
- Somerset-Union Soil Conservation District and Hudson-Essex-Passaic Soil Conservation District Soil Erosion & Sediment Control Plan Certifications

It is anticipated that all of the above permits would be obtained in a timely fashion with no difficulty before the start of construction.

NOTE: Even though the airport sponsor has/shall obtain one or more permits from the appropriate federal, state, and/or local agencies for the proposed project, initiation of such project shall NOT be approved until FAA has issued its environmental determination.

8. MITIGATION

Describe those mitigation measures to be taken to avoid creation of significant impacts to a particular resource as a result of the proposed project, and include a discussion of any impacts that cannot be mitigated.

Potential impacts to the Peripheral Ditch, a designated State Open Water, have been identified (See Section 6S, Water Quality). These impacts include minor filling from bridge piers and abutments or riprap and through shading from the new/widened bridge structures. Efforts to minimize or eliminate these anticipated impacts will be undertaken during Final Design. Mitigation for any impact to the Peripheral Ditch would occur through either on-airport mitigation, or with a monetary contribution and/or credit purchase at an approved mitigation bank. In addition, the construction of the new North Bridge and South Bridge would be mitigated by the restoration of their former footprints to their natural condition. Mitigation to the adjacent riparian zone would occur through compensatory planting at suitable sites located on the airport.

The Authority and PSE&G are committed to implementing the Proposed Action in accordance with all federal, state and local environmental laws, regulations, policies, and permit requirements applicable to the project.

PSE&G has an approved *Spill Prevention Control and Countermeasures Plan* (SPCC Plan) for all its existing Switching Stations and will have an SPCC Plan for the proposed Switching Station at the airport. Secondary containment and spill response controls contained in the SPCC Plan would be followed to reduce the risk of spills associated with the storage of bulk petroleum products. If additional petroleum products are stored on-site for more than 6 months, the SPCC Plan will be revised to reflect this additional storage. At the completion of the Proposed Action, the SPCC Plan would be updated as necessary.

In addition, to reduce adverse environmental impacts associated with Authority projects and actions, the Authority is committed to having each of its contractors perform the work in accordance with the following recent and relevant standards and guidelines:

- *PANYNJ Sustainable Building Guidelines*
- *PANYNJ Sustainable Infrastructure Guidelines*
- Item 156 of FAA Advisory Circular (AC) 150/5370-10F, *Standards for Specifying Construction of Airports*

- PANYNJ SPCC Plan for Facilities at Newark Liberty International Airport

The project's construction documents would include language and details on dust and sedimentation control. Implementation of the Proposed Action may also require the removal and remediation of some hazardous materials from subsurface areas. These materials would be properly disposed of, reclaimed, or recycled in accordance with all federal, state and local requirements.

9. PUBLIC INVOLVEMENT

Describe the public review process and any comments received.

To satisfy FAA requirements for public involvement, a Notice of Availability (NOA) was published in the Star-Ledger and Bergen Record on September 4, 2014 to solicit public comment. The Draft EA was available for review at the airport's Administration Building at 1 Conrad Road, Newark; the Authority's headquarters office at 225 Park Avenue South in Manhattan; and at the FAA's New York Airports District Office at 159-30 Rockaway Blvd, Suite 111, Jamaica, New York. A copy of the document was also available for review on the Authority's website. The comment period closed at 5:00 PM on October 3, 2014. No comments were received.

To ensure that interested parties are informed, another advertisement will be placed in the Star-Ledger and Bergen Record, announcing the FAA's determination of significance.

10. LIST OF ATTACHMENTS

- Attachment A: Glossary
- Attachment B: NJDEP and USFWS Documentation
- Attachment C: Figures
 - C-1 - Proposed PSE&G Transmission Lines
 - C-2 - Proposed PANYNJ Bridge and Road Work
 - C-3 - Proposed PANYNJ Utility Work
- Attachment D: Air Quality Analysis
- Attachment E: FEMA Flood Hazard Resources Map
- Attachment F: Airport Layout Plan
- Attachment G: SHPO Consultation Letter
- Attachment H: Draft EA Newspaper Advertisement Tearsheet

Project Title: Infrastructure Renewal – Electrical Distribution

Identifier: EWR

11. PREPARER CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct.

Signature

Date

Adeel A. Yousuf

Name

Airport Environmental Specialist

Title

The Port Authority of NY & NJ

Affiliation

(212) 435-3784

Phone No.

12. AIRPORT SPONSOR CERTIFICATION

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s), and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.

Signature

Date

Edward C. Knoesel

Name

Senior Manager, Environmental and Noise Programs

Title

The Port Authority of NY & NJ

Affiliation

(212) 435-3747

Phone No.

Attachment A

Glossary

Glossary

Air Breaker Station – See Open Air Switchgear.

Capacity - The load-carrying ability expressed in megawatts (MW) of generation, transmission or other electrical equipment.

Circuit – A path of conductors (wires) that an electric current follows.

Circuit Breaker – A device designed to open and close an electrical circuit.

Conductor – A material through which electric current flows easily, also referred to as wires.

Conduit - A protective cover, tube or piping system for electric cables.

Distribution – An interconnected group of lines and associated equipment for the local delivery of low-voltage electricity between the transmission network and end users.

Duct bank - A duct bank is an assembly of conduit or ducts, which is usually encased in concrete in a trench. It can be installed underground between structures or buildings to allow installation of power and communication cables.

Gas Insulated Switchgear (GIS) - Switchgear where the conductors and contacts are insulated by pressurized sulfur hexafluoride gas.

Grid – The transmission and distribution networks operated by electrical utilities.

Kilovolt (kV) – A unit of electromotive force equal to 1,000 volts.

Kilowatt (kW) – A unit of electrical power equal to 1,000 watts.

Load - All the devices that consume electricity and make up the total demand for power at any given moment, like factories, distribution substations, etc.

Megawatt (MW) - A unit of electrical power equal to 1 million watts.

Open Air Switchgear – Switchgear that is mounted on a metallic framed cabinet and uses air as an insulator. In the 20th century, open air switchgear frames dominated the substation landscape. This technology requires enough space between gears to insure safety.

Outage - The unavailability of electrical equipment; it could be planned for maintenance or unplanned (forced) by weather or equipment failures.

PJM - Pennsylvania, Jersey and Maryland Regional Transmission Organization. The legal entity created to plan and supervise electric transmission within a 13 state area, including New Jersey.

PJM, acting under FERC authority, ensures the reliability of the electric power supply system by managing a long-term regional electric transmission planning process.

Reliability – The degree of performance of the elements of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired. The ability to deliver uninterrupted electricity to customers on demand, and to withstand sudden disturbances such as short circuits or loss of system components.

Substation - Changes energy from one amount of voltage to another, often in the direction of a higher voltage to a lower voltage. A high-voltage transmission line will connect to a substation to move electricity into a low-voltage distribution system on its way to customers.

Switchgear - In electrical engineering, any of several devices used for opening and closing electric circuits, especially those that pass high currents.

Switching Station - Facility equipment used to tie together two or more electric circuits through switches. The switches are selectively arranged to permit a circuit to be disconnected or to change the electric connection between the circuits.

Transmission – An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply, and points at which it is transformed for delivery to customers or is delivered to other electric systems.

Attachment B

NJDEP & USFWS Documentation



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

State Forestry Services

Mail Code 501-04

ONLM - Natural Heritage Program

P.O. Box 420

Trenton, NJ 08625-0420

Tel. #609-984-1339

Fax. #609-984-1427

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

May 2, 2014

Patricia Fox
Port Authority of NY & NJ
One Conrad Road, Bldg. 1, Newark Airport
Newark, NJ 07114

Re: Newark Airport Electrical Infrastructure Upgrades

Dear Ms. Fox:

Thank you for your data request regarding rare species information for the above referenced project site in Elizabeth City, Union County; and Newark City, Essex County.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.1) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Request for Data into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1 and 2 (attached) to determine if any priority sites are located on or in the vicinity of the site.

A list of rare plant species and ecological communities that have been documented from the project site, referenced above, can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf.

If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive NJ-GeoWeb website at the following URL, <http://www.state.nj.us/dep/gis/geoweb splash.htm> or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from
<http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf>.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Robert J. Cartica', with a long horizontal flourish extending to the right.

Robert J. Cartica
Administrator

c: NHP File No. 14-4007462-5457

Table 1: On Site Data Request Search Results (7 Possible Reports)

Rare Plants/Ecological Communities Possibly On Site:	No
Rare Plants/Ecological Communities On Site/Immediate Vicinity:	No
Natural Heritage Priority Sites On Site:	No
Landscape 3.1 Species Based Patches On Site:	Yes
Landscape 3.1 Vernal Pool Habitat On Site:	No
Landscape 3.1 Stream/Mussel Habitat On Site:	No
Other Animals Tracked by ENSP On Site:	No

**Rare Wildlife Species or Wildlife Habitat on the Project
Site Based on Search of
Landscape Project 3.1 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection	State Protection	Grank	Srank
<i>Aves</i>	Black-crowned Night-heron	Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Cattle Egret	Bubulcus ibis	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Glossy Ibis	Plegadis falcinellus	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Least Tern	Sterna antillarum	Nesting Colony	4	NA	State Endangered	G4	S1B,S1N
	Little Blue Heron	Egretta caerulea	Foraging	2	NA	Special Concern	G5	S3B,S3N
	Savannah Sparrow	Passerculus sandwichensis	Breeding Sighting	3	NA	State Threatened	G5	S2B,S4N
	Snowy Egret	Egretta thula	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Upland Sandpiper	Bartramia longicauda	Breeding Sighting	4	NA	State Endangered	G5	S1B,S1N
	Checkered White	Pontia protodice	Breeding/Courtship	3	NA	State Threatened	G4	S2
<i>Insecta</i>								

Table 2: Vicinity Data Request Search Results (6 possible reports)

Rare Plants/Ecological Communities within the Vicinity:	No
Natural Heritage Priority Sites within the Vicinity:	No
Landscape 3.1 Species Based Patches within the Vicinity:	Yes
Landscape 3.1 Vernal Pool Habitat within the Vicinity:	No
Landscape 3.1 Stream/Mussel Habitat within the Vicinity:	No
Other Animals Tracked by ENSP within the Vicinity:	No

**Rare Wildlife Species or Wildlife Habitat Within the
Immediate Vicinity of the Project Site Based on Search of
Landscape Project 3.1 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection	State Protection	Grank	Strank
<i>Aves</i>								
	Black-crowned Night-heron	Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Cattle Egret	Bubulcus ibis	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Glossy Ibis	Plegadis falcinellus	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Least Tern	Sterna antillarum	Nesting Colony	4	NA	State Endangered	G4	S1B,S1N
	Little Blue Heron	Egretta caerulea	Foraging	2	NA	Special Concern	G5	S3B,S3N
	Savannah Sparrow	Passerculus sandwichensis	Breeding Sighting	3	NA	State Threatened	G5	S2B,S4N
	Snowy Egret	Egretta thula	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Tricolored Heron	Egretta tricolor	Foraging	2	NA	Special Concern	G5	S3B,S3N
	Upland Sandpiper	Bartramia longicauda	Breeding Sighting	4	NA	State Endangered	G5	S1B,S1N
<i>Insecta</i>								
	Checkered White	Pontia protodice	Breeding/Courtship	3	NA	State Threatened	G4	S2



IPaC - Information, Planning, and Conservation System

Environmental Conservation Online System

<http://www.fws.gov>

IPaC Home Page (/ipac/)

Initial Project Scoping (/ipac/wizard/chooseLocation/prepare.action)

Project Builder ()

FAQs (/ipac/faqs.jsp)

Step 1

Natural Resources of Concern

[Back](#)

[\(/ipac/wizard/chooseLocation/prepare.action\)](/ipac/wizard/chooseLocation/prepare.action)

Location

An online Endangered Species Act species list is available on this page for your project area, represented by the office(s) listed below.

[Save or Print the Preliminary List](#) ([javascript:toggleElement\('preliminaryList'\)](#))

Step 2

[\(/ipac/wizard/chooseActivities/prepare.action\)](/ipac/wizard/chooseActivities/prepare.action)

Activities

The Endangered Species Act species list below is for planning purposes only -- it is not an official species list. To request an official species list, click the Request an Official Species list link to the right and follow the instructions.

[Request an Official Species List](#) ([javascript:toggleElement\('requestOfficialSpeciesList'\)](#))

Step 3

Trust resources list

Step 4

Conservation measures

New Jersey Ecological Services Field Office
927 NORTH MAIN STREET, BUILDING D
PLEASANTVILLE, NJ 8232
(609) 646-9310

<http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>
(<http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>)

Project Location Map:



Note: The map reflects the map layers selected on the Step 1 Location page. To change what appears on this map, return to the Location page and add or remove the map layers.

Project Counties:

Essex, NJ | Union, NJ

Project type: Transmission Line

Endangered Species Act Species List ([USFWS Endangered Species List](http://www.fws.gov/endangered/) (<http://www.fws.gov/endangered/>)).

There are no listed species found within the vicinity of your project.

[Don't see a species you expect to see? \(#\)](#)

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuge \(http://refuges.fws.gov\)](http://refuges.fws.gov)).

There are no National Wildlife Refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird \(http://www.fws.gov/migratorybirds/\)](http://www.fws.gov/migratorybirds/)).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird U.S.C. 703). Bald eagles and golden eagles receive additional protection under the [Bald and Protection Act \(http://www.fws.gov/midwest/eagle/protect/laws.html\)](http://www.fws.gov/midwest/eagle/protect/laws.html) (16 U.S.C. 668). The [Ser Conservation Concern \(2008\) \(http://library.fws.gov/Bird_Publications/BCC2008.pdf\)](http://library.fws.gov/Bird_Publications/BCC2008.pdf) report identifies subspecies, and populations of all migratory nongame birds that, without additional conservation action, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

NWI Wetlands ([USFWS National Wetlands Inventory \(http://www.fws.gov/nwi\)](http://www.fws.gov/nwi)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, projects may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the National Wetland Inventory website. The designated FWS office can also assist you. Impacts to other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to the project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers \(http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx\)](http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx).

IPaC is unable to display wetland information at this time.

Last updated: May 5, 2014

[ECOS Home \(/ecos/indexPublic.do\)](http://ecos.fws.gov/ipac/wizard/trustResourceList/prep.action) | [Contact Us \(/ecos/helpdesk.do\)](http://ecos.fws.gov/ipac/helpdesk.do)

Attachment C

Figures

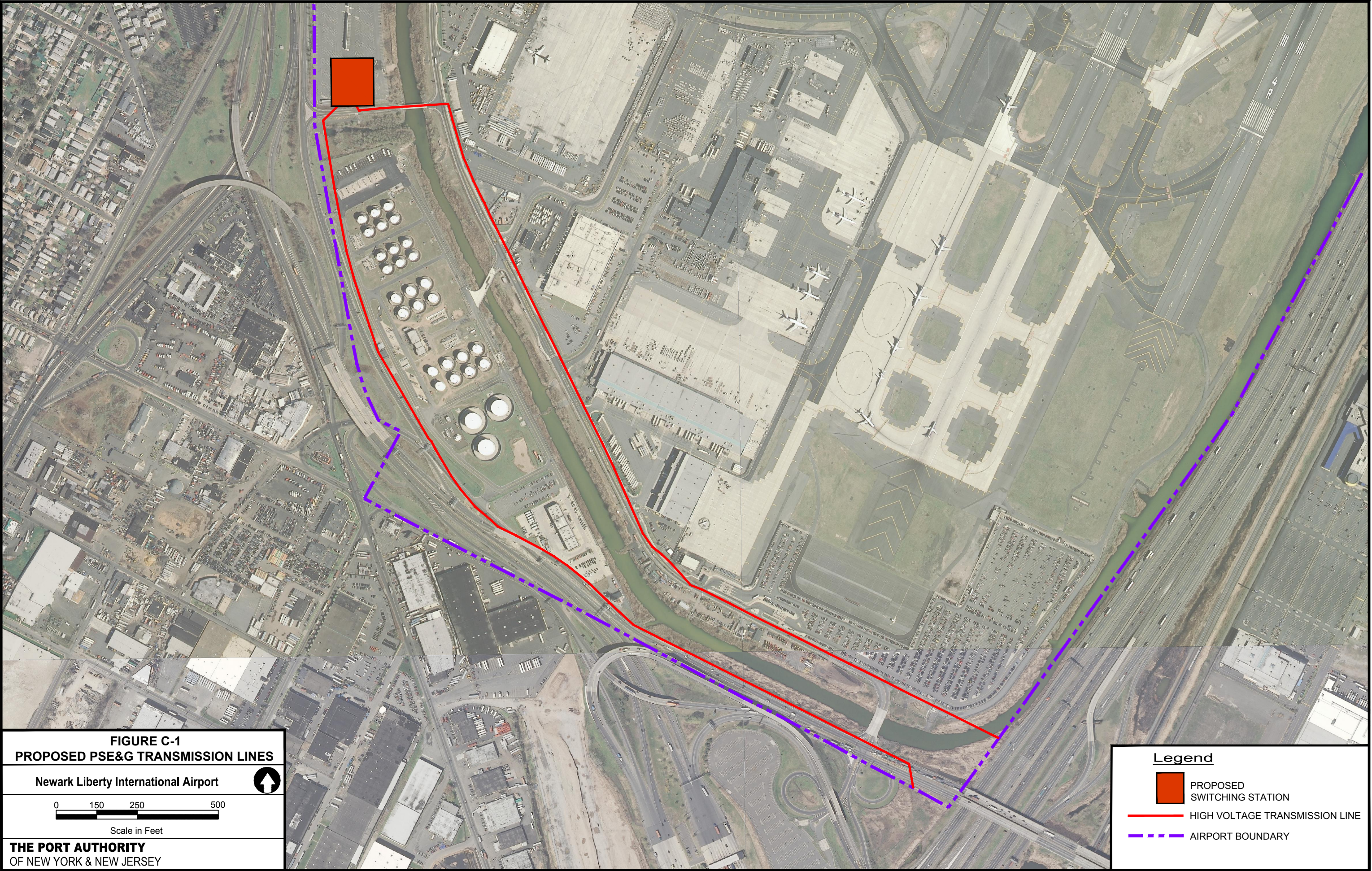


FIGURE C-1
PROPOSED PSE&G TRANSMISSION LINES


Newark Liberty International Airport


0 150 250 500


Scale in Feet

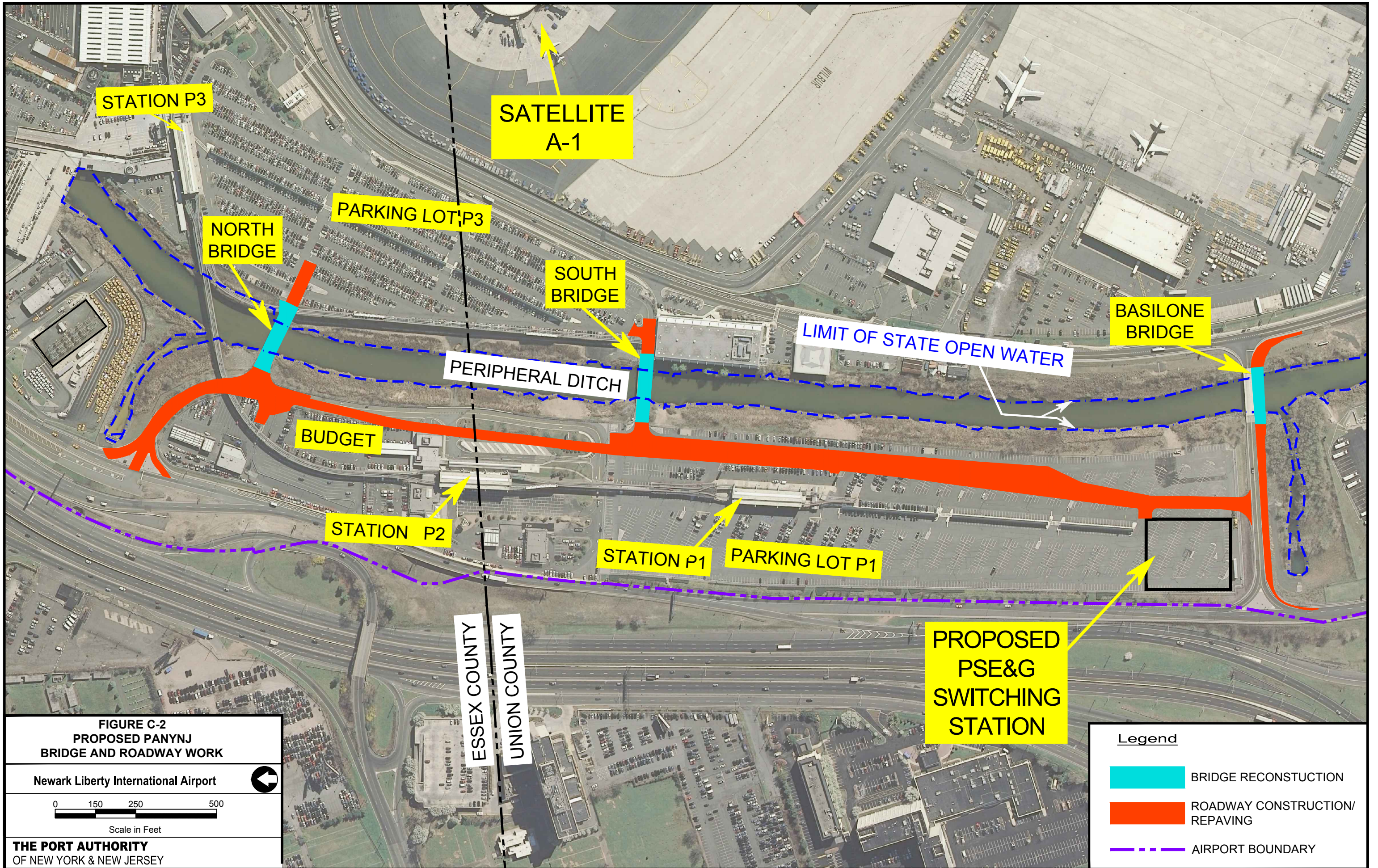
THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

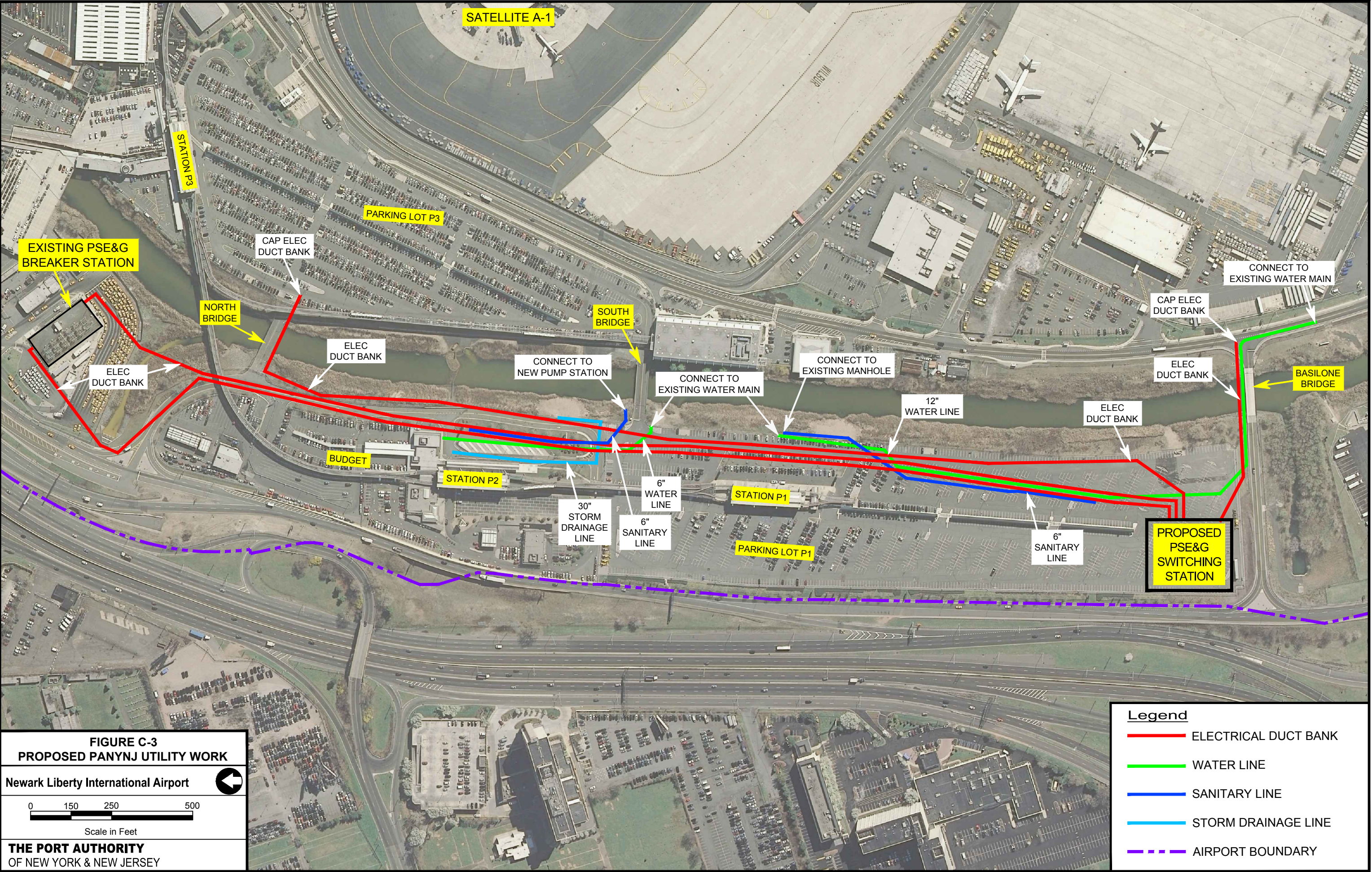
Legend

 PROPOSED SWITCHING STATION

 HIGH VOLTAGE TRANSMISSION LINE

 AIRPORT BOUNDARY





Attachment D

Air Quality Analysis

ATTACHMENT D

GENERAL CONFORMITY RULE AND AIR EMISSIONS ANALYSIS

1 Clean Air Conformity

The 1990 amendments to the Clean Air Act (CAA) require federal agencies to ensure that their actions conform to the appropriate State Implementation Plan (SIP) in a nonattainment area. The SIP provides for implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS); it includes emission limitations and control measures to attain and maintain the NAAQS. Conformity to a SIP, as defined in the CAA, means conformity to a SIP's purpose of reducing the severity and number of violations of the NAAQS to achieve attainment of the standards. The federal agency responsible for a proposed action is required to determine if its proposed action conforms to the applicable SIP.

The U.S. Environmental Protection Agency (USEPA) has developed two sets of conformity regulations; federal actions are differentiated into transportation projects and non-transportation-related projects:

- Transportation projects, which are governed by the “transportation conformity” regulations (40 CFR Parts 51 and 93), effective on December 27, 1993 and revised on August 15, 1997.
- Non-transportation projects, including those in an airport that require approval from Federal Aviation Administration (FAA), which are governed by the “general conformity” regulations (40 C.F.R. Parts 6, 51 and 93) described in the final rule for *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* published in the *Federal Register* on November 30, 1993. The general conformity rule became effective January 31, 1994 and was revised on March 24, 2010.

This general conformity applicability analysis has been prepared for the proposed new switching station to be constructed by PSE&G and the utility infrastructure work by the Port Authority necessary to support it, as well as roadway, bridge and other infrastructure work being undertaken as part of an ongoing facility-wide infrastructure renewal program at Newark Liberty International Airport.

2 General Conformity

2.1 Attainment and Nonattainment Areas

The general conformity rule applies to federal actions occurring in air basins designated as nonattainment for the NAAQS or in attainment areas subject to maintenance plans (maintenance areas). Federal actions occurring in air basins that are in attainment with the NAAQS are not subject to the conformity rule.

A criterion pollutant is a pollutant for which an air quality standard has been established under the CAA. The designation of nonattainment is based on the exceedances or violations of the air quality standard. A maintenance plan establishes measures to control emissions to ensure the air quality standard is maintained in areas that have been re-designated as attainment from a previous nonattainment status.

Under the requirements of the 1970 Clean Air Act (CAA), as amended in 1977 and 1990, the USEPA established NAAQS for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), inhalable particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb).

Areas that meet the NAAQS for a criterion pollutant are designated as being in “attainment;” an area where a pollutant level exceeds the corresponding NAAQS is designated as being in “nonattainment.” O₃ nonattainment areas are subcategorized based on the severity of their pollution problem (marginal, moderate, serious, severe, or extreme). PM₁₀ and CO nonattainment areas are classified as moderate or serious. When insufficient data exist to determine an area’s attainment status, it is designated unclassifiable (or in attainment).

The proposed action would take place at Newark Liberty International Airport, which lies within Essex and Union Counties, New Jersey, an area that is currently designated as a nonattainment area for PM_{2.5}, a moderate nonattainment area for 8-hour O₃, a maintenance area (former nonattainment area) for CO, and an attainment area for the other criteria pollutants. O₃ is principally formed from nitrogen oxides (NO_x) and volatile organic compounds (VOC) through chemical reactions in the atmosphere. SO₂ is considered a precursor of PM_{2.5}.

2.2 *De Minimis* Emissions Levels

To focus general conformity requirements on those federal actions with the potential to have significant air quality impacts, threshold (*de minimis*) rates of emissions were established in the final rule. A formal conformity determination is required when the annual net total of direct and indirect emissions from a federal action occurring in a nonattainment or maintenance area for a criterion pollutant would equal or exceed the annual *de minimis* level for that pollutant. **Table 1** lists the *de minimis* levels for each pollutant.

For O₃ nonattainment areas, USEPA’s conformity rules establish *de minimis* emission levels for both O₃ precursors, VOC and NO_x, on the presumption that VOC and NO_x reductions will contribute to reductions in O₃ formation. Since the project site is located in an O₃ moderate nonattainment area in an O₃ transport region, the *de minimis* levels of 100 tons per year (tpy) of NO_x and 50 tpy of VOC apply.

For PM_{2.5} nonattainment areas, USEPA’s conformity rules establish *de minimis* emission levels for both PM_{2.5} and its precursor, SO₂. Although the project area is currently designated as in attainment for SO₂, SO₂ was considered in the analysis as a precursor of PM_{2.5}. The *de minimis* level of 100 tpy applies to both PM_{2.5} and SO₂. For CO maintenance areas, 100 tpy is the *de minimis* level.

Table 1: *De Minimis* Emission Levels for Criteria Air Pollutants

Pollutant	Nonattainment Designation	Tons/Year
Ozone*	Serious	50
	Severe	25
	Extreme	10
	Other nonattainment or maintenance areas outside ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100**
Carbon Monoxide	All	100
Sulfur Dioxide	All	100
Lead	All	25
Nitrogen Dioxide	All	100
Particulate Matter ≤ 10 microns	Moderate	100
	Serious	70
Particulate Matter ≤ 2.5 microns***	All	100
Notes: * Applies to ozone precursors – volatile organic compounds (VOC) and nitrogen oxides (NO _x); ** VOC/NO _x ; *** Applies to PM _{2.5} and its precursors.		

2.3 Analysis

This CAA General Conformity Rule (GCR) analysis was conducted according to the guidance provided by 40 C.F.R. Parts 6, 51, and 93. *Determining Conformity of Federal Actions to State or Federal Implementation Plans*, (USEPA, November 30, 1993 and March 24, 2010).

The analysis was performed to determine whether a formal conformity analysis would be required. Pursuant to the GCR, all reasonably foreseeable emissions (both direct and indirect) associated with the implementation of the project were quantified and compared to the applicable annual *de minimis* levels to determine potential air quality impacts.

The conformity analysis for a federal action examines the impacts of the direct and indirect net emissions from mobile and stationary sources. Direct emissions are emissions of a criterion pollutant or its precursors that are caused or initiated by a federal action and occur at the same time and place as the action. Indirect emissions, occurring later in time and/or further removed in distance from the action itself, must be included in the determination if both of the following apply:

- The federal agency can practicably control the emissions and has continuing program responsibility to maintain control.
- The emissions caused by the federal action are reasonably foreseeable.

Increased direct and indirect NO_x, VOC, PM_{2.5}, CO, and SO₂ emissions would result from the following potential demolition and construction activities:

- Use of diesel and gas-powered demolition and construction equipment.
- Movement of trucks containing construction and removal materials.

- Commuting of construction workers and inspectors.

3 Emissions Estimate

The GCR requires that potential emissions generated by any project-related activity and/or increased operational activities be determined on an annual basis and compared to the annual *de minimis* levels for those pollutants (or their precursors) for which the area is classified as nonattainment or maintenance. Emissions attributable to activities related to the proposed project were analyzed for NO_x, VOC, PM_{2.5}, CO, and SO₂.

3.1 Proposed Activities Resource Data Estimates

Estimates as to construction crew and equipment requirements and productivity are based on data presented in

- “2003 RSMeans Facilities Construction Cost Data”, R.S. Means Co., Inc., 2002
- “2011 RSMeans Facilities Construction Cost Data”, R.S. Means Co., Inc., 2010

The assumptions used in predicting construction activity data are based on the following proposed work components:

- Construction of a new 345kV/26kV switching station in an area located in the southern portion of Parking Lot P-1.
- Installation of three parallel 3’-0” x 3’-0” concrete duct banks of approximately 2,200 linear feet (LF) each along the eastern edge of Parking Lot P-1.
- Installation of one 3’-0” x 3’-0” concrete duct bank of approximately 1,000 LF that would run to Basilone Road.
- Construction of approximately 2,200 LF of at-grade roadway to connect Carson and Basilone Roads (the Carson Road Extension).
- Replacement of the existing North Bridge.
- Reconstruction of the existing Basilone Road Bridge.
- Replacement of the existing South Bridge.
- Installation of approximately 2,200 LF of water, storm sewer and sanitary sewer within the Carson Road.

An expanded description of the proposed construction activities is contained in Section 2, Project Description, of the Short-Form EA.

3.2 Equipment Operations and Emissions

The quantity and type of equipment necessary were determined based on the activities necessary to implement the proposed action as described above. All equipment was assumed to be diesel-powered unless otherwise noted. Pieces of equipment to be used include, but are not limited to:

- Cranes and forklifts;
- Loaders and back hoes;
- Pavers, rollers and compactors;
- Concrete pump, light towers and boom lifts;
- Graders, excavators and bulldozers;

- Rollers and skid steers;
- Pile drivers and concrete breakers; and,
- Dump trucks, utility trucks and vacuum trucks.

Estimates of equipment emissions were based on the estimated hours of usage and emission factors for each motorized source for the project. Although the entire construction activities are planned to occur over several years, the activity inputs were developed conservatively assuming all demolition and construction action would be compressed over one year. Emission factors for NO_x, VOC, CO, CO₂, PM₁₀, PM_{2.5}, and SO₂ related to heavy-duty diesel equipment were obtained from the NONROAD emission factor model (USEPA, 2008).

The USEPA recommends the following formula to calculate hourly emissions from non-road engine sources including cranes, front end loaders, etc.:

$$M_i = N \times HP \times LF \times EF_i$$

where:

- M_i = mass of emissions of i th pollutants during inventory period;
- N = source population (units);
- HP = average rated horsepower;
- LF = typical load factor; and
- EF_i = average emissions of i th pollutant per unit of use (e.g., grams per horsepower-hour).

Typical load factor values were obtained from the NONROAD model emission factor worksheet (USEPA, 2008).

3.3 Construction Vehicle Operations and Emissions

Truck and commuting vehicle operations would result in indirect emissions. However, the only activities that are subject to the general conformity determination include vehicle operations within the airport. Motor vehicle operations are assumed and summarized as follows:

- Construction trucks would travel at an average speed of 25 miles per hour (mph) on site, for a total estimated on-airport run time of two hours per working day; and
- Each worker or inspector's commuter vehicle would take a 20-minute round trip to commute within the airport at an average speed of 25 mph.

Emission factors for motor vehicles were calculated for both trucks (modeled as heavy duty diesel vehicles) and commuter vehicles (modeled as light duty gasoline vehicles) using the USEPA MOVES2010B program. The emission factors were developed using national default input parameters for Union and Essex Counties where the airport is located and other adjustments such as appropriate seasons applicable to each pollutant. These emission factors were then multiplied by the vehicle operational hours to determine motor vehicle emissions.

4 Compliance Analysis

Based on this analysis of NO_x, VOC, CO, PM_{2.5}, PM₁₀ and SO₂ emissions performed in conjunction with the Final Rule of *Determining Conformity of Federal Actions to State or Federal Implementation Plans*, (USEPA, November 30, 1993 and March 24, 2010), the proposed action would not require a formal conformity determination. The conservative results, assuming the total emissions predicted from demolition and construction activities, would occur only within a two-year period that are planned to occur between the third quarter of 2016 through August 2018. As shown in **Table 2**, the results show no exceedances of the applicable *de minimis* criteria of 100 tpy for NO_x, PM_{2.5}, SO₂ and CO, and 50 tpy of VOC. Therefore, the proposed action would have minimal air quality impacts and would not require a formal conformity determination.

Table 2: Total Construction Emissions

Emissions (tons)					
Type	VOC	NO _x	CO	PM _{2.5}	SO ₂
2016 (31 weeks)					
Non-Road Equipment Emission	0.25	4.83	1.14	0.17	0.17
On-Road Vehicle Emission	0.11	1.31	1.76	0.10	0.01
Total Emission – 2016	0.36	6.14	2.90	0.27	0.18
2017 (52 weeks)					
Non-Road Equipment Emission	0.42	8.23	1.94	0.29	0.28
On-Road Vehicle Emission	0.19	2.22	2.99	0.17	0.02
Total Emission – 2017	0.61	10.45	4.93	0.46	0.30
2018 (35 weeks)					
Non-Road Equipment Emission	0.28	5.48	1.29	0.19	0.19
On-Road Vehicle Emission	0.13	1.48	2.00	0.11	0.01
Total Emission – 2018	0.41	6.96	3.29	0.31	0.20
<i>Annual De Minimis Level</i>	<i>50</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

REFERENCES

Federal Aviation Administration. September 2004. *Air Quality Procedures for Civilian Airports & Air Force Bases*.

R.S. Means Co., 2002. *2003 RSMeans Facilities Construction Cost Data*.

R.S. Means Co., 2010. *2011 RSMeans Facilities Construction Cost Data*.

US Environmental Protection Agency. November 30, 1993. *40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans, Federal Register*.

US Environmental Protection Agency. March 24, 2010. *40 CFR Parts 51 and 93. Revision to the General Conformity Rule*.

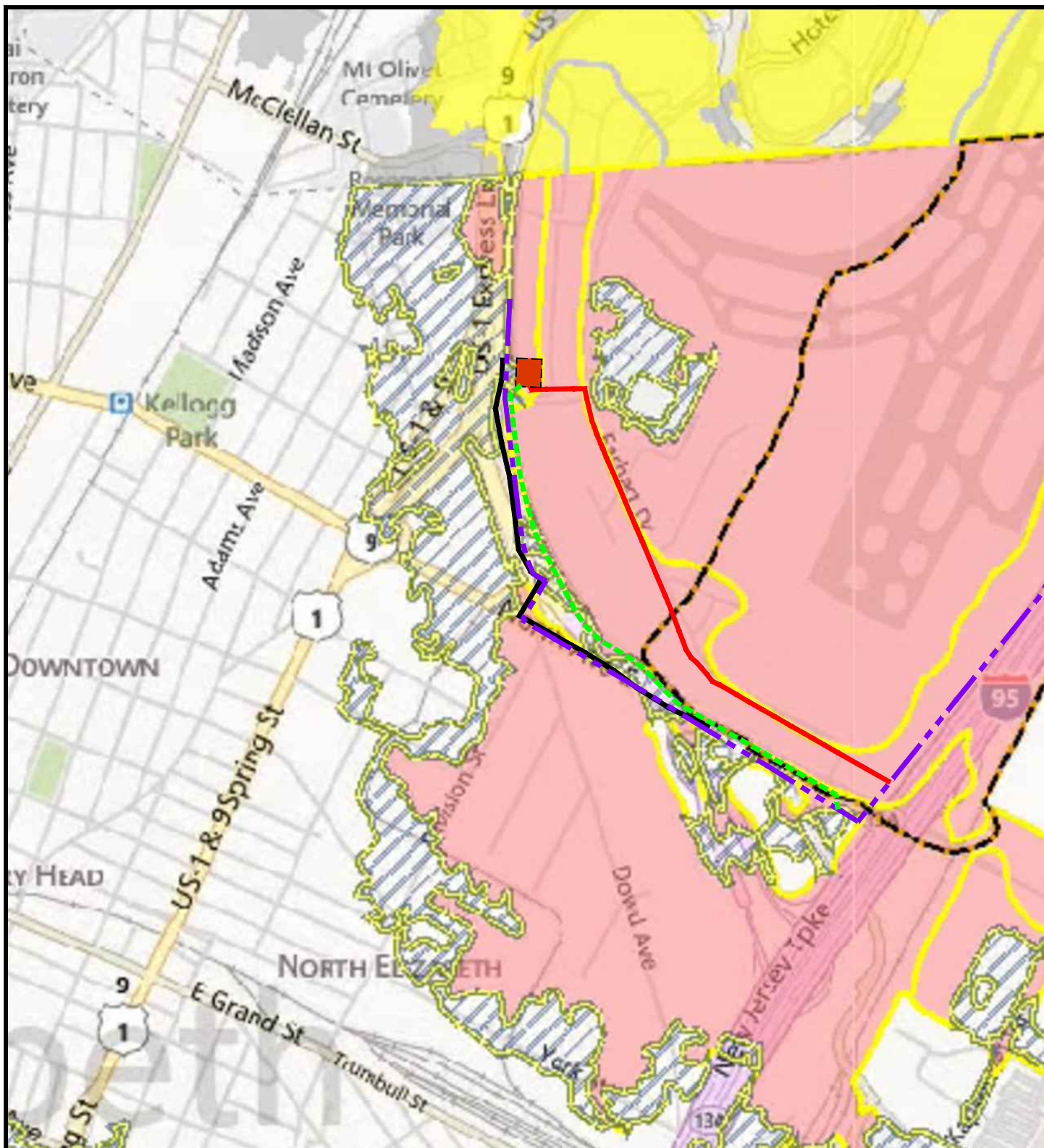
US Environmental Protection Agency. July 17, 2006. *40 CFR Parts 51 and 93. PM_{2.5} De Minimis Emission Levels for General Conformity Applicability, Federal Register*.

US Environmental Protection Agency. June 2012. *Motor Vehicle Emission Simulator (MOVES) User Guide for MOVES2010b*.

USEPA. December 31, 2008. *Nonroad Model Emission Factor Worksheet*.

Attachment E

FEMA Flood Hazard Resources Map



Key

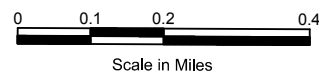
- Floodplain Areas
- A
 - AE
 - AO
 - VE
 - Shaded X

Legend

- PROPOSED SWITCHING STATION
- HIGH VOLTAGE TRANSMISSION LINE
- HIGH VOLTAGE TRANSMISSION LINE
- AIRPORT BOUNDARY

FEMA FLOOD HAZZARD MAP

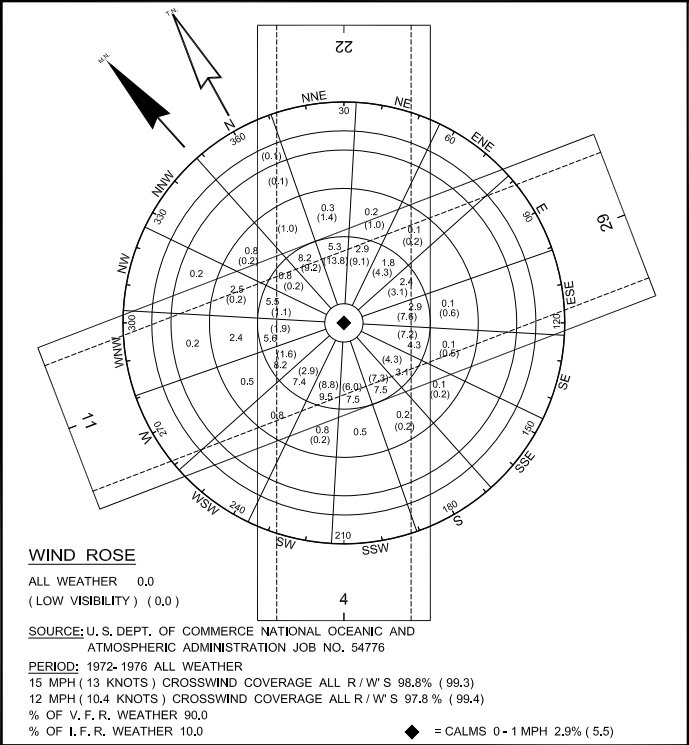
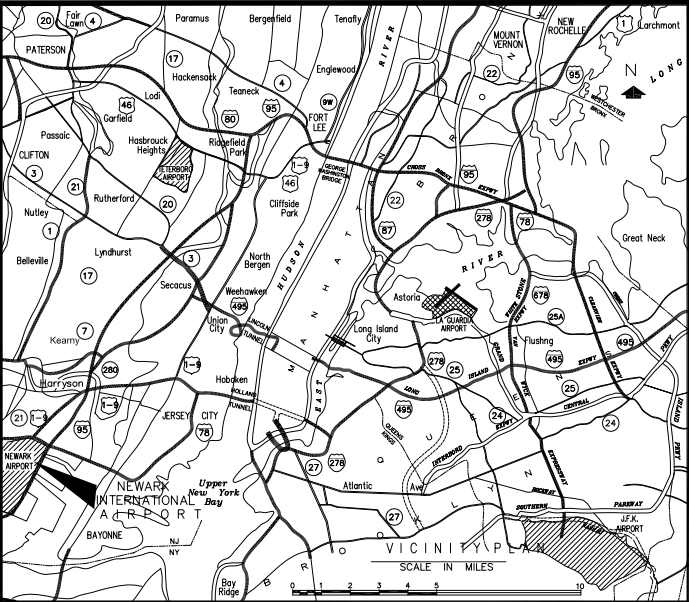
Newark Liberty International Airport



THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

Attachment F

Airport Layout Plan



AIRPORT DATA

AIRPORT ELEVATION —18.3'

AIRPORT REFERENCE POINT (A.R.P.) COORDINATES — LAT. 40°41'31.805" LONG. 74°10'07.951"

NORMAL MAX. TEMP. OF HOTTEST MONTH — 85.6°F

RUNWAY END ELEVATIONS & COORDINATES:

4L - 11.3' LAT.- 40°40'31.3716" LONG.-74°10'46.0209" 4R - 11.5' LAT.- 40°40'39.2984" LONG.- 74°10'27.2915"

22L -10.3' LAT.- 40°42'08.2439" LONG.-74°09'30.7306" 22R -10.6' LAT.- 40°42'09.2091" LONG.-74°09'43.8255"

11-18.3' LAT.- 40°42'10.0955" LONG.-74°10'50.5467" 29-10.3' LAT.- 40°42'04.2544" LONG.-74°09'22.5943"

RUNWAY DATA

	R/W 4L-22R	R/W 4R-22L	R/W 11-29
R/W LANDING LENGTH	8,457' / 9,576'	8,810' / 8,206'	6,800' / 6,502'
EFF. R/W GRADIENT IN %	0	0	.1
% WIND COVERAGE	92.8	92.8	96.6
INSTRUMENT R/W	YES	YES	YES
APPROACH SLOPES	50:1	50:1	50:1
LIGHTING	HIGH INT. EDGE. CTRLN. TDZ-4L-22R	HIGH INT. EDGE. CTRLN. TDZ 4R-22L	EDGE - HIGH INT. CTRLN.

MARKING

PRECISION INSTRUMENT

PAVEMENT STRENGTH *

210,000 # D • 498,000 # DT • 628,000# DT/CL • 592,000# TT

NAVIGATIONAL AIDS*

PAPI - 3" ILS REIL MALSR	PAPI - 3" ILS REIL	PAPI ILS ALSF - 2	PAPI ILS MALSR	VASI-4 ILS REIL	PAPI ILS - (FUT.) REIL
--------------------------	--------------------	-------------------	----------------	-----------------	------------------------

* D-DUAL WHEEL, DT-DUAL TANDEM, DT/CL-DT WITH CTRLN GEAR, DDT-DOUBLE DT, TT-TRIPLE TANDEM

** ADDITIONAL AIDS: TOWER, FSS, WEATHER, VOR, ASR, RVR, ASD, TAXIWAY LIGHTING-CENTERLINE OR EDGE, WIND CONES, LOW LEVEL WIND SHEAR ALERT SYSTEM

NOTES:

1. ALL ELEVATIONS SHOWN ARE IN FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, N.J. AS ESTABLISHED BY THE NATIONAL OCEAN SURVEY

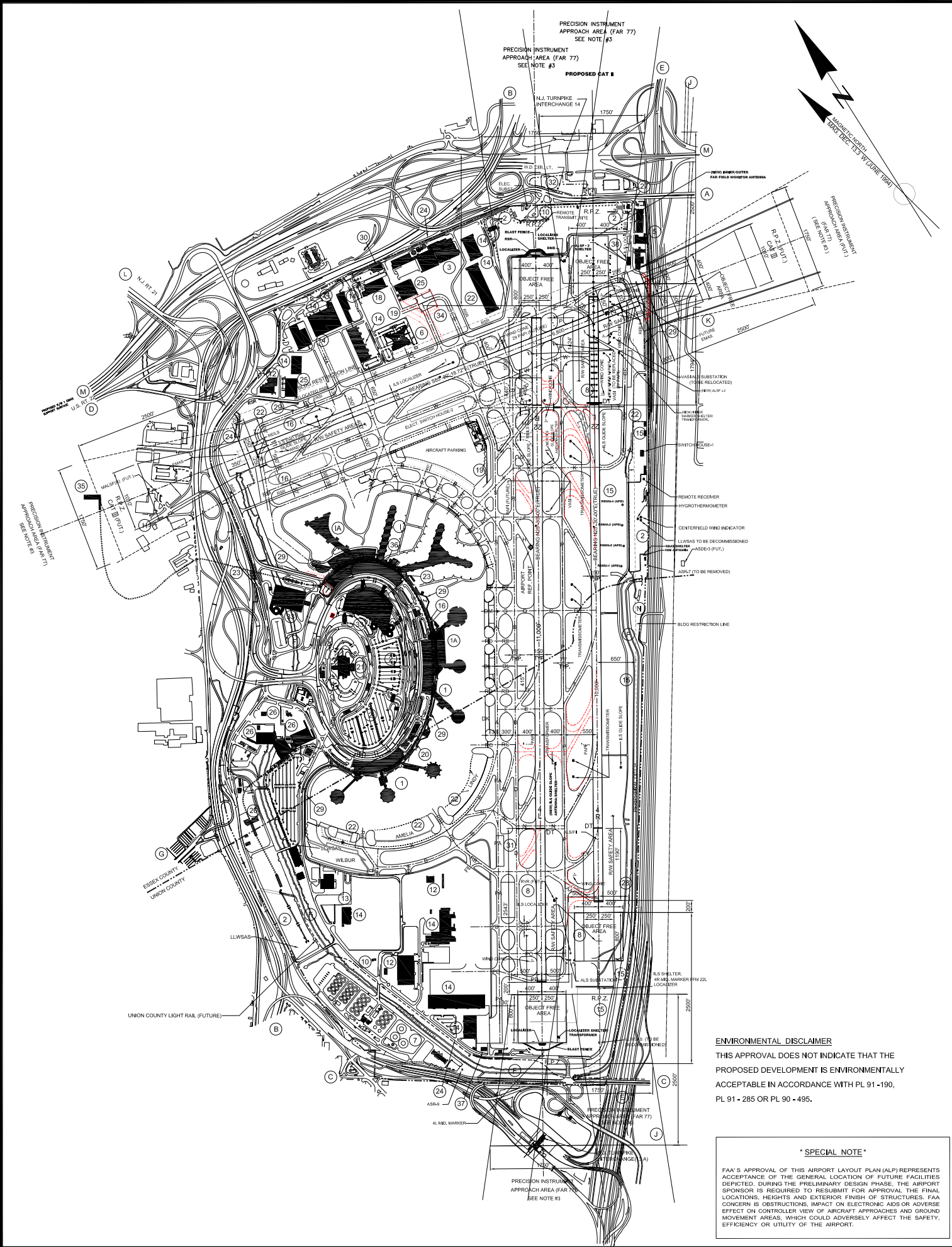
2. P. A. DATUM NEWARK INTERNATIONAL AIRPORT ELEV. 300.00' IS MEAN HIGH WATER AT THE BATTERY WHICH IS EQUAL TO 2.653' ABOVE M.S.L. AT SANDY HOOK

3. FOR ACTUAL APPROACH CONDITIONS SEE CURRENT EWR OBSTRUCTION CHART (OC) 285.

4. GROOVED: R/W 4R-22R, R/W 4R-22L, R/W 11-29

5. CFR ACCESS AT R/W END PROVIDED ON GROUND STABILIZED BY EROSION PAVEMENT EXCEPT WHERE C.F.R. ROAD IS SHOWN

6. LATITUDE & LONGITUDE DATA REFER TO NORTH AMERICAN DATUM 1983 (NAD-1983)



INDEX:				
A. PORT STREET				
B. U.S. RT. 1-9				
C. NORTH AVENUE				
D. U.S. RT. 22				
E. NEW JERSEY TURNPIKE				
F. PERIPHERAL DITCH				
G. Mc CLELLAN STREET				
H. HAYNES AVENUE				
J. CONRAIL - NEWARK AND ELIZABETH BRANCH				
K. PORT NEWARK				
L. N.J. RT.21				
M. RT. 1-78				
N. CITY OF NEWARK PUMP STATION SITE				
P. N.J. RT. 81				
LEGEND:				
-----	AIRPORT BOUNDARY LINE			
---	FUTURE CONSTRUCTION			
///	UNDER CONSTRUCTION			
\\	TO BE DEMOLISHED			
D.T.	DISPLACED THRESHOLD			
H	HELIPAD			
■	LIGHT RAIL STATION			
-----	MONORAIL			
R.P.Z.	RUNWAY PROTECTION ZONE			
-----	UNION COUNTY LIGHT RAIL (UNDER STUDY)			
=====	SECURITY FENCE			
HIGHWAYS & ROADWAYS:				
=====	EXISTING			
///	UNDER CONSTRUCTION			
----	FUTURE			
INDEX:				
1. PASSENGER TERMINAL				
1A. INTERNATIONAL FACILITY				
2. AUTO PARKING (PUBLIC)				
3. AIRCRAFT MAINT. BASE FACILITIES				
4. CONTROL TOWER				
5. AIRPORT SERVICE & MAINTENANCE AREA				
6. EMERGENCY EQUIPMENT GARAGE (CFR BLDG.)				
7. FUEL STORAGE AREA				
8. APPROACH LIGHTING SYSTEM				
9. NAVIGATION AIDS & WEATHER FACILITIES				
10. AUTO SERVICE STATION				
12. ANCILLARY BUILDINGS				
13. U. S. P. S. FACILITY				
14. CARGO FACILITIES				
15. PATROL ROAD				
16. RESTRICTED SERVICE ROADS				
17. PUBLIC SERVICE ROADS				
18. G.A. FACILITIES				
19. P.A. ADMINISTRATION BUILDING				
20. HEATING & REFRIG. PLANT				
21. HOTEL				
22. AIRCRAFT PARKING				
23. MONORAIL				
24. BREWSTER ROAD				
25. HANGAR				
26. RENTAL CAR AREAS				
27. MEDICAL BUILDING				
28. C.F.R. ACCESS ROAD				
29. BLAST FENCE				
30. OFFICE BUILDING (P.A.)				
31. SECONDARY DE - ICING AREA				
32. IMPOUND LOT				
33. GARAGE				
34. DE - ICING FACILITY (INFRARED)				
35. NORTHEAST CORRIDOR (NEC) STATION				
36. RAMP CONTROL TOWER				
37. SUB STATION #3				
38. CENTRAL AUTOMOTIVE (CAD) STORAGE BUILDING				
ENVIRONMENTAL DISCLAIMER THIS APPROVAL DOES NOT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH PL 91-190, PL 91-285 OR PL 90-495.				
* SPECIAL NOTE * FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED DURING THE PRELIMINARY DESIGN PHASE. THE AIRPORT SPONSOR IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS AND EXTERIOR FINISH OF STRUCTURES. FAA CONSENTS TO OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS OR ADVERSE EFFECT ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS, WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY OR UTILITY OF THE AIRPORT.				
THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY ORIGINAL SIGNED BY WILLIAM DECOTA APPROVED FOR ROBERT KELLY DIRECTOR OF AVIATION DATE JAN. 06, 1998				
THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY AVIATION DEPARTMENT AVIATION PLANNING DIVISION NEWARK LIBERTY INTERNATIONAL AIRPORT AIRPORT LAYOUT PLAN 0 1200 2400 DECEMBER, 31, 1997 EWR-9976				
FEDERAL AVIATION ADMINISTRATION APPROVED ORIGINAL SIGNED BY PHILIP BRITO CHIEF AIRPORT DISTRICT OFFICE DATE JAN. 07, 1998				

Attachment G

SHPO Consultation Letter

THE PORT AUTHORITY OF NY & NJ

RECEIVED

April 16, 2014

APR 21 2014

Katherine Marcopul
Supervising Historic Preservation Specialist
New Jersey State Historic Preservation Office
P.O. Box 420
Mail Code 501-048
Trenton, NJ 08625-0420

HISTORIC PRESERVATION OFFICE

14-2496-1 VM

HPO-E2014-416

RE: Newark Liberty International Airport Electrical Infrastructure Upgrades

Dear Ms. Marcopul:

The Port Authority of New York and New Jersey (the Port Authority) is currently planning a series of electrical infrastructure upgrades at Newark Liberty International Airport (EWR) to increase capacity and maintain reliability in support of safe, secure and efficient airport operations (the Proposed Action). The FAA is the lead federal agency and the Port Authority is the sponsor and lead state agency. An Environmental Assessment for the project is currently being prepared in accordance with the National Environmental Policy Act (NEPA). The purpose of this letter is to initiate consultation with the New Jersey State Historic Preservation Office (SHPO) to determine what, if any, cultural resources investigations would be required under Section 106 of the National Historic Preservation Act (NHPA) and NEPA. We look forward to working with you and the SHPO to assure that this Proposed Action conforms to both NHPA and NEPA requirements.

The region's electric utility, Public Service Electric & Gas (PSE&G), is proposing to construct a new 345kV/26kV switching station on the airport as part of a larger regional reliability effort. The existing station is 45 years old and has reached the end of its useful life. It contains many outdated design features and components and, because of the increase in airport loads over the years, is now undersized. PSE&G has determined that its best investment would be to construct a new switching station of higher capacity, to accommodate existing demand as well as forecast long-term growth, and to provide increased reliability within the utility grid. The existing station would remain in service as an emergency backup to the new station.

Newark Liberty International Airport
70 Brewster Road
Newark, NJ 07114
T: 973-961-6257 F: 973-961-6334
e-mail: pkfox@panynj.gov

THE PORT AUTHORITY OF NY & NJ

In order to support the operation of the new switching station, the Port Authority will undertake additional electrical infrastructure work. The Proposed Action will also include a series of roadway, bridge and other infrastructure work being undertaken by the Port Authority as part of an ongoing airport-wide infrastructure renewal program.

Description of the Proposed Action

The Proposed Action would consist of the following elements:

To Be Undertaken by PSE&G

- Construction of a new 345kV/26kV switching station in a 200-foot by 200-foot area located in the southern portion of Parking Lot P-1, which is currently closed. The switching station would consist of transformers, breakers, a 500kW diesel generator, lightning masts, and gas insulated switchgear (GIS). The GIS would be housed in a building on-site and the entire facility would be enclosed by an aesthetically pleasing wall that would limit visibility of the switching station and its equipment to the general public.
- The new switching station would be fed by two 345kV transmission circuits that would originate off-airport. The first feeder, approximately 5,800 LF in length, would enter airport property in the southeast corner near Parking Lot P-8 and run along Earhart Road to Basilone Road, where it would turn west, cross the Peripheral Ditch on the Basilone Road Bridge, then enter the switching station. The second feeder, approximately 5,900 LF in length, would also enter airport property from the southeast and run along North Avenue East, then along South Directory Road to Basilone Road, where it would enter the switching station.

To Be Undertaken by the Port Authority

- Installation of three parallel 12-inch by 5-inch duct banks of approximately 2,200 linear feet (LF) each along the eastern edge of Parking Lot P-1 from the proposed switching station north to Carson Road, then continuing north along Carson Road to the rental car area. Two duct banks would connect to the existing 26-kV air breaker station. The third would turn east and cross the Peripheral Ditch on the North Bridge, terminating in a manhole in Parking Lot P-3.
- Installation of one 12-inch by 5-inch duct bank of approximately 1,000 LF from the proposed switching station to Basilone Road, then east across the Basilone Road Bridge, terminating in a manhole in Earhart Road.
- Construction of approximately 2,200 LF of at-grade roadway to connect Carson and Basilone Roads (the Carson Road Extension). This would include all associated components such as curbing, roadway lighting, sidewalks and

THE PORT AUTHORITY OF NY & NJ

pavement markings; but would not include any intersection signalization. The work would be done as part of the Proposed Action to be more efficient with excavation and paving in the Project Area in order to minimize operational disruption to airport tenants.

- The Carson Road Extension work would also include installation of fiber optic wiring and connections for telecommunication services. This would include wiring for Port Authority security access control, CCTV, and the Supervisory Control and Data Acquisition, and Parking Revenue Control systems. Wiring and connections for FAA communications between the South Area remote transmitters and ASR-9 radar installations and the control tower would also be provided, and the airport's Variable Message System may also be accommodated.
- Replacement of the existing North Bridge. This bridge, which is currently closed, was built in 1978. The two-span bridge crosses the Peripheral Ditch to provide access between Parking Lot P-3 and Carson Road. Based on current standards, this bridge is structurally deficient and functionally obsolete. Because the existing bridge cannot support the proposed duct bank, it would be demolished and replaced at this time. The proposed replacement structure would occupy the same footprint.
- Reconstruction of the existing Basilone Road Bridge. This bridge carries Basilone Road over the Peripheral Ditch and connects South Directory Road to Earhart Drive. This two-span bridge was built in 1984. The bridge rating for this structure meets current standards, however it is necessary to widen this bridge to carry the proposed duct bank from the proposed switching station to the east side of the Peripheral Ditch.
- Replacement of the existing South Bridge. This bridge spans the Peripheral Ditch to provide access between the AirTrain maintenance facility and guideway for airport maintenance staff. It is also used as a connection for the general public between daily parking lots P1/P2 and P3. This two-span bridge was also built in 1978. The bridge rating for this structure does not meet current standards, and would be demolished with the proposed replacement structure being slightly offset to the north of its former location.
- Installation of approximately 2,200 LF of water line, storm sewer and sanitary sewer within the Carson Road right-of-way to support the Port Authority's long-term program needs for infrastructure renewal as presently anticipated for the airport's South Area.

THE PORT AUTHORITY OF NY & NJ**Previous Cultural Resources Surveys and Cultural Setting***Archaeological Resources*

Two recent cultural resources studies have been undertaken in the Project Area by the Port Authority's consultant (AECOM). The first, in support of the Terminal A Redevelopment Program, was conducted in April 2012 (HPO-E2012-262/12-1213-1 VM). The second, in support of proposed fuel system modifications, was undertaken in July 2013 (HPO-H2013-119/13-1710-1 VM). These two studies concluded that the APE for each respective project appeared to have little to no potential to contain undocumented archaeological resources.

A third study, a Phase I Cultural Resources Survey conducted in November 1989 identified the project area as a former wetland and reported that in 1928 about 68 acres of the marshland were raised to a height of almost 20 feet above sea level for the original airfield. Land filling continued through the 1930s, as the airport expanded. The survey conducted subsurface testing in two small areas at the western limits of the APE that were areas of naturally higher ground, unaffected by the filling of the marshland. No prehistoric or historic sites were identified as a result of this effort and no further work was recommended.

A review of the NJ-GeoWeb online database and NJSM site files found that no archaeological resources have been identified within one mile of the APE. The soil types present within the APE were also reviewed as to their suitability for prehistoric habitation. Soils beneath the airport consist of anthropogenic fill soils as the result of urban development. To assess prehistoric land use, deep machine trenching to below the overburden of compact fill would be necessary. However, the buried prehistoric surface was previously a wetland, which is unlikely to have been suitable for prehistoric habitation.

Historic Architectural Resources

Research conducted during the above studies indicates that there are no previously identified NRHP-listed or eligible architectural resources located within the project area. Three buildings located outside the project area, but on airport property, were previously listed in the New Jersey State Register of Historic Places on June 25, 1980 and in the National Register of Historic Places on December 2, 1980. These buildings are the 1935 Terminal, the 1938 Brewster Hangar and the Medical Building, which was built between 1934 and 1938. The Terminal was relocated 2,500 feet southwest of its original location in 2002 and became the airport's Administration Building. It is located outside of the project area. The Brewster Hangar was demolished in 1998. The Medical Building is the only building that remains in its original location at the north end of the airport proper.

A review of historic maps and aerial photographs from the late 19th and 20th centuries (ESRI 2011, 2009; Lake and Beers 1862; NETR 2009; Stewart 1876; USGS 1898)


THE PORT AUTHORITY OF NY & NJ

identified no evidence of historic architectural resources over 50 years of age located within the project area.

Based on our reviews of currently available information, the proposed APE for the Proposed Action appears to have little to no potential to contain undocumented archaeological resources and is not likely to affect any National Register eligible or listed properties. We look forward to your review of the project and notification of what steps, if any, may be required to fulfill the requirements of the NHPA and NEPA.

If you require any additional information or have questions about this application, please contact Donald E. Ehrenbeck, AICP, P.P., at (732) 564-3239.

Sincerely,


Patricia Fox
Program Manager

Enclosures

As proposed, the project will not adversely affect historic properties. Pursuant to 800.5(c), if no consulting parties object to this finding within the 30 day review period, the project may proceed, as proposed, unless resources are discovered during project implementation, pursuant to 800.13.

 /km 5/20/2014

DANIEL D. SAUNDERS
Deputy State Historic Preservation Officer

Date
NAE

Attachment H
Draft EA Newspaper Advertisement Tearsheet

U.S. OPEN

Serena starts slow, finishes strong over Pennetta

ASSOCIATED PRESS

After a bad-as-can-be start, dropping the first three games, Serena Williams quickly turned things around and stretched her U.S. Open winning streak to 19 matches to get back to the semifinals.

Considered the best server in women's tennis, the No. 1-seeded Williams was broken twice in a row at the outset last night, before taking complete control for a 6-3, 6-2 victory over 11th-seeded Flavia Pennetta of Italy.

Williams is bidding to become the first woman with three consecutive U.S. Open titles since Chris Evert took four in a row from 1975-78. The 32-year-old American also is trying to pull even with Evert and Martina Navratilova at 18 Grand Slam singles trophies.

Williams, a five-time champion at Flushing Meadows, had not yet reached a major semifinal in 2014, bowing out in the fourth round at the Australian Open, the second round at the French Open, and the third round at Wimbledon. The last time she didn't reach at least one Grand Slam title match in a season was 2006, when she entered only two of the sport's top tournaments.

On Friday, Williams will meet Ekaterina Makarova, a Russian seeded 17th who advanced to her first Grand Slam semifinal by eliminating Victoria Azarenka 6-4, 6-2. The other women's semifinal will be No. 10 Caroline Wozniacki of Denmark against unseeded Peng Shuai of China.

Earlier yesterday, Kei Nishikori became the first man from Japan to reach the U.S. Open semifinals in 96 years, outlasting third-seeded Stan Wawrinka of Switzerland 3-6, 7-5, 7-6 (7), 6-7 (5), 6-4.

That match went 4 hours, 15



JERRY LAI/USA TODAY SPORTS

Kei Nishikori beat third-seeded Stan Wawrinka to become the first man from Japan to reach the U.S. Open semifinals in 96 years.

minutes, and the 10th-seeded Nishikori managed to shake off any exhaustion from his previous victory, which lasted 4:19 and ended at 2:26 a.m. Tuesday, equaling the latest finish in tournament history.

Nishikori began slowly against the Australian Open champion, but eventually got his bearings and used crisp returns and strong net play to

edge ahead.

"Actually, I started a little bit tight, but my body was OK," Nishikori said in an on-court interview. "I don't know how I finished ... but I'm very happy."

In the semifinals, Nishikori will face No. 1 Novak Djokovic or No. 8 Andy Murray, who each owns a U.S. Open title and were to face each other in Wednesday's last match.

"Hopefully I can play 100 percent tennis next round," Nishikori said.

On Williams' second serve of her quarterfinal, she was called for a foot fault — an unpleasant reminder of her meltdown after that very same ruling in the closing moments of a loss to Kim Clijsters in the 2009 U.S. Open semifinals.

This time, Williams was

unfazed right afterward, and wound up winning the point when Pennetta's second-serve return found the net. But miscues by Williams led to an opening break, and after about 10 minutes of play, Pennetta — a semifinalist in New York last year, but never a major finalist — was ahead 3-0.

The sort of score that looks like a typo.

Didn't last long, though.

Williams began taking the ball inside the baseline as much as possible and finding the mark with her serves, putting more pressure on Pennetta while reeling off six straight games to take the first set.

Pennetta, who is into the doubles semifinals with partner Martina Hingis, might have been forgiven for giving up at that point. But she made things competitive again — at least briefly.

Four aces in one game allowed her to lead 2-1 in the second set. That was pretty much that. Williams broke at love to go up 3-2, raising her left fist overhead to celebrate one particularly impressive shot, in which she raced back to the baseline to retrieve a lob, spun and smacked a forehand winner.

That was part of a 10-point run by Williams, who has not had a particularly difficult path so far through an upset-filled women's field.

She hasn't dropped a set, but she also has not had to face No. 3 Petra Kvitova, No. 7 Eugenie Bouchard, No. 8 Ana Ivanovic, No. 16 Azarenka or No. 24 Sam Stosur — the last player to beat Williams at the U.S. Open, in the 2011 final.

All of those women were on Williams' half of the draw, and all lost to other players.

Azarenka, the runner-up to Williams at Flushing Meadows in 2012 and 2013, said she wasn't able to practice Tuesday because of food poisoning. But she did not want to talk about how that might have affected her play against Makarova, who won the last four games.

"You can ask me 20 times the same question. I'm not going to make any excuses today," Azarenka said, shaking her head.

COLLEGE FOOTBALL



JOHN O'BOYLE / THE STAR-LEDGER

Rutgers J.J. Denman called his experience against Washington State "a dream come true."

RUTGERS

Redshirt sophomore's offseason work pays off in season opener

By Dan Duggan

NJ.COM/FOR THE STAR-LEDGER

Rutgers offensive lineman J.J. Denman had been working hard all offseason, hoping to move his way up the depth chart.

The redshirt sophomore had no assurance that his efforts would be rewarded with playing time, particularly with the Scarlet Knights returning all five starters on the line.

But coach Kyle Flood took notice of Denman's progress in practice and inserted the 6-foot-6, 300-pounder at right tackle for 15 plays in Rutgers' 41-38 win over Washington State in last Thursday's season opener. Denman had previously only seen action in last season's blowout win over Division I-AA Norfolk State.

Getting the opportunity to play meaningful snaps against a high-caliber opponent was a completely different experience.

"It was a dream come true, really," Denman said. "It's just what you've been working for. I was happy to play with the people I always wanted to play with. Playing for Rutgers and for my family, it finally felt good just to be out there. It was probably the most exciting feeling I ever felt."

But not everything turned out to be dreamy for Denman, who was beaten for a sack late in the first half.

There were some mistakes," Denman said. "We work on this stuff every day in practice. It's a little different in the game, but it's just something I'm going to get used to with more and more reps and more time at practice."

Denman rotated with fifth-year senior Taj Alexander. It's essential for Flood to build offensive line depth, as Alexander battled injuries throughout the offseason and top backup Bryan Leoni is sidelined with a lower body injury.

"J.J. is a guy that we have to continue to get experience," Flood said. "He played 15 plays

(Thursday) night and we've got to keep getting him experience because he's earned that opportunity from practice. It's going to give us an opportunity to not just play another guy, but to really play winning football with another guy. If we do have a turned ankle or something down the road here, we'll have one more guy that's ready because he's been in the fire."

Lining up next to starting right guard Chris Muller was a perk for Denman. The four-star prospects from Pennsylvania have been close since their recruitment.

"It was great," Denman said. "We talked about it before the game because we knew I was going to get a shot. We just prepared for it and went over some stuff on paper and worked together in practice during the week, got the communication down a little better. There's still some stuff to clean up, but it was a lot of fun."

Denman returned to the practice field Tuesday armed with his first significant game experience.

That should give him the opportunity to take the next step in his development.

"Now I just want to see him continue to work," Flood said. "If he continues to work, he's got good talent. He'll get better and he'll become a talented player, which for all of them is what we really want. We want a high-level of performance on a consistent level."

As Denman focuses on improving, he can draw encouragement from the fact that the coaching staff has shown it will reward players who put in the work in practice.

"Everyone who has a starting spot here at Rutgers earned that," Denman said. "No one walks into a spot, no matter what. You have to work for what you get."

Dan Duggan may be reached at dduggan@nj.com. Follow him on Twitter at [DDuggan21](https://twitter.com/DDuggan21). Find NJ.com Rutgers Football on Facebook.

Florida's Muschamp rips critics, defends reinstatement of players

NOTEBOOK

STAR-LEDGER WIRE SERVICES

Florida coach Will Muschamp came to his own defense yesterday, ripping critics who questioned his decision to reinstate three players suspended for a season opener that lasted just 10 seconds.

Muschamp said on the weekly Southeastern Conference coaches call that "it's not just about suspending players for games."

"There are a lot of things that go into discipline," Muschamp said. "It's about altering and changing behavior, which we've done here. I think our discipline speaks for itself and how we've handled our football team, OK? So it's not just about missing games. If it was just about suspensions, you never have an issue, right? So at the end of the day it's more than that, and there are a lot of things that go into those situations, a lot more than people know."

Muschamp suspended receiver Demarcus Robinson and defensive tackles Darious Cummings and Jay-nard Bostwick for last week's season opener against Idaho. But the game was delayed nearly three hours because of lightning after the opening kickoff and then eventually halted for good because of unsafe playing conditions.

Muschamp said Monday that Robinson, Cummings and Bostwick will play Saturday against Eastern Michigan. He could have kept their suspensions in place against Eastern Michigan or said they would be suspended against Idaho if the game had been rescheduled. He did neither.

"It's very frustrating for me as a coach, or any coach, to have someone being critical and you don't even have all the information," Muschamp said. "So at the end of the day, I make the decisions in this program, I handle the discipline in this program, and it's been handled very well."

Muschamp has seemingly cleaned up a program that had plenty of issues when he took over in 2010.

After replacing Urban Meyer, Muschamp had 11 players suspended a total of 14 times during his first two years on the job. He's had four players involved in five arrests since, including just one in the last 400-plus days.

Meanwhile, Florida and Idaho

agreed to cancel the postponed season opener.

The schools agreed to play a game in Gainesville in 2017; both will play 11 games this season.

The Vandals still will get their contracted \$975,000 for making the trip to Gainesville this year.

Florida, meanwhile, will refund millions in ticket sales, although insurance is expected to cover all or most of the lost revenue.

Both teams have an open date on Saturday, Oct. 25, but neither was eager to give up a much-needed bye week in the middle of conference play.

Also, Florida will be without backup linebacker Jeremi Powell for at least three games following knee surgery. Powell had arthroscopic knee surgery yesterday to repair torn meniscus. The sophomore is expected to miss games against Eastern Michigan, Kentucky and Alabama.

UCLA: Running back Steven Manfro will miss the rest of the season with a torn ACL, a school spokesman said.

Manfro was taken off the practice field on a cart after injuring his knee Tuesday. The junior is part of the No. 11 Bruins' three-

man rotation at the position with Paul Perkins and Jordan James, and he was often featured as a receiver out of the backfield.

UCLA spokesman Steve Rourke confirmed Manfro's injury yesterday.

Manfro caught 37 passes for 400 yards and two touchdowns over the last two seasons and was also featured on special teams.

Clemson: Coach Dabo Swinney said freshman receiver Kyrin Priester has been dismissed from the team for a poor attitude.

Swinney said that Priester had no respect for authority and that he was a good individual who had lost his way.

Priester, a 6-foot-1, 186-pound wideout played on special teams in last week's 45-21 loss at Georgia last weekend.

Priester was listed as a third-string receiver.

Michigan: Offensive lineman Kyle Bosch has left the program for an undetermined period of time for personal reasons, coach Brady Hoke said.

Bosch played as a reserve guard in last week's victory over Appalachian State.

THE PORT AUTHORITY OF NY & NJ

NOTICE OF AVAILABILITY and REQUEST FOR COMMENT Draft Environmental Assessment Infrastructure Renewal – Electrical Distribution Newark Liberty International Airport, Newark, New Jersey

In accordance with the National Environmental Policy Act (NEPA), notice is hereby given that copies of a Draft Environmental Assessment (EA) for the Infrastructure Renewal – Electrical Distribution Project at Newark Liberty International Airport are available for public review and comment at the following locations:

The Port Authority of NY & NJ
Newark Liberty International Airport
Terminal A Redevelopment Program
Brewster Road
Building # 70
Newark, NJ 07114
Attn: Ajit Haldipur
Hours: 9:00 am to 4:00 pm

The Port Authority of NY & NJ
Aviation Department
Aviation Technical Services
225 Park Avenue South, 9th Floor
New York, NY 10003
Attn: Edward Knoesel
Hours: 9:00 am to 5:00 pm

The Draft EA document for this project will be available at these locations until the close of the comment period, which is 5:00 PM on October 3, 2014. In addition, a copy of this document may be viewed online at: <http://www.panynj.gov/about/pdf/electrical-distribution-ea-ewr.pdf>

The Port Authority is inviting the Public to submit, in writing, comments on the Draft EA prepared for the Infrastructure Renewal – Electrical Distribution Project. The Port Authority is accepting comments on this Draft EA document until the official comment period closes on October 3, 2014. Comments must be received 5:00 PM on October 3, 2014 in order to be considered.

All comments on this Draft EA should be sent to: The Port Authority of NY & NJ, 225 Park Avenue South, 9th Floor, New York, NY 10003, Attn: Edward Knoesel. In addition, comments may be emailed to EWREDEA@panynj.gov with the subject heading "EWR ELECTRICAL DISTRIBUTION EA COMMENTS." If you have any questions on this notice please contact Edward Knoesel at eknoesel@panynj.gov.

