

PENDING PETITION MEMO

Date: 11/1/2005

TO : Office of Electricity and the Environment D. May
OGC

FROM: CENTRAL OPERATIONS

UTILITY: CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

SUBJECT: 05-T-1369

In the Matter of the Application of Consolidated Edison Company of New York, Inc. for a Certificate of Environmental Compatability and Public Need under Article VII of the New York State Public Service Law for the Cedar Street Project. 11/1/05

05-T-1369

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Petition

05-T-1369



Eric M. Dessen
Associate Counsel

October 31, 2005

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VIA OVERNIGHT MAIL

The Hon. Jaclyn A. Brilling
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Case 05-T-____: In the Matter of the Application of Consolidated Edison Company of New York, Inc. for a Certificate of Environmental Compatibility and Public Need under Article VII of the New York State Public Service Law for the Cedar Street Project

Dear Secretary Brilling:

Pursuant to § 122 of the New York State Public Service Law ("PSL") and implementing regulations at 16 NYCRR § 85-2.2, enclosed for filing with the New York State Public Service Commission (the "Commission") are ten copies of Consolidated Edison Company of New York, Inc.'s ("Con Edison") Application for a Certificate of Environmental Compatibility and Public Need for its Cedar Street Project (the "Project"). The Project entails the construction and operation of a new underground 138 kV electric transmission line from Con Edison's existing Washington Street Substation in the City of Mount Vernon, Westchester County, to Con Edison's existing Cedar Street Substation in the City of New Rochelle. The transmission line will initially contain one feeder, although there will be sufficient capacity to install a second feeder as anticipated long-term load growth warrants. The underground transmission line will be approximately 3.0 miles in length.

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County, including load growth associated with construction projects currently underway or planned for the area beyond 2005, including, among others, two new buildings under construction at the Iona College campus, a proposed new high school, in the City of New Rochelle, and various planned major residential/commercial and infrastructure developments in New Rochelle and elsewhere in southeastern Westchester County.

Also enclosed with this letter are (i) a Certificate of Service, prepared pursuant to 16 NYCRR § 85-2.10, showing that copies of the Application are being served today on all parties required to be served pursuant to PSL § 122; and (ii) a statement confirming that persons residing in the affected municipalities have been given notice of the Application by publication in the *The Journal News* once a week for two consecutive weeks prior to the filing as required by 16 NYCRR § 85-2.10. Original affidavits of publication will be filed with the Commission upon receipt.

Respectfully submitted,



Eric M. Dessen

Enclosures

cc: Attached Service List

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

-----X

IN THE MATTER of the Application of :
Consolidated Edison Company of New York, Inc. :
For a Certificate of Environmental Compatibility and :
Public Need Pursuant to Article VII of the Public :
Service Law for the Cedar Street Project, Westchester :
County, New York :

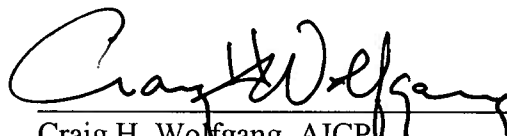
CASE NO. 05-_____

-----X

CERTIFICATE OF SERVICE

Craig H. Wolfgang, being duly sworn, deposes and says:

That on the 31st day of October, 2005, a true and complete copy (or copies as noted) of the Article VII Application of Consolidated Edison Company of New York, Inc., for a Certificate of Environmental Compatibility and Public Need for the Cedar Street Project in Westchester County, New York, was served upon each party on the attached list by Federal Express for delivery on 1st day of November, 2005.


Craig H. Wolfgang, AICP
Manager, Environmental Permitting
TRC Environmental Corporation

Subscribed and sworn on this
31st day of October, 2005


NOTARY PUBLIC

JACQUELINE M. MCKEEVER
NOTARY PUBLIC, STATE OF NEW JERSEY
MY COMMISSION EXPIRES APRIL 5, 2007

**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
CEDAR STREET PROJECT
PUBLIC SERVICE LAW ARTICLE VII APPLICATION
SERVICE LIST**

State Agencies and Officials

The Honorable Jaclyn A Brilling, (10 copies)
Secretary to the Commission
NYS Public Service Commission
Three Empire State Plaza, 14th Floor
Albany, NY 12223-1350

The Honorable Nathan L. Rudgers
Commissioner
NYS Department of Agriculture and Markets
10B Airline Drive
Albany, NY 12235

The Honorable Denise M. Sheehan,
Acting Commissioner
NYS Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1011

Mrs. Margaret Duke, Environmental Permits
NYS Department of Environmental Conservation
Region 3 Office
21 South Putt Corners
New Paltz, NY 12561

The Honorable Thomas J. Madison, Jr.
Acting Commissioner
New York State Department of Transportation
50 Wolf Road
Albany, NY 12232

The Honorable Bernadette Castro
Commissioner
New York State Office of Parks, Recreation
and Historic Preservation
One Empire State Plaza, 20th Floor
Albany, NY 12238

The Honorable Randy A. Daniels
Secretary of State
New York State Department of State
41 State Street
Albany, NY 12231-0001

The Honorable Charles A. Gargano
Commissioner
Empire State Development Corporation
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New York, NY 10017-6706

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88th Assembly District
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Scarsdale, NY 10583

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District 37
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Port Chester, NY 10573

NYS Senator Jeff Klein
District 34
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NYS Senator Ruth Hassell-Thompson
District 36
767 East Gunhill Road
Bronx, New York 10467

NYS Assemblyman George S. Latimer
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Westchester County Legislator - District 11
Michaelian Office Building
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White Plains, NY 10601

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Westchester County Legislator – District 10
Michaelian Office Building
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White Plains, NY 10601

The Honorable Andrew J. Spano
Westchester County Executive
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

The Honorable Clinton I. Young, Jr
Westchester County Legislator – District 13
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

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Mayor
1 Roosevelt Sq, Room 107
Mount Vernon, NY 10550

Hon. Timothy C. Idoni
Mayor
City Hall, 515 North Avenue
New Rochelle, NY 10801

Hon. Michael Clain
Mayor
Pelham Village Hall
195 Sparks Avenue
Pelham NY 10803

Mr. Richard Slingerland
Village of Pelham Administrator
Pelham Village Hall
195 Sparks Avenue
Pelham, NY 10803

Libraries

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Mount Vernon, NY 10550

Pelham Public Library
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Pelham, NY 10803

New Rochelle Public Library
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New Rochelle, NY 10801

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Division Permit Coordinator
New York State Thruway Authority
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Suffern, NY 10901

Metro North Railroad
James J. Gillies, Director
Power Systems
420 Lexington Avenue
New York, New York 10017



Eric M. Dessen
Associate Counsel

October 31, 2005

VIA OVERNIGHT MAIL

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Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

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Respectfully submitted,



Eric M. Dessen

Enclosures

cc: Attached Service List



conEdison
a conEdison, inc. company

Cedar Street Project

**Application to the New York State Public Service Commission
for a Certificate of Environmental Compatibility
and Public Need under Article VII of the Public Service Law**

Prepared for

**Consolidated Edison Company
of New York, Inc.**

Prepared by

TRC

1200 Wall Street West
Lyndhurst, New Jersey 07071

October 2005



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Cedar Street Project

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October 2005

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- Appendix B Pre-Filed Direct Testimony
- Appendix C Draft Certificate Conditions
- Appendix D Phase IA Archaeological Report

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Executive Summary

EXECUTIVE SUMMARY

Project Overview

Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Applicant") is submitting this Application for a Certificate of Environmental Compatibility and Public Need pursuant to Article VII of the New York State Public Service Law ("PSL") to authorize the construction and operation of up to two 138 kV underground feeders along a single transmission line route in southeastern Westchester County, New York. The feeders will connect Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with the 138/13.8 kV Cedar Street Substation located in the City of New Rochelle. One feeder will be constructed immediately (Phase I). This feeder will consist of a three-phase, single copper conductor solid dielectric 138 kV insulated cable circuit within a buried duct bank. The duct bank will be designed with spare capacity to allow for future installation of a second feeder to support expected long-term area load growth (Phase II). One fiber optic cable will also be installed within the duct bank to provide for voice and data communications. The proposed route will be approximately 3 miles in length. Equipment required to accommodate the Phase I feeder will be added at both the Washington Street and Cedar Street Substations, including installation of a 138/13.8 kV transformer at the Cedar Street Substation. An additional transformer will be installed at the Cedar Street Substation at such time as the Phase II feeder is determined necessary to serve area load growth. The proposed construction of the new feeders and supporting equipment at the existing substations is collectively referred to herein as the "Cedar Street Project" or the "Project".

The duct bank for the transmission line will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed transmission line will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, the proposed transmission line is anticipated to be located within the roadway or sidewalk of the existing parkway bridge (Lincoln Avenue) with all construction from above rather than below the bridge.

Construction within the New York State Thruway Authority ("NYSTA") right-of-way and the installation of the proposed transmission line within the Thruway entrance ramp will require occupancy and work permits from the NYSTA. Con Edison will fully comply with the requirements set forth in the NYSTA occupancy and work permits, consistent with the ongoing jurisdiction of the Public Service Commission ("Commission") under PSL Article VII. The Applicant will also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the New England Thruway.

Con Edison will coordinate with the New York State Department of Transportation ("NYSDOT"), NYSTA and Westchester County, as applicable, to finalize proposed highway crossing locations and techniques and to develop and implement a Maintenance and Protection of Traffic Plan to ensure safe and adequate traffic operations along the Hutchinson River Parkway, the New England Thruway, and other local roadways.

During the course of the planning/engineering/design efforts associated with the proposed Cedar Street Project, Con Edison has undertaken numerous outreach meetings with potentially affected land use stakeholders, including representatives of Westchester County, the Cities of Mount Vernon and New Rochelle, and the Village of Pelham.

Benefits from the Project include: (1) improved reliability on the Con Edison electric transmission and distribution system from the installation of a third transformer at the Cedar Street Area Substation, and the proposed 138 kV underground transmission line supply feeder, allowing Con Edison to meet expected electrical load growth in southeastern Westchester County (2) assuring the continued availability and reliability of electric service in southeastern Westchester County through the utilization/construction of a new transmission line route between the Washington Street and Cedar Street Substations; (3) minimizing visual impacts by using underground cables; and (4) minimizing potential environmental impacts by using solid dielectric cable, rather than oil-filled electric cables, and proposing placement of the proposed transmission lines wholly within existing roadway rights-of-way.

Environmental Studies

Con Edison conducted comprehensive environmental studies of the Project. The results of these studies are summarized below:

Land Uses: The proposed transmission facilities will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways, thereby minimizing potential long-term land use impacts. Land uses adjacent to or near the proposed transmission line consist of manufacturing/industrial uses; public parklands; transportation corridors; low-, medium-, and high-density residential uses; institutional uses; mixed-use (non-residential) development; and commercial/retail uses. The parks and recreational uses adjacent to the proposed transmission line include Wilson Woods Park and the associated pool and recreation center in Mount Vernon and Lincoln Park and the Great Lawn in New Rochelle. There are no agricultural land uses adjacent to the proposed route or connecting substations.

The use of existing roadway rights-of-way along virtually the entire length of the proposed transmission line route avoids potential impacts to adjacent and nearby present and future land

uses. Once installed, the transmission facilities will not affect surrounding land uses. Being underground, the transmission facilities will not be visible or audible. Therefore, conflicts with existing and future nearby land uses will be minimal. During trench excavation and duct bank installation, access to driveways and parking lots may be temporarily curtailed. On-street parking spaces may be temporarily restricted. Mobilization of a sufficient contractor workforce will ensure that construction proceeds as quickly as possible. Trench width and the amount of vegetation disturbed will be kept to a minimum. Backfilling of trenches, soil stabilization, and surface restoration will follow immediately after duct bank installation. Installation of the additional transformers at the Cedar Street substation will have no effect on the surrounding commercial and industrial land uses.

There will be no significant land use impacts due to operation of the Project.

Aesthetics and Visual Resources: Noted visual or aesthetic resources located in the vicinity of the proposed transmission route include the Wilson Woods Park in Mount Vernon, Lincoln Park on Lincoln Avenue in New Rochelle, and the Great Lawn in New Rochelle. Since the transmission lines will be underground, the transmission line right-of-way will not be noticeable following the temporary visual impacts associated with construction activities. Accordingly, there will be no long-term, adverse visual impacts attributable to the proposed transmission lines.

The equipment additions at the Washington Street and Cedar Street Substations will not result in any impact to visual and aesthetic resources. The interconnection of the new 138 kV transmission line at the Washington Street Substation and the installation of the new transformers at the Cedar Street Substation will not create any new visual elements at these locations. From public vantage points near the Lyons Place and Hartford Avenue intersection, the Washington Street Substation will be viewed in the context of a mixed industrial setting. The Cedar Street Substation is located inside a 15-foot high masonry wall, and the facility presents an uncluttered and unidentified public façade.

Cultural Resources: Construction of the proposed transmission lines and upgrades to the existing substations will have no impact on cultural resources. The proposed transmission lines will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. Prior disturbance along these rights-of-way essentially eliminates the potential for encountering significant archaeological sites along these routes. To provide for the protection of any unknown archaeological resources, an Unanticipated Discovery Plan has been developed as part of the Applicant's Phase IA survey to provide for the identification, protection and documentation of archaeological resources discovered during construction.

The proposed transmission line construction will occur within one National Register Listed property (Rochelle Park – Rochelle Heights Historic District) and adjacent to a second Listed

property (Pelham Firehouse) and two National Register Eligible ("NRE") properties. Due to the underground construction design, the proposed project poses no adverse direct or visual effect to the Rochelle Park - Rochelle Heights Historic District, the Pelham Firehouse and the NRE properties identified.

Terrestrial Ecology and Wetlands: The proposed area traversed by the route for the proposed transmission line does not contain any unusual or unique ecological communities. The proposed transmission line will be installed within existing paved roadways for nearly its entire length from the Washington Street Substation to the Cedar Street Substation. Accordingly, the vegetative communities within the Project area consist almost entirely of roadside areas and previously developed areas that may or may not be directly affected by the Project. The upgrade and installation work at the Washington Street and Cedar Street Substations will take place within the confines of existing substations and will not disturb any natural habitats.

Topography, Hydrology, and Soils: The proposed transmission route will be placed in existing roadway right-of-ways, where soil types and topography are ideally suited to the common construction methods to be employed. When completed, the portion of the corridor excavated for the transmission line will be returned to its original topographic and drainage conditions. A state-licensed contractor will dispose of excavated soils and asphalt at an appropriately licensed facility. Due to the previously developed nature (for the most part) of the proposed transmission routes and the construction activities supporting the installation of the transmission facilities, adverse impacts as a result of soil excavation should not occur. There are no known unique geologic features on or within one mile of the proposed transmission routes or the two existing substations.

Topography along the route of the proposed transmission line is level to slightly sloping with elevations that range from approximately 50 feet above mean sea level ("MSL") to 100 feet MSL. Although several localized areas of sharp grade change are found in the vicinity of the Washington Street Substation, Wilson Woods Park, and the Hutchinson River, the flat to gently sloping topography along the transmission line route is ideally suited to the shallow subsurface excavation required to support the construction.

No wetlands or streams will be impacted by the proposed excavation and construction of the transmission lines. Although the construction of the transmission line involves crossing the Hutchinson River, the preferred crossing will be via an existing bridge, which would not require any disturbance to the riverbed or banks. Because Con Edison currently has a spare transformer and foundation located adjacent to the operating transformer units at the Cedar Street Substation, which will likely be brought online to support the Project, grading will be required at the Cedar Street Substation. All necessary stormwater plans will be prepared for construction and operations. Con Edison will also prepare a Construction Storm Water Pollution Prevention Plan

("CSWPP") as part of the EM&CP for the Cedar Street Project to address activities related to both the proposed transmission line and the installation of the third transformer at the Cedar Street Substation in accordance with applicable state guidelines and standards. No cumulative or adverse environmental impacts on topography, soils, or other geologic resources from construction and operation associated with the proposed Cedar Street Project are anticipated.

Water: During final design of the Project, Con Edison will work with Westchester County representatives and other local officials to ensure that the construction and operation of the transmission line and continued operation of the existing substations do not have any impacts to existing infrastructure, including water supply distribution systems, the sanitary sewer systems, and storm water sewer systems.

Construction of the transmission facilities will require minimal water supply. If water is required for construction activities, such as for dust control, pavement cutting, etc, water will be brought to the construction site in a tanker truck. No water supply will be required for the transmission facilities during operation.

The Cedar Street Substation is an unmanned facility and water demand will not significantly change with the addition of the third transformer. During final engineering and design, Con Edison will verify that existing water supply and pressure is adequate to provide fire protection for the third transformer. In accordance with the conditions of the Article VII Certificate for the Cedar Street Project, Con Edison will prepare and implement an Environmental Management and Construction Plan (EM&CP), which will include provisions for storm water management during construction and operation of the Project.

Traffic and Transportation: The proposed route will be located primarily within the curb-to-curb portion of the rights-of-way of public roadways. The duct bank for the feeders will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway.

Construction of the proposed transmission line will involve the crossing of the Hutchinson River Parkway in southern Westchester County via an existing bridge (Lincoln Avenue). Preliminary plans include the placement of the duct bank within the roadway or sidewalk of the bridge with all construction from above rather than below the bridge. With this scenario, traffic along the Hutchinson River Parkway would not be affected. Upon further evaluation, if the required duct bank cannot be placed within the existing bridge structure, the proposed feeders would be installed beneath the Parkway via directional drilling or horizontal boring in a manner acceptable to the NYSDOT. The specific location and engineering design for the crossings would be determined in consultation with the NYSDOT and permit applications, if required, would be

filed by Con Edison with the NYSDOT for the work. Con Edison would fully comply with the requirements set forth in a NYSDOT Highway Crossing Permit and Utility Work Permit for the Project, consistent with the Commission's ongoing jurisdiction under PSL Article VII. The Applicant would also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the Hutchinson River Parkway.

Construction of the proposed transmission line will also require crossing the New England Thruway via an existing entrance ramp underpass at Interchange 16. The proposed route also crosses a southbound exit ramp. Construction within the NYSTA right-of-way and the installation of the proposed feeders within the Thruway entrance ramp will require occupancy and work permits from the NYSTA. Subject to the continuing authority of the Commission under PSL Article VII, Con Edison will fully comply with the requirements set forth in the NYSTA permits. The Applicant will also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the New England Thruway.

Con Edison will coordinate with NYSDOT, NYSTA and Westchester County, as applicable, to finalize proposed highway crossing locations and techniques and to develop and implement a Maintenance and Protection of Traffic Plan to ensure safe and adequate traffic operations along the Hutchinson River Parkway, the New England Thruway, and other local roadways.

Con Edison property within the Washington and Cedar Street Substations will be used for construction laydown storage areas in support of construction activities associated with the proposed transmission line. Additional staging in support of daily construction activities will occur within the proposed transmission line rights-of-way. The proposed Washington and Cedar Street Substation improvements will not impact existing traffic conditions. With the exception of occasional maintenance activities, no traffic will be generated in the Project area due to the operation of the transmission line.

Noise: Construction noise-related impacts from the proposed 138 kV transmission line and proposed improvements at the Washington and Cedar Street Substations are expected to be minimal. Interconnection of the new 138 kV transmission feeders at the Washington Street Substation will require only the installation of the duct bank and cable within the substation yard and electrical work at an existing bus position. Therefore, construction noise will be limited in terms of intensity and duration and will have no appreciable affect on the surrounding industrial neighborhood. No additional noise generating equipment will be installed at the Washington Street Substation, so operational noise levels will remain unchanged.

Construction noise-related impacts from the addition of a third transformer at the Cedar Street Substation are expected to be minimal. Construction noise, while varying according to the

equipment in use, will be mitigated by the surrounding 15-foot high masonry wall, attenuating effect of distance; the intermittent and short lived character of the noise; and the use of functional mufflers on all construction equipment

Construction of the Phase I transmission feeder is anticipated to occur over a 6 to 8 month period. Work in the vicinity of any single general receptor along the transmission line route will likely last three days to one week, as construction activities move along the corridor. The maximum noise levels associated with the construction equipment are anticipated to not exceed 90 dBA at a distance of 50 feet.

Operational noise-related impacts from the proposed 138 kV transmission line and proposed improvements at the Washington and Cedar Street Substations are also expected to be minimal. During operation, the underground feeders will not generate noise. The nearest residences to the Cedar Street Substation are approximately 800 feet distant and the new transformer will be placed within a masonry block firewall within the walled confines of the substation. Consequently, no impacts on ambient noise quality are anticipated from the operations of the Cedar Street Substation. Operational noise levels, at the location of the nearest residential receptors, are expected to comply with the specified City of New Rochelle standards. No additional noise generating equipment will be installed at the Washington Street Substation, so operational noise levels will remain unchanged.

Transmission Line Electric and Magnetic Fields ("EMF"): Section 4.10 of Exhibit 4 of this application presents a worst-case analysis of potential EMF impacts associated with the proposed feeders. The PSC established standards for Electric and Magnetic Fields in its Interim Policy Statement on Magnetic Fields, issued September 11, 1990. In this document, PSC set the maximum magnetic field strength as 200 milligauss (mG), measured at one meter above grade.

The new 138 kV transmission feeders will each be connected to a 65 MVA (nameplate rating) transformer; however, for EMF modeling purposes, 80 MVA maximum capacity was used for peak load worst-case assessment. The 80 MVA maximum capacity loading represents a worst case operating condition for the 65 MVA nameplate rated transformers, i.e., operation pending emergency replacement of a failed transformer or ancillary equipment in the Substation. The magnetic field levels produced by the proposed underground cable circuit(s) were calculated to be no greater than 75 mG at any location, well below the 200 mG standard. All assessment calculations were made along a line perpendicular to the underground cables and at 3.28 feet (39.4 inches or 1 meter) above ground level.

The cables will not produce an electric field external to the concentric cable shield and metallic sheath. With both multi-point bonded and single point bonded configurations, the shield and sheath are grounded at a minimum of one location along each section. Therefore, no electric

field from the energized phase conductor can exit (exist?) outside of the grounded shield and sheath.

Application Organization

The Application is organized as follows:

Project Information: Provides the Affidavit of Service, Statement of Publication (with copy of Public Notice), Matter of the Application, and Motion for Waivers.

Exhibit 1, General Information Regarding Application: Provides the name, address, and telephone number of the Applicant.

Exhibit 2, Location of Facilities: Provides detailed maps showing the routes of the Project transmission facilities and the location of the Washington Street and Cedar Street Substations sites on an aerial photograph and NYSDOT map. This exhibit also provides a description of the Project.

Exhibit 3, Alternatives: Provides a discussion of the alternative structures, routes, and construction methods investigated for the Project.

Exhibit 4, Environmental Studies: Contains detailed analyses of the potential impacts on all environmental resource areas, including Land Uses; Aesthetics and Visual Resources; Cultural Resources; Terrestrial Ecology and Wetlands; Topography, Soils, and Hydrology; Traffic and Noise; and Transmission Line and Substation EMF.

Exhibit 5, Design Drawings: Presents the design drawings and profiles of the Project's transmission and substation components.

Exhibit 6, Economic Effects of Proposed Facilities: Provides the anticipated economic effects of the construction and operation of the Project.

Exhibit 7, Local Ordinances: Provides a listing of local ordinances applicable to the Project.

Exhibit 8, Other Pending Filings: Identifies other pending filings with governmental departments or agencies, which concern the subject matter of the Project.

Exhibit 9, Cost of Proposed Facilities: Provides a statement regarding costs of the Project.

Exhibit E-1, Description of Proposed Transmission Facilities: Provides a detailed description of the proposed transmission facilities that comprise the Project.

Exhibit E-2, Other Facilities: Discusses facilities associated with the transmission line.

Exhibit E-3, Underground Construction: Provides a discussion of the Project transmission facilities, design standards and construction methods as related to underground construction.

Exhibit E-4, Engineering Justification: Provides the engineering justification for the Project, and discusses specific benefits with respect to reliability.

Exhibit E-5, Effect on Communications: Provides a statement describing the anticipated effects of the Project and related equipment on communication systems.

Exhibit E-6, Effect on Transportation: Provides a statement regarding the anticipated effect of the Project and associated construction on the surrounding transportation systems.

Pre-Filed Testimony: Provides expert testimony in support of the Application

Appendices: Provide supporting information for the various studies and outreach efforts described within the Application.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Project Information

Certificate of Service

Affidavit of Publication (with copy of Public Notice)

Matter of the Application

Motion for Waivers

List of Acronyms

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

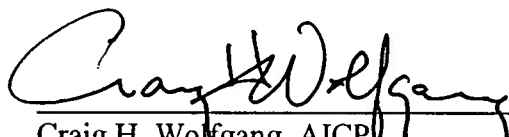
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IN THE MATTER of the Application of :
Consolidated Edison Company of New York, Inc. :
For a Certificate of Environmental Compatibility and :
Public Need Pursuant to Article VII of the Public :
Service Law for the Cedar Street Project, Westchester :
County, New York :
:
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CASE NO. 05-_____


CERTIFICATE OF SERVICE

Craig H. Wolfgang, being duly sworn, deposes and says:

That on the 31st day of October, 2005, a true and complete copy (or copies as noted) of the Article VII Application of Consolidated Edison Company of New York, Inc., for a Certificate of Environmental Compatibility and Public Need for the Cedar Street Project in Westchester County, New York, was served upon each party on the attached list by Federal Express for delivery on 1st day of November, 2005.


Craig H. Wolfgang, AICP
Manager, Environmental Permitting
TRC Environmental Corporation

Subscribed and sworn on this
31st day of October, 2005


NOTARY PUBLIC

JACQUELINE M. MCKEEVER
NOTARY PUBLIC, STATE OF NEW JERSEY
MY COMMISSION EXPIRES APRIL 5, 2007

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
CEDAR STREET PROJECT
PUBLIC SERVICE LAW ARTICLE VII APPLICATION
SERVICE LIST

State Agencies and Officials

The Honorable Jaclyn A Brilling, (10 copies)
Secretary to the Commission
NYS Public Service Commission
Three Empire State Plaza, 14th Floor
Albany, NY 12223-1350

The Honorable Nathan L. Rudgers
Commissioner
NYS Department of Agriculture and Markets
10B Airline Drive
Albany, NY 12235

The Honorable Denise M. Sheehan,
Acting Commissioner
NYS Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1011

Mrs. Margaret Duke, Environmental Permits
NYS Department of Environmental Conservation
Region 3 Office
21 South Putt Corners
New Paltz, NY 12561

The Honorable Thomas J. Madison, Jr.
Acting Commissioner
New York State Department of Transportation
50 Wolf Road
Albany, NY 12232

The Honorable Bernadette Castro
Commissioner
New York State Office of Parks, Recreation
and Historic Preservation
One Empire State Plaza, 20th Floor
Albany, NY 12238

The Honorable Randy A. Daniels
Secretary of State
New York State Department of State
41 State Street
Albany, NY 12231-0001

The Honorable Charles A. Gargano
Commissioner
Empire State Development Corporation
633 Third Avenue, 33rd Floor
New York, NY 10017-6706

NYS Assemblywoman Amy Paulin
88th Assembly District
700 White Plains Rd. Suite 252
Scarsdale, NY 10583

NYS Senator Suzi Oppenheimer
District 37
222 Grace Church Street, 3rd Floor
Port Chester, NY 10573

NYS Senator Jeff Klein
District 34
3713 East Tremont Avenue, Lower Level
Bronx, New York 10465

NYS Senator Ruth Hassell-Thompson
District 36
767 East Gunhill Road
Bronx, New York 10467

NYS Assemblyman George S. Latimer
91th Assembly District
933 Mamaroneck Avenue Suite 102
Mamaroneck, NY 10543

NYS Assemblyman J. Gary Pretlow
87th Assembly District
6 Gramatan Ave.
Mt. Vernon, NY 10550

Westchester County Representatives

The Honorable James Maisano
Westchester County Legislator - District 11
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

Mr. Salvatore J. Carrera, Director
Westchester County Office of Economic
Development
Michaelian Office Building
148 Martine Avenue, Room 901
White Plains, NY 10601-2963

The Honorable Vito Pinto
Westchester County Legislator – District 10
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

The Honorable Andrew J. Spano
Westchester County Executive
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

The Honorable Clinton I. Young, Jr
Westchester County Legislator – District 13
Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

Municipal Officials

Hon. Ernest D. Davis
Mayor
1 Roosevelt Sq, Room 107
Mount Vernon, NY 10550

Hon. Timothy C. Idoni
Mayor
City Hall, 515 North Avenue
New Rochelle, NY 10801

Hon. Michael Clain
Mayor
Pelham Village Hall
195 Sparks Avenue
Pelham NY 10803

Mr. Richard Slingerland
Village of Pelham Administrator
Pelham Village Hall
195 Sparks Avenue
Pelham, NY 10803

Libraries

Mount Vernon Central library
28 South First Ave
Mount Vernon, NY 10550

Pelham Public Library
530 Colonial Avenue
Pelham, NY 10803

New Rochelle Public Library
1 Library Plaza
New Rochelle, NY 10801

Other Interested Parties

Mr. Darrin Scalzo
Division Permit Coordinator
New York State Thruway Authority
4 Executive Boulevard
Suffern, NY 10901

Metro North Railroad
James J. Gillies, Director
Power Systems
420 Lexington Avenue
New York, New York 10017

AFFIDAVIT OF PUBLICATION
from
The Journal News

Florence Benilla being duly sworn says that he/she is the principal clerk of The Journal News, a newspaper published in the County of Westchester and State of New York, and the notice of which the annexed is a printed copy, was published in the newspaper area(s) on the date(s) below:

Note: The two-character code to the left of the run dates indicates the zone(s) that the ad was published. (See Legend below)

AS 10/20/05

Signed _____

Sworn to before me

This 24th day of October 2005

Jack L. Sharp
Notary Public, Westchester County

JACK L. SHARP
Notary Public, State of New York
No. 01SH6019087
Qualified in Rockland County
Term Expires Feb. 1, 2007

Legend:

Northern Area (AN):

Amawalk, Armonk, Baldwin Place, Bedford, Bedford Hills, Briarcliff Manor, Buchanan, Chappaqua, Crompond, Cross River, Croton Falls, Croton on Hudson, Goldens Bridge, Granite Springs, Jefferson Valley, Katonah, Lincolndale, Millwood, Mohegan Lake, Montrose, Mount Kisco, North Salem, Ossining, Peekskill, Pound Ridge, Purdys, Shenorock, Shrub Oak, Somers, South Salem, Verplanck, Waccabuc, Yorktown Heights, Brewster, Carmel, Cold Spring, Garrison, Lake Peekskill, Mahopac, Mahopac Falls, Putnam Valley, Patterson

Central Area (AC):

Ardsey, Ardsley on Hudson, Dobbs Ferry, Elmsford, Harrison, Hartsdale, Hastings, Hastings on Hudson, Hawthorne, Irvington, Larchmont, Mamaroneck, Pleasantville, Port Chester, Purchase, Rye, Scarsdale, Tarrytown, Thornwood, Valhalla, White Plains, Greenburgh

Southern Area (AS):

Bronxville, Eastchester, Mount Vernon, New Rochelle, Pelham, Tuckahoe, Yonkers

Rockland Area (JN or RK):

Blauvelt, Congers, Garnerville, Haverstraw, Hillburn, Monsey, Nanuet, New City, Nyack, Orangeburg, Palisades, Sloatsburg, Sparkill, Spring Valley, Stony Point, Suffern, Tallman, Tappan, Thiells, Tomkins Cove, West Haverstraw, West Nyack, Pearl River, Piermont, Valley Cottage, Pomona

Patent Trader (PT):

Amawalk, Armonk, Baldwin Place, Bedford, Bedford Hills, Briarcliff, Chappaqua, Cortlandt Manor, Cross River, Croton Falls, Goldens Bridge, Granite Springs, Jefferson Valley, Katonah, Lincolndale, Millwood, Mohegan Lake, Mount Kisco, North Salem, Pleasantville, Pound Ridge, Purdys, Shrub Oak, Somers, South Salem, Thornwood, Verplanck, Waccabuc, Yorktown Heights

Review Press (BVW):

Bronxville, Eastchester, Scarsdale, Tuckahoe

AFFIDAVIT OF PUBLICATION

from

The Journal News

NOTICE OF APPLICATION
BY CONSOLIDATED EDISON
COMPANY OF NEW YORK, INC.

GENERAL INFORMATION

Consolidated Edison Company of New York, Inc., ("Con Edison") intends to file an application with the New York State Public Service Commission ("NYSPPSC") for a certificate of Environmental Compatibility and Public Need under Article VII of the New York State Public Service Law authorizing the construction and operation of a new 3-mile underground electric transmission line from Con Edison's existing Washington Street Substation in the City of Mount Vernon to the existing Cedar Street Substation in the City of New Rochelle. This notice is published in accordance with the NYSPPSC regulations set forth at NYCRR Title 16 65-2.10(c). During the course of the proceeding commenced by the filing of the application, alternate routes or route segments, not presently under consideration may be offered without further notice by newspaper publication. In addition, the NYSPPSC may, without further notice by newspaper publication, approve routes for the facility that traverse municipalities other than those enumerated in this notice. A copy of the application will be served upon the chief executive officers of Westchester County, the City of Mount Vernon, the Village of Pelham, and the City of New Rochelle on the same date the application is filed with the NYSPPSC.

DESCRIPTION OF PROPOSED FACILITY

An electric underground feeder will be constructed between the Con Edison Washington Street and Cedar Street Substations. The feeder will consist of three-phase copper conductor-solid dielectric 138 kV insulated cable circuit housed in a buried duct bank. The duct bank will be designed to have spare capacity to allow for future installation of an additional feeder to support expected area load growth. A new transformer will be installed at the 138/13 kV Cedar Street Substation in the City of New Rochelle. Equipment required to support the new underground feeder will be added at both substations.

PREFERRED UNDERGROUND ROUTE

The preferred route originates in the City of Mount Vernon at Con Edison's Washington Street Substation. The underground feeder will exit the substation on Hartford Avenue and continue east along Hartford Avenue to South Columbus Avenue, proceed north on South Columbus Avenue for a short distance, then continue east along Beechwood Avenue. The route turns north at Bradford Road, passing underneath the New Haven Line of the Metro North Railroad and entering Wilson Woods Park. The route continues northeast through the park on Wilson Woods Park Road, turning east at Lincoln Avenue, crossing the Hutchinson River Parkway Bridge and Hutchinson

River, into the Village of Pelham, and continues east along Lincoln Avenue passing into the City of New Rochelle and proceeding to the intersection with North Avenue. East of North Avenue, Lincoln Avenue becomes Manor Place. The route continues east on Manor Place turning south on The Circle, traveling around the Great Lawn, and turning south across vacant NYS Thruway property. The route continues southeast crossing both the southbound exit and entrance lanes of New England Thruway (I-95) at Interchange 16, passes under the New England Thruway and under the New Haven Line of the Metro North Railroad to the intersection of Commerce Drive and Cedar Street. The route turns west along Commerce Drive into the walled property of the Cedar Street Substation. The 3.0 miles of underground transmission line will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. Alternative routes have also been evaluated in the application.

DATE OF APPLICATION (FILING)
Con Edison expects to file an Article VII Application with the NYSPPSC on or about October 31, 2005. Copies of the Application will be available for public inspection during normal business hours at the Mount Vernon Central Library, 28 South First Avenue, Mount Vernon, NY 10550; the Pelham Public Library, 530 Colonial Avenue, Pelham, NY 10803; the New Rochelle Public Library, 1 Library Plaza, New Rochelle, NY 10801; and the New York State Department of Public Service offices in Albany at the Department of Public Service Central Files, 14th Floor, Three Empire State Plaza, Albany, New York, New York 12223. For more information or assistance concerning the application, interested person may contact Eric M. Dessan, Associate Counsel, Consolidated Edison Company of New York, Inc., 4 Irving Place, New York, NY 10003 at 212

AFFIDAVIT OF PUBLICATION

from

The Journal News

STATE OF NEW YORK
COUNTY OF WESTCHESTER

Northern Area

Armonk	North Salem
Armonk	Ossining
Baldwin Place	Peekskill
Bedford	Pound Ridge
Bedford Hills	Purdys
Branciff Manor	Shenock
Buchanan	Shrub Oak
Chappaqua	Somers
Crompond	South Salem
Cross River	Verplanck
Croton Falls	Waccabuc
Croton on Hudson	Yorktown Heights
Goldens Bridge	Brenster
Granite Springs	Camel
Jefferson Valley	Cold Spring
Katonah	Garrison
Lincolndale	Lake Peekskill
Millwood	Mahopac
Mohegan Lake	Mahopac Falls
Montrose	Puram Valley
Mount Kisco	Patterson

Central Area

Day	Pleasantville
Day on Hudson	Port Chester
Dobbs Ferry	Purchase
Elmsford	Rye
Greenburgh	Scarsdale
Harrison	Tarrytown
Hartsdale	Thornwood
Hawthorne	Valhalla
Ivington	White Plains
Larchmont	Hastings on Hudson
Mamaroneck	

Southern Area

Mount Vernon	Eastchester
Yonkers	New Rochelle
Tuckahoe	Pelham
Bronxville	

Rockland Area

Suffern	Pomona
Blauvelt	Stearnsburg
Congers	Sparkill
Garnerville	Spring Valley
Haverstraw	Stony Point
Hilborn	Tallman
Nanuet	Tappan
New City	Theris
Rock	Tomkins Cove
Saugerties	Valley Cottage
Paisades	West Haverstraw
Pearl River	West Nyack
Pierson	

Florence Bunilla

being

duly sworn, says that he/she is the principal clerk of The Journal News, a newspaper published in the County of Westchester and State of New York, and the notice of which the annexed is a printed copy, was published in the newspaper indicated on the left and on the dates checked below:

Year <u>2005</u>																	
Oct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	19	20	21	22	23	24	25	26	27	28	29	30	31				

Signed

LB

Sworn to before me

this 28th day of October 20 05

Lola M. Hall

Notary Public, Westchester County

LOLA M. HALL
NOTARY PUBLIC, STATE OF NEW YORK
NO. 01HA6112693
QUALIFIED IN WESTCHESTER COUNTY
TERM EXPIRES JULY 6, 2008

**NOTICE OF APPLICATION
BY CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.**

GENERAL INFORMATION

Consolidated Edison Company of New York, Inc., ("Con Edison") intends to file an application with the New York State Public Service Commission ("NYSPSC") for a certificate of Environmental Compatibility and Public Need under Article VII of the New York State Public Service Law authorizing the construction and operation of a new 3-mile underground electric transmission line from Con Edison's existing Washington Street Substation in the City of Mount Vernon to the existing Cedar Street Substation in the City of New Rochelle. This notice is published in accordance with the NYSPSC regulations set forth at NYCRR Title 16 § 85-2.10(c). During the course of the preceding commenced by the filing of the application, alternate routes or route segments, not presently under consideration may be offered without further notice by newspaper publication. In addition, the NYSPSC may, without further notice by newspaper publication, approve routes for the facility that traverse municipalities other than those enumerated in this notice. A copy of the application will be served upon the chief executive officers of Westchester County, the City of Mount Vernon, the Village of Pelham, and the City of New Rochelle on the same date the application is filed with the NYSPSC.

DESCRIPTION OF PROPOSED FACILITY

An electric underground feeder will be constructed between the Con Edison Washington Street and Cedar Street Substations. The feeder will consist of three-phase copper conductor solid dielectric 138 kV insulated cable circuit housed in a buried duct bank. The duct bank will be designed to have spare capacity to allow for future installation of an additional feeder to support expected area load growth. A new transformer will be installed at the 138/13 kV Cedar Street Substation in the City of New Rochelle. Equipment required to support the new underground feeder will be added at both substations.

PREFERRED UNDERGROUND ROUTE

The preferred route originates in the City of Mount Vernon at Con Edison's Washington Street Substation. The underground feeder will exit the substation on Hartford Avenue and continue east along Hartford Avenue to South Columbus Avenue, proceed north on South Columbus Avenue for a short distance, then continue east along Beechwood Avenue. The route turns north at Bradford Road, passing underneath the New Haven Line of the Metro North Railroad and entering Wilson Woods Park. The route continues northeast through the park on Wilson Woods Park Road, turning east at Lincoln Avenue, crossing the Hutchinson River Parkway Bridge and Hutchinson River, into the Village of Pelham, and continues east along Lincoln Avenue passing into the City of New Rochelle and proceeding to the intersection with North Avenue. East of North Avenue, Lincoln Avenue becomes Manor Place. The route continues east on Manor Place turning south on The Circle, traveling around the Great Lawn, and turning south across vacant NYS Thruway property. The route continues southeast crossing both the southbound exit and entrance lanes of New England Thruway (I-95) at Interchange 16, passes under the New England Thruway and under the New Haven Line of the Metro North Railroad to the intersection of Commerce Drive and Cedar Street. The route turns west along Commerce Drive into the walled property of the Cedar Street Substation. The 3.0 miles of underground transmission line will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. Alternative routes have also been evaluated in the application.

DATE OF APPLICATION FILING

Con Edison expects to file an Article VII Application with the NYSPSC on or about October 31, 2005. Copies of the Application will be available for public inspection during normal business hours at the Mount Vernon Central Library, 28 South First Avenue, Mount Vernon, NY 10550, the Pelham Public Library, 530 Colonial Avenue, Pelham, NY 10803, the New Rochelle Public Library, 1 Library Plaza, New Rochelle, NY 10801, and the New York State Department of Public Service offices in Albany at the Department of Public Service Central Files, 14th Floor, Three Empire State Plaza, Albany, New York, New York 12223. For more information or assistance concerning the application, interested person may contact Eric M. Dessen, Associate Counsel, Consolidated Edison Company of New York, Inc., 4 Irving Place, New York, NY 10003 at 212 460-4889.

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

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IN THE MATTER of the Application of :
Consolidated Edison Company of New York, Inc. :
for a Certificate of Environmental Compatibility and :
Public Need Pursuant to Article VII of the Public :
Service Law for the Cedar Street Project, :
Westchester County, New York :

CASE NO. 05-_____

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APPLICATION

Pursuant to Public Service Law § 122 and its implementing regulations at 16 NYCRR § 85-2.8, Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Applicant") makes application under Article VII of the Public Service Law for a Certificate of Environmental Compatibility and Public Need to construct and operate a maximum of two feeders within a new underground electric transmission line and ancillary equipment, including new 138/13.8 kV transformers at two area substations in Westchester County, New York (the "Cedar Street Project" or the "Project").

Description of the proposed facility. One feeder will be constructed immediately and will consist of a three-phase, single copper conductor solid dielectric 138 kV insulated cable circuit housed within a single buried duct bank (Phase I). The transmission line for the feeders, approximately 3 miles long, will be located in southeastern Westchester County, New York connecting Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with its 138/13.8 kV Cedar Street Substation in the City of New Rochelle. The duct bank will be designed with spare capacity to allow for future installation of an additional feeder to support expected long-term area load growth (Phase II). Equipment required to accommodate the new feeders will be added at both the Washington Street and Cedar Street Substations, including the immediate installation of a third transformer and associated equipment

(a circuit switcher, potheads, and switchgear) at the Cedar Street Substation to accommodate the proposed Phase I feeder. An additional transformer and associated equipment will be installed at the Cedar Street Substation at such time as the Phase II feeder is determined necessary to serve area load growth.

Statement of the location of the proposed site or right-of-way. Con Edison seeks authority to construct and operate a new electric transmission line extending from Con Edison's existing Washington Street Substation in the City of Mount Vernon to its existing Cedar Street Substation in the City of New Rochelle, Westchester County, New York. A detailed description of the proposed route and location of the Washington Street and Cedar Street Substations is set forth in Exhibit 2 of the Application. The proposed transmission line is approximately 3.0 miles in length and will be installed primarily within the curb-to curb portion of the rights-of-way of public roadways. The substation improvements required in support of the new transmission line will be completed within the existing fence and property lines of the Washington Street and Cedar Street Substations.

Summary and description of the Project's environmental impact studies. TRC

Environmental conducted environmental studies and impact assessments related to Project construction and operation on behalf of the Applicant. The subject matters covered include land uses, aesthetic and visual resources, cultural resources, terrestrial ecology and wetlands, topography and soils; water resources, traffic, noise, security and emergency services, communications, and transmission electromagnetic fields. The findings of these studies are presented in Exhibits 4, E-5, and E-6 of the Application. The studies find that the Project's construction and operation will have minimal impact on the environment and to residents of Westchester County, the Village of Pelham, and the Cities of Mount Vernon and New Rochelle.

Need for the proposed facility. The Cedar Street Project is designed to meet both near-term and anticipated long-term electric load growth in southern Westchester County. Based upon Con Edison's most recent electrical load projections, the potential exists for development of a 6-megawatt overload, during first contingency conditions, on the remaining Cedar Street transformer as early as summer 2007. This projected overload condition at Cedar Street, if left uncorrected, would threaten network reliability in southeastern Westchester County and Con Edison's residential, business, and institutional customers served by the Cedar Street Substation. Moreover, there are significant construction projects currently underway or planned for the area beyond 2005, including two new buildings under construction at the Iona College campus in the City of New Rochelle, a proposed new high school, also in the City of New Rochelle, and various planned major residential/commercial developments in the City of New Rochelle. These anticipated projects would substantially increase electric load in southeastern Westchester and further strain existing electrical supply facilities. Construction and operation of the Project will allow Con Edison to meet expected load growth in southeastern Westchester County. A detailed description of the engineering and economic justification for the Project is contained in Exhibits 6 and E-4 of the Application.

Description of any reasonable alternate locations or routes for the Project. A detailed discussion of the route selection process for the Project is provided in Exhibit 3 of the Application. Exhibit 3 provides a description of the comparative merits of various routes and sites considered, and reviews alternative technologies. Exhibit 3 also considers a no-action alternative and the feasibility of demand-side management and distributive generation. The route alternatives analysis considered: the location of existing substation facilities and the desire to maintain a direct route between the Washington and Cedar Street Substations along existing public roadway rights-of-way to minimize the number of bends and manholes along the final route; a desire to avoid constructibility issues that would result in the need for specialized construction methods; a desire to minimize work within major transportation corridors; and a

route that minimized, to the extent practicable, temporary disruption to sensitive land uses (e.g., schools, hospitals). Exhibit 3 establishes a detailed basis for the determination that the selected route of the transmission line is best-suited for the Project.

Other relevant information. Exhibit 7 of the Application provides information on local ordinances and requests the Commission to grant waivers of specified provisions of those local ordinances, which the Applicant believes would be unduly restrictive if applied to the Project.

WHEREFORE, Consolidated Edison Company of New York, Inc. respectfully requests that the Public Service Commission issue an order pursuant to Article VII of the Public Service Law granting:

1. A Certificate of Environmental Compatibility and Public Need for the proposed Cedar Street Project as herein described; and
2. Such other and further authorizations, consents, permission, and approvals as may be necessary for the construction, operation, and maintenance of the facilities herein proposed, including, but not limited to, the waivers of local ordinances described in Exhibit 7 of the Application.

Dated: October 31, 2005

Respectfully submitted,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By: 

Eric M. Dessen, Esq.
Associate Counsel
4 Irving Place
New York, New York 10003
(212) 460-4889

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

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IN THE MATTER of the Application of :
Consolidated Edison Company of New York, Inc. :
for a Certificate of Environmental Compatibility and :
Public Need Pursuant to Article VII of the Public :
Service Law for the Cedar Street Project, :
Westchester County, New York :

CASE NO. 05-_____

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**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.'S MOTION FOR
WAIVERS OF APPLICATION REQUIREMENTS**

Pursuant to 16 NYCRR § 85-2.4, and as part of its filing for a Certificate of Environmental Compatibility and Public Need for the Cedar Street Project, Consolidated Edison Company of New York, Inc. (the "Applicant") respectfully requests that the Commission waive or modify applicability of the following sections of the Commission's regulations relating to information to be included in an application filed pursuant to Public Service Law Article VII.

16 NYCRR § 86.3(a)(1)(i): Submit detailed maps, drawings and explanations for the proposed right-of-way covering an area of at least five miles on either side of the proposed facility location.

The Applicant requests a modification of the requirement to submit detailed maps, drawings, and explanations, including New York State Department of Transportation ("NYSDOT") 1:24,000 scale maps showing the proposed right-of-way covering an area of at least five miles on either side of the proposed facility location. As set forth in the Application, the Project consists of a short length (approximately 3.0 miles) of transmission line extending from the existing Washington Street Substation to the existing Cedar Street Substation in Westchester County. Given that the new transmission line will be located entirely underground

and that the substation improvements required in support of the new transmission line will be completed within the existing fence and property lines of the Washington Street and Cedar Street Substations, the Applicant requests that the Commission modify the requirements of § 86.3(a)(1) and allow the Applicant to provide NYSDOT maps, drawings and explanations for the proposed rights-of-way and substation facilities covering an area of one mile on either side of the Project components.

16 NYCRR § 86.3(a)(1)(iii): Submit detailed maps, drawings and explanations for known archaeologic, geologic, historical or scenic area, park or untouched wilderness on or within three miles of the right-of-way.

The Applicant requests a modification of the requirement to submit detailed maps, drawings, and explanations relating to any "known archaeologic, geologic, historical, or scenic area, park, or untouched wilderness on or within three miles of the right-of-way." As set forth in the Application, the proposed transmission line will be located entirely underground along existing roadway rights-of-way. The proposed substation improvements required in support of the new transmission line will be completed within the existing fence and property lines of the Washington Street and Cedar Street Substations. Consequently, the Applicant requests that the Commission reduce the § 86.3(a)(1)(iii) three-mile radius to a radius within one mile of the Project rights-of-way.

16 NYCRR § 86.3(a)(2): Submit detailed maps, drawings and explanations for the right-of-way of the proposed facilities, including NYSDOT maps showing the relationship of the proposed facility to the Applicant's overall system.

The Applicant requests a waiver of the requirement to submit detailed maps, drawings, and explanations, including NYSDOT 1:250,000 scale maps showing the relationship of the proposed facility to the Applicant's overall system. Given the limited impact and short

distance of the Project's proposed transmission line and given that the interface of the proposed facilities with the existing Con Edison transmission system is limited to the interconnection at the existing Washington Street and Cedar Street Substations, which are clearly shown in Figure 2-1 of the Application, the Applicant requests that the Commission waive the requirement of § 86.3(a)(2).

16 NYCRR § 86.3(b)(2): Submit detailed maps, drawings and explanations for the right-of-way of the proposed facilities, including aerial photographs of urban areas and urbanizing fringe areas taken within six months of the date of filing.

The Applicant requests a waiver of the requirement to submit detailed maps, drawings, and explanations for the rights-of-way of the proposed facilities, including aerial photographs of urban areas and urbanizing fringe areas taken within six months of the date of filing. The timing of the engineering design of the Project has resulted in the unavailability at the date of Application filing of confirmed current (i.e., within six months of date of filing) aerial photography for the project's preferred route. The Applicant has substituted for this photography, 0.5-foot ground resolution orthophotographs, dated 2004, obtained from the New York State GIS Clearinghouse. The Applicant believes that due to the fact that the entire route of the proposed transmission corridor is located within existing public roadway rights-of-way, which are developed with urban/suburban development that pre-date the six month period prior to the submittal of this application, that the substituted aerial photography obtained from the New York State GIS Clearinghouse is sufficiently recent to meet the Commission's needs for its review of the Application. Accordingly, Applicant requests that the Commission waive the six-month requirement of § 86.3(b)(2) with respect to this portion of the Application's aerial photography.

16 NYCRR §§ 86.6(b) and (c). Submit design, profile and architectural drawings and descriptions, including material of construction, color and finish; and a profile of the centerline of the right-of-way at exaggerated vertical scale.

The Applicant requests a waiver of the requirement that (i) design drawings and descriptions of the material of construction, color and finish of proposed structures and (ii) a profile of the centerline right-of-way for the route of the proposed transmission line be submitted upon filing of the Application. Final details with respect to the Project's transmission line right-of-way centerline are not yet complete. Moreover, the limited substation improvements required in support of the new transmission line will be completed within the existing fence and property lines of the Washington Street and Cedar Street Substations. The Applicant intends to provide these design details for the new transmission line and required substation improvements to the Commission for review and approval in the Project's Environmental Management and Construction Plan. Accordingly, the Applicant seeks a waiver of the provisions of §§ 86.6(b) and (c) that require the submittal of this final engineering design information upon filing of the Application.

16 NYCRR § 88.4(a)(4): Provide appropriate system studies, showing expected flow on the line under normal, peak and emergency conditions, including effects on stability of the interconnected system.

The Applicant requests a waiver of the requirement to provide appropriate system studies, showing expected flows on the transmission line under normal, peak and emergency conditions, including effects on stability of the interconnected system. Con Edison believes that system power flow studies for the Cedar Street Project are unnecessary. As reflected in the Application and, more specifically, as reflected in Exhibit E-4 and Table E-4.1, the proposed Cedar Street 3rd transformer will only be supplied from one of the existing 138 kV radial feeders which runs from Dunwoodie North 138 kV substation to the Washington Street area

substation Loading on the feeder which will supply the Cedar Street 3rd transformer will depend entirely on the load served by the Cedar Street substation, i.e., each feeder will supply one-third of the substation load during normal conditions and one-half of the load during first contingency (emergency) conditions. Given the radial supply of the proposed 3rd transformer installation at the Cedar Street area substation from the existing Dunwoodie North 138 kV substation, power will always flow unidirectionally from the Dunwoodie North substation to the Cedar Street substation. Consequently, with no other source of flow, there are no system impacts, and feeder and substation transformer flows can be easily calculated from the load supplied by Cedar Street.

The Cedar Street substation presently supplies the Cedar Street load area. As indicated in Table E-4.1 of the Application, without the proposed Project, the Cedar Street area substation will exceed its emergency rating during peak load and first contingency conditions, affecting the supply of the load area beginning in 2007. With the proposed Project, the capability of the Cedar Street substation will be increased to eliminate the potential substation overload. Thus the Cedar Street Project will have no overall effect on system loads. Consequently, the Applicant requests that the Commission waive the system studies requirement of § 88.4(a)(4) and utilize the information currently provided in the Application and supporting exhibits.

Dated: October 31, 2005

Respectfully submitted,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

By: 

Eric M. Dessen, Esq.
Associate Counsel
4 Irving Place
New York, New York 10003
(212) 460-4889

LIST OF ACRONYMS

°F	temperature, degrees Fahrenheit
μT	microTesla
AC	Alternating current
ACGIH	American Conference of Governmental Industrial Hygienists
ADT	Average Daily Traffic
AEIC	Association of Edison Illuminating Companies
ALAI	American Indian Archaeological Institute
APE	Area of Potential Effect
Applicant	Consolidated Edison Company of New York, Inc.
ASTM	American Society of Testing and Materials
B	Magnetic flux densities
BMPs	Best Management Practices
BMPP	Best Management Practices and Procedures
CHP	Combined Heat and Power
ConEd	Consolidated Edison Company of New York, Inc.
Con Edison	Consolidated Edison Company of New York, Inc.
Commission	New York State Public Service Commission
CSWPP	Construction Storm Water Pollution Prevention Plan
dB(A)	decibels, A-weighted scale
DEC	Department of Environmental Conservation
DC	Direct current
DOT	Department of Transportation
DPS	Department of Public Service
DSM	Design Side Management
EH&S	Environmental, Health and Safety
EM&CP	Environmental Management and Construction Plan
EMF	Electric and Magnetic Fields
EPRI	Electric Power Research Institute
FHWA	Federal Highway Administration
FRE	Fiberglass Reinforced Epoxy
G	gauss
gpm	gallons per minute
HUD	U. S. Department of Housing and Urban Development
ICEA	Insulated Cable Engineers Association

ICNIRP	International Commission on Non-Ionizing Radiation Protection
km	Kilometers
kV	Kilovolts
LIPA	Long Island Power Authority
LOS	Level of Service
mG	milligauss
MPB	Multi Point Bonding
MSL	Mean Sea Level
MTA	Metro Transit Authority
MVA	Megavolt-Ampere
MW	Megawatts
NAGPRA	Native American Graves Protection and Repatriation Act
NEC	National Electric Code
NESC	National Electrical Safety Code
NHPA	National Historic Preservation Act
NRE	National Register Eligible
NRL	National Register Listed
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NYCRR	New York Code of Rules and Regulations
NYISO	New York Independent System Operator's
NYPA	New York Power Authority
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYSERDA	New York State Energy Research and Development Authority
NYSM	New York State Museum
NYSMUTCD	New York State Manual on Uniform Traffic Control Devices
NYSPSC	New York State Public Service Commission
NYSRHP	New York State Register of Historic Places
NYSTA	New York State Thruway Authority
O&M	Operation and Maintenance
OCHSO	Onsite Construction Health and Safety Officer
OPRHP	Office of Parks, Recreation, and Historic Preservation
PSL	Public Service Law
ROW	right-of-way
SBC	System Benefits Charge
SESC	Soil Erosion and Sediment Control Plan
SHPA	State Historic Preservation Act

SHPO	State Historic Preservation Office
SOP	Standard Operating Procedure
SPB	Single Point Boding
SPCC	Spill Prevention Control and Countermeasure Plan
SPDES	State Pollutant Discharge Elimination System
SPHINX	State Preservation Historic Information Network
State	State of New York
SWPP	Storm Water Pollution Prevention Plan
T	Tesla
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Department of the Interior's Fish and Wildlife Service
V	Volt
VRAP	Visual Resources Assessment Procedure
WCIHP	Westchester County Inventory of Historic Places
WCDOPW	Westchester County Department of Public Works
XLPE	cross-link polyethylene

Exhibit 1
General Information

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit 1

**General Information
Regarding Application**

EXHIBIT 1: GENERAL INFORMATION REGARDING APPLICATION

This Exhibit addresses the requirements of 16 NYCRR §86.2.

1. The name of the Applicant is:

Consolidated Edison Company of New York, Inc.

2. The Applicant's Address is:

4 Irving Place
New York, NY 10003

3. The Applicant's telephone number is:

(212) 460-4600

4. The principal officer of the Applicant is:

Mr. Kevin Burke
Chief Executive Officer
Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

5. Documents and correspondence are to be served upon:

Eric M. Dessen, Esq.
Associate Counsel
Consolidated Edison Company of New York, Inc.
4 Irving Place, Room 1810-S
New York, New York 10003
Tel: 212-460-4889

and

Mr. Jim Shannon
Project Manager
Consolidated Edison Company of New York, Inc.
Substations Operation Planning
1610 Matthews Avenue, Room 302
Bronx, New York 10462
Tel: 718-904-4839

6. Project Milestones:

October 2005: Article VII Application filing

March 2006: Anticipated Issuance of Certificate of Environmental Compatibility
and Public Need

June 2006: Commencement of Construction

May 2007: Completion of Construction

Exhibit 2
Location of Facilities

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit 2

Location of Facilities

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EXHIBIT 2: LOCATION OF FACILITIES

This Exhibit addresses the requirements of 16 NYCRR §86.3.

2.1 General Description of Facility Location

Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Applicant") is proposing to construct an approximate 3.0-mile, 138 kV underground transmission line in southeastern Westchester County, New York, connecting Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with its 138/13.8 kV Cedar Street Substation in the City of New Rochelle (the "Project"). The single transmission line will contain a maximum of two feeders.

The first feeder will be constructed immediately and will consist of a three single-phase copper conductor solid dielectric 138 kV insulated cable circuit within a buried duct bank (Phase I). The duct bank will be designed with spare capacity to allow for future installation of an additional feeder to support expected area load growth (Phase II). Equipment required to accommodate the new transmission lines will be added at both the Washington Street and Cedar Street Substations, including installation of a third transformer and associated equipment (a circuit switcher, potheads and switchgear) at the Cedar Street Substation to accommodate the proposed Phase I feeder. An additional circuit switcher and pothead will also be installed at the Cedar Street proposed 138 kV feeder position to serve an anticipated Metro-North substation. An additional transformer will be installed at the Cedar Street Substation at such time as the Phase II feeder is determined necessary to serve area load growth. This new work will be completed within the existing fence and property lines of the Washington Street and Cedar Street Substations.

The proposed route of the Project will be located primarily within the curb-to-curb portion of the rights-of-way of public roadways. As a consequence, there will be a limited need to acquire additional easements or rights-of-way for the Project. Con Edison is in discussions with the New York State Thruway Authority ("NYSTA") for the installation of the transmission line within property under control of the NYSTA in the vicinity of the Cedar Street Substation.

2.1.1 Proposed Transmission Route

The Project's transmission line will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. The proposed route for the transmission line begins at Con Edison's Washington Street Substation and heads east along Hartford Avenue for a distance of approximately 1,300 feet to the intersection with South Columbus Avenue. The route continues north along South Columbus Avenue, for approximately 100 feet to the intersection with Beechwood Avenue. At Beechwood Avenue, the route turns east and continues for a distance of approximately 1,300 feet to the intersection of Bradford Road. At Bradford Road the route travels northeast for approximately 200 feet and passes underneath the New Haven Line of the

Metro-North Railroad and enters Wilson Woods Park. The route continues northeast through the park along Wilson Woods Park Road for approximately 2,200 feet to the intersection of Lincoln Avenue. At Lincoln Avenue the route continues east, crossing the Hutchinson River Parkway Bridge and Hutchinson River, and continues east along Lincoln Avenue for approximately 7,600 feet to the intersection with North Avenue. East of North Avenue, Lincoln Avenue becomes Manor Place. The route continues northeast through the North Avenue intersection onto Manor Place for approximately 500 feet to The Circle. The route travels south for approximately 350 feet along The Circle then intersects Manhattan Avenue. On Manhattan Avenue, the route turns northeast for approximately 575 feet and veers south onto vacant NYSTA property, adjacent to a the southbound exit lane of Interchange 16 of the New England Thruway (I-95). The route continues southeast for approximately 1,300 feet, crossing both southbound exit and entrance lanes of the Thruway and passes under the 8-lane New England Thruway overpass and under Metro-North's New Haven Line (which is also used by Amtrak between New Rochelle and New Haven) to the intersection of Commerce Street and Cedar Street, at which point the route turns south and continues along Commerce Street for approximately 125 feet to the gated driveway leading into the walled Cedar Street Substation.

The transmission line duct bank will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed feeder will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, the proposed transmission line may be located within the sidewalk of the existing parkway bridge.

Due to limitations on the continuous available length of solid dielectric cable, manholes will be installed approximately every 1,500 to 2000 feet along the route. The manholes will serve as locations for pulling the solid dielectric cable through the individual conduits and for splicing the cable. The manholes will be underground structures approximately 18 feet long by 8 feet wide, accessible via two manholes and set flush to grade. The precise placement of each manhole will be determined as part of the final design of the transmission lines.

2.1.2 Washington Street Substation

The existing Washington Street Substation is located on an approximate one-acre site located at the northeast intersection of Hartford Avenue and Lyons Place, south of Washington Street and approximately 800 feet south of the Metro-North Railroad in the City of Mount Vernon, Westchester County. The substation will accommodate a new 138 kV transmission line within the existing fence line of the substation property.

2.1.3 Cedar Street Substation

The Cedar Street Substation is located on an approximate two-acre site adjacent to the New Haven Line of the Metro-North Railroad and approximately 500 feet east of Interchange 16 of the New England Thruway. The substation will accommodate the new 138 kV transmission line and new 138-13.8 kV Transformer No. 3 within the existing walled substation property.

2.2 Location Map

The general location of the transmission facilities rights-of-way and the two substations, including alternative routes considered, are shown on Figure 2-1, which provides a New York State Department of Transportation ("NYSDOT") 1:24,000 scale map of the Project area. Due to the short length of the transmission facilities (approximately 3.0 miles for the preferred route and 3.5 miles for the alternative route), and considering that the proposed line will be underground, Con Edison has requested that the New York State Public Service Commission (the "Commission" or "NYSPSC") (i) waive the applicability of 16 NYCRR §86.3 (a)(1)(i), which requires the Applicant to provide a NYSDOT map covering an area of at least five miles on either side of the facility locations, and (ii) allow Con Edison to provide a NYSDOT map covering an area within one mile on either side of the proposed transmission line route. The NYSDOT map (Figure 2-1) has been used to identify:

- (1) the location of the facilities rights-of-way;
- (2) where the construction of the facility would necessitate permanent clearing or other changes to the topography, vegetation or man-made structures; and
- (3) known, geologic, historic or scenic areas, parks or untouched wilderness on or within one mile of the rights-of-way. Areas of known archeological resources are not shown to protect these sensitive areas.

Minimal permanent clearing will be required since the proposed transmission line will be located primarily within existing roadway and rights-of-way. The crossing of the Hutchinson River and the Hutchinson River Parkway will not require any clearing as the proposed transmission line at this crossing will be located within the existing parkway bridge that crosses both the roadway and the river. A small amount of permanent clearing may be required for that portion (approximately 150 feet) of the transmission route located between the southbound exit ramp of Interchange 16 of the New England Thruway and Manhattan Avenue in the City of New Rochelle. The proposed transmission line will not affect existing man-made structures. No significant permanent changes in topography will result from installation of the transmission line.

Figure 2-1 also identifies historic sites and parks within one mile of the proposed electric transmission route and the alternative routes addressed in this Application.

Since the transmission line will be located underground and the Washington Street and Cedar Street Substations are well-screened and located in commercial (Cedar Street Substation) and industrial (Washington Street Substation) areas, visual impacts to historic sites and parks will not occur. A Phase 1A cultural resources report has been prepared to identify areas of potential archeological resources based on the location of known and documented archeological sites. The Phase 1A report concluded that construction of the Project would have no impact on cultural resources or properties listed in the State or National Register of Historic Places. To provide for the protection of any unknown archeological resources, the Applicant has developed an Unanticipated Discovery Plan as part of its Phase 1A cultural resources survey (see Appendix D) to provide for the identification, protection and documentation of any archeological resources discovered during construction.

Again, due to the short length of the transmission line (approximately 3.0 miles), Con Edison has also requested that the Commission waive the applicability of 16 NYCRR §86.3(a)(2) requiring an Applicant to provide a NYSDOT 1:250,000 scaled map. The interface of the proposed facilities with the existing transmission system is limited to the interconnection at the existing Washington Street and Cedar Street Substations, which is clearly shown on Figure 2-1.

2.3 Aerial Photographs

Con Edison has also requested that the Commission (i) waive the applicability of 16 NYCRR §86.3(b)(2), which requires the Applicant to submit detailed maps, drawings, and explanations for the rights-of-way of the proposed facilities, including aerial photographs of urban areas and urbanizing fringe areas *taken within six months of the date of filing*. Con Edison has included with this Application orthophotographs of the Project area that were taken in 2004 and obtained from the New York State GIS Clearinghouse. The Applicant believes that this substituted aerial photography for the urban landscape is sufficiently recent to meet the Commission's needs for its review of the Application.

Figures 2-2 and 2-3a through 2-3d provide aerial photography of the Project area reflecting current conditions along the preferred and alternative transmission routes. Figure 2-2 is an overview of the entire Project area at an approximate scale of 1 inch = 1,500 feet, which includes the substation locations, the preferred and alternative transmission lines, and the area within one mile of the Project. Figures 2-3a through 2-3d provide the same aerial photography at an approximate scale of 1 inch = 400 feet and show: 1) where the construction of the facilities would necessitate permanent clearing within the rights-of-way, vegetation or man-made structures; 2) the location of access and maintenance roads; 3) proposed temporary construction easement areas; and 4) the location of the facilities on the rights-of-way.

As described above, no permanent clearing will be required to facilitate the installation of the proposed transmission line within road rights-of-way, or subsequent equipment at the substations. In the event directional drilling becomes the preferred option for crossing the Hutchinson River, some areas of clearing will be required. No significant permanent changes in topography will result from installation of the transmission facilities.

2.4 Supplemental Right-of-Way Information

The proposed electric transmission line will originate at the Washington Street Substation and terminate at the Cedar Street Substation. Upon leaving Con Edison's property, the transmission route will be located within public rights-of-way along Hartford Avenue, South Columbus Avenue, Washington Street, Beechwood Avenue, Bradford Road, Lincoln Avenue, Manor Place, The Circle, Manhattan Avenue, Cedar Street and Commerce Street. No private property will be crossed or required for the proposed transmission line.

Con Edison has solicited comments from the NYSTA to obtain permission to locate a portion of the transmission feeder within the area of Interchange 16 of the New England Thruway.

The construction contractor will identify and lease temporary construction storage areas in the vicinity of the Project. Additional staging in support of daily construction activities will occur within the street right-of-way in the immediate vicinity of the current construction activity.

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Exhibit 3

Alternatives

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EXHIBIT 3: ALTERNATIVES

This Exhibit addresses the requirements of 16 NYCRR §86.4.

3.1 Introduction

Public Service Law §122.1(e) requires that an application include “a description of any reasonable alternative locations or routes for the facility” (emphasis added). The 3.0-mile preferred route for the Cedar Street 138 kV electric transmission line is described in detail in Exhibit 2 of this Application. Con Edison also evaluated a major route alternative between the Washington Street and Cedar Street Substations, as well as several route variations along the preferred route.

Selection of the preferred route was based upon the establishment of a preferred right-of-way connecting to the Washington Street and Cedar Street Substations. Although alternative routes were considered, the selected route is preferred because it: 1) makes extensive use of existing rights-of-way; 2) does not require the acquisition of new rights-of-way from private property owners; and 3) avoids disturbance of natural habitat and the need for significant clearing of vegetation.

3.2 Alternative Transmission Line Technologies

The proposed Phase I 138 kV underground feeder will consist of three single-phase cables. Each cable will consist of a copper conductor with a cross-sectional area of 1,500,000 circular mils (1,500 kcmil), cross-linked polyethylene insulation, a metallic sheath to prevent water and moisture migration into the conductor, and a polyethylene outer jacket. The total outer diameter of each cable will be approximately 3 ½ inches. In addition, spare conduits will be installed for a future feeder (Phase II) that will run from Washington Street to Cedar Street. A concrete duct bank consisting of eight 6-inch diameter, fiberglass reinforced epoxy (“FRE”) conduits and two smaller polyethylene conduits for control wiring will be installed. Con Edison considered only underground transmission lines because: 1) underground lines are consistent with this type of line and voltage in Westchester County; 2) underground lines substantially minimize any environmental and visual impacts as compared to overhead facilities; and 3) underground lines significantly increase the reliability of these circuits by avoiding exposure to high winds and ice.

Consideration was also given to other cable technologies, including high-pressure fluid-filled pipe-type and low-pressure fluid-filled cables for the 138 kV transmission lines. These alternative technologies were rejected because of: 1) the potentially more significant environmental impacts associated with their use, including the potential for accidental spills or

leaks of the dielectric fluid used in these types of cable; and 2) the increased maintenance required for these technologies.

3.3 Consideration of Alternative Routes

In the urbanized project area between the Washington Street Substation and the Cedar Street Substation, almost every roadway represents a potential routing opportunity for an underground electric transmission line. To identify and evaluate potential alternative routes, consideration was given to specific constraints that would preclude or significantly hinder construction and maintenance of the proposed 138 kV transmission line. Within the project area, the most obvious constraints when evaluating direct routes between the two substations include: 1) the MetroNorth and Amtrak railroad corridors; 2) the New England Thruway; and 3) the Hutchinson River and Parkway. These major transportation corridors define the routing opportunities for the proposed transmission line, and routes that make use of existing roadway crossings were considered preferable to those routes that required new easements and specialized construction techniques (i.e., horizontal boring or directional drilling) to install the required duct bank.

The following sections identify the route evaluation criteria that were used to determine the preferred route and describe the major route alternatives and smaller route variations that were identified and evaluated.

3.3.1 Route Evaluation Criteria

The proposed transmission line route, the major route alternatives and route variations were developed through field evaluations by Con Edison staff responsible for transmission line engineering and construction. Several specific criteria were used by Con Edison to identify the optimum route, including the following:

- Maintain a direct route between the two substations
- Minimize the number of bends and manholes along the route
- Avoid constructibility issues resulting from the need for specialized construction methods
- Minimize work within major transportation corridors
- Minimize temporary disruption to sensitive land uses (e.g., schools, hospitals)

The proposed route crosses the MetroNorth Railroad along an existing underpass and crosses the Hutchinson River Parkway and Hutchinson River within an existing bridge. Similarly, the proposed route crosses the New England Thruway and the MetroNorth and Amtrak corridor along existing roadway crossings. Other crossing locations as well as the longitudinal placement of the proposed transmission line within these corridors provided the basis for the definition of alternative routes.

3.3.2 Major Route Alternatives

a. MLK Alternative

The Highbrook Avenue crossing of the MetroNorth Railroad corridor provided an opportunity to identify a major route alternative for the proposed transmission line. The MLK Boulevard/Highbrook Avenue/Washington Avenue Alternative (MLK Alternative) would exit the Washington Street Substation to the east along Hartford Avenue for a distance of approximately 1,300 feet to the intersection with South Columbus Avenue. The route continues south along South Columbus Avenue, approximately 600 feet to the intersection with MLK Boulevard/East 3rd Street. The route continues southeast along MLK Boulevard for approximately 4,600 feet, passing over the Hutchinson River Parkway on an existing bridge to the intersection of Highbrook Avenue. At Highbrook Avenue the route turns north and continues for approximately 2,250 feet, crossing beneath the MetroNorth Railroad at an existing underpass and continuing to the intersection with Washington Avenue. The route continues east along Washington Avenue for approximately 4,050 feet to the intersection of Webster Avenue. At Webster Avenue the route turns north, continuing approximately 875 feet to the intersection of Lockwood Avenue. The route continues east along Lockwood Avenue for approximately 2,550 feet to North Avenue. At North Avenue the route travels approximately 250 feet north to the intersection of Park Place. The route then travels northeast along Park Place for approximately 800 feet to a cul-de-sac. Continuing northeast from the Park Place cul-de-sac, the route crosses under the New England Thruway at Interchange 16 and continues for a distance of approximately 500 feet east within the entrance ramp beneath the Amtrak corridor to Cedar Street. The route turns southeast along Cedar Street for approximately 300 feet and enters the Cedar Street substation from Commerce Street. The total distance of this major route alternative is approximately 3.5 miles, approximately 0.5 miles longer than the proposed route.

In comparison to the preferred route, the MLK Alternative is slightly longer and has more major bends (10 versus 6). The MLK Alternative is similar to the proposed route with regard to the use of existing roadway crossings of the MetroNorth Railroad, the New England Thruway and the Amtrak corridor. Potential constructibility issues may arise with the MLK Alternative for the segment along Park Place, which is a relatively narrow residential street with on-street parking along both sides of the road. With regard to sensitive land uses, the MLK Alternative would be located near the Colonial Elementary School in Pelham, the Columbus Elementary School in New Rochelle, and the New Rochelle Hospital, whereas the preferred route is located only near the Hutchinson Elementary School in Pelham. In summary, the MLK Alternative is slightly longer, would require more sharp bends and manholes, and potentially would be more disruptive to sensitive land uses and residents along Park Place; accordingly, the proposed route is considered preferable to this alternative.

b. Metro-North Alternative

A cursory review of available maps and aerial photographs shows that the Metro-North Railroad provides a generally direct route between the Washington Street and Cedar Street Substations. During the planning process for the Project, Con Edison explored the possibility of routing the required feeder within the railroad corridor. The Metro-North Alternative would be located along the south side of the railroad corridor for nearly the entire distance between the Washington Street and Cedar Street Substations; the precise locations where the cable would access and leave the railroad corridor, as well as the precise location of the cable centerline within the railroad right-of-way, have not been determined. During preliminary discussions with representatives of the Metro-North Railroad, it was conveyed to Con Edison that the required track outages along this active railroad corridor would be restricted to non-peak periods during the day. These restrictions would significantly impact the construction logistics, schedule and cost, and for these reasons, this route alternative was eliminated from further consideration.

3.3.3 Route Variations

Several route variations were considered for specific segments along the preferred route. The following sections describe these route variations, which are illustrated on Figure 2-3a through 2-3d.

a. Washington Street Variation

Consideration was given to a variation of the preferred route exiting the Washington Street Substation via Hartford Avenue and Lyons Place, heading north to Washington Street and proceeding east. From this point, the transmission line would continue east along the preferred route on Beechwood Avenue.

This route variation was considered inferior to the preferred route for two reasons. Existing feeders to Washington Street Substation are located within Washington Street and the placement of additional feeders in Washington Street is not preferred for reliability reasons. Also, this route variation would be slightly longer than the preferred route (1,900 feet versus 1,400 feet).

b. Bradford Road Variation

Consideration was given to a route variation within Wilson Woods Park using Bradford Road rather than Wilson Woods Park Road. Bradford Road is used to provide access to the Landaur Metropolitan office building, which is located along the north side of the Metro-North railroad

tracks. The use of Bradford Road would provide a slightly shorter, more direct route and would avoid the sweeping curve of Wilson Woods Park Road.

This route variation has several disadvantages in comparison to the preferred route. First, Bradford Road is quite narrow, and managing construction equipment while maintaining access to the office building would require clearing along either side of the roadway. In addition, Bradford Road is privately deeded property, which would require the acquisition of a new right-of-way by Con Edison and/or the negotiation and establishment of new easements on privately owned land. For these reasons, the preferred route follows Wilson Woods Road for its entirety through the park.

c. Hutchinson River Variation

A route variation was considered as an alternative to the use of the existing bridge crossing of the Hutchinson River Parkway and the Hutchinson River. This route variation would extend east from Wilson Woods Park Road, just south of the Hutchinson River Parkway Bridge, cross via directional drilling under the Parkway and Hutchinson River to a point near the intersection of Lincoln Avenue and First Avenue. From this point, the transmission line would extend east to the Cedar Street Substation along the preferred route via Lincoln Avenue. The precise locations for the drilling and receiving pits have not been identified.

This route variation was not preferred for several reasons. While technically feasible (assuming acceptable subsurface conditions), directional drilling would be more costly and would result in greater construction-related impacts. In addition, when drilling under an active highway, maintenance and protection of traffic during construction is of paramount importance. This alternative would require establishment of a new right-of-way through presently wooded areas in the vicinity of the Hutchinson River, requiring the clearing of additional vegetation and the disturbance of natural habitat. Furthermore, this alternative would require the acquisition of new rights-of-way by Con Edison and/or the negotiation and establishment of new easements on privately owned land. In comparison to the use of the existing bridge crossing of the Hutchinson River Parkway and Hutchinson River, this alternative using directional drilling would be more costly and would result in greater environmental impact than the preferred route.

d. North Avenue and Park Place Variation

A route variation was considered for the final portion of the preferred route at the intersection of Lincoln Avenue and North Avenue. This route variation would extend south along North Avenue after the intersection of Lincoln Avenue and continue to Park Place, and then proceed northeast along Park Place and continue east beneath the New England Thruway and Amtrak railroad along the same alignment as the MLK Alternative to the Cedar Street Substation.

This route variation has several disadvantages when compared to the preferred route. This alternative would require installation of the duct bank along North Avenue, a busy, commercial thoroughfare, potentially resulting in greater traffic disruption and impacting on-street parking for local businesses. In addition, as noted previously, Park Place is a narrow, residential street, and construction along this street would impact the residents, who currently use both sides of the street for parking. Considering these constructibility issues, this alternative is not preferred over the proposed route.

3.4 Expansion of Existing Rights-of-Way

The proposed 138 kV underground feeder will be installed almost entirely within public roadway rights-of-way, and no expansion of these existing rights-of-way will be needed to accommodate the proposed facility.

3.5 Alternate Methods to Fulfill Energy Requirements

Alternate methods to fulfill energy requirements considered by Con Edison included a “no-action” alternative and the feasibility of demand side management (“DSM”) and distributed generation. Con Edison, in its recent electrical load projections, evaluated the contributions of demand-side management and distributed generation programs and determined that these programs would not be sufficient, either due to financial, permitting, timing, and/or siting issues, to meet the electric transmission and distribution obligations of Con Edison. Further discussion of these alternate methods to fulfill the energy requirements of Con Edison in Westchester County is provided in the following sections.

3.5.1 No-Action Alternative

The no-action alternative is not considered a viable alternative as Con Edison’s most recent electrical load projections indicate that the potential exists for development of a near-term overload situation in southern Westchester County (see Exhibit E-4). An overload in this area would, in turn, have the potential to negatively impact existing substations servicing Westchester County and electric system reliability to Westchester County residents and businesses served by these substations. Moreover, significant new construction in Westchester, currently underway or planned, will substantially increase electric demand and further strain existing electrical supply transmission and distribution facilities. Selecting the no-action alternative would not satisfactorily address the increasing electrical demands of Westchester County and Con Edison’s ability and obligation to meet these demands.

3.5.2 Demand Side Management

DSM is a component of Con Edison's current electric supply mix as its current electric rate plan contains a DSM goal of 675 MW to be achieved by April 1, 2008. Nevertheless, the increased electric demand in southern Westchester County, as described above and detailed in Exhibit E-4, necessitates the proposed transmission line and substation improvements. DSM may have the potential to defer a project for a short-term period, but it will not eliminate the need for this project. The Project will be a long-term solution that is necessary for Con Edison to meet its obligation under the New York State Public Service Law to supply reliable electric service to its residential and commercial customers in Westchester County.

3.5.3 Distributed Generation

Distributed generation ("DG") is also not considered a viable alternative to the proposed project. First, virtually all customers with distributed generation require Con Edison to supply them with standby service, i.e., Con Edison must have the facilities to serve that customer's peak demand if the DG is not operating. Accordingly, Con Edison must design its system as if the DG was not operating and the DG was unavailable to meet peak system demand. DG therefore cannot address the need that would be met by the proposed Cedar Street project.

Moreover, typical DG projects range from 2 to 10 MW. With the projected load growth of 12 MW and a projected overload of 19 MW at the Cedar Street Substation by summer 2015, southern Westchester County would require at least 10 individual DG projects in the next 10 years. Typically, these projects take approximately two years to license, design, finance and construct. Even assuming that number of willing hosts and suitable sites could be identified, DG alone is not considered a viable alternative to the Project considering the potential environmental impacts (i.e., air quality impacts) associated with the operation of such a large number of small generating units in Westchester County.

This conclusion regarding distributed generation is supported by a report submitted to NYSERDA, *Combined Heat and Power Market Potential for New York State* (Final Report, October 2002). Combined Heat and Power (CHP - also known as cogeneration) is considered a type of DG, which also includes technologies that just generate electricity, such as fuel cells, emergency diesel generators, and photovoltaics. Although the report identifies statewide potential of nearly 8,500 MW for new Combined Heat and Power (CHP) projects at 26,000 sites in New York, close to 74% of this potential is derived from plants below 5 MW in size, primarily at commercial and institutional facilities, which to date have seen low market penetration due to a combination of factors, including deficiencies in small CHP technologies and systems, lack of adequate sales and service infrastructure, and low familiarity of users and building owners. The Base Case market penetration scenario presented in the report indicates that 764 MW of CHP is

projected to be installed in New York State by 2012; with 70% of this capacity - approximately 535 MW - projected to be in downstate New York (consisting of the LIPA, Con Edison and Orange and Rockland service areas). The report does not provide for the breakdown of this projected installed capacity into the individual service areas or by county. A review of net remaining CHP potential in the Con Edison service area (see tables A-7 and A-8 of that report) indicates a total of 85 commercial locations and 7 industrial locations that could support CHP projects greater than 5 MW for a total of approximately 830 MW. A closer review of the data indicates that most of the potential sites (75 out of 92) consist of office buildings, colleges and universities, hotels/motels, and apartment buildings. Considering the general land uses and development density within the project area versus the overall Con Edison service area, it is likely that only a small number of the potential CHP sites are located in proximity to the project area. Accordingly, CHP alone will not satisfy the projected load growth that will be addressed by the proposed Cedar Street Project.

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Exhibit 4

Environmental Effects

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EXHIBIT 4: ENVIRONMENTAL EFFECTS

This Exhibit addresses the requirements of 16 NYCRR §86.5.

4.1 Introduction

The Cedar Street Project has been conceived and will be designed, constructed and operated in a manner that avoids or minimizes impacts to environmental resources within the Project area. The scope of the Cedar Street Project spans approximately 3 miles of 138 kV underground transmission line connecting the Washington Street and Cedar Street Substations within southeastern Westchester County. Extensive field investigations, literature reviews, and agency consultations were conducted to identify and assess existing environmental conditions within the Project area. This Exhibit summarizes the results of environmental impact studies prepared by Con Edison under the following categories:

- Land Uses;
- Aesthetics and Visual Resources;
- Cultural Resources;
- Terrestrial Ecology and Wetlands;
- Topography and Soils;
- Water Resources;
- Traffic;
- Noise; and
- Transmission Line Electric and Magnetic Fields ("EMF").

The impact studies describe existing conditions, methodologies used in the investigation, the anticipated environmental effects of the transmission facilities and, where appropriate, recommended mitigation measures to avoid or minimize any adverse impacts.

4.2 Land Uses

In accordance with PSL §122(1)(c) and 16 NYCRR §86.5(b)(2)(iv), this section includes a study of the land use impacts resulting from the construction and operation of the proposed Cedar Street Project. The study examines land uses in and adjacent to the transmission line, land use plans for the area, and the applicable zoning regulations to determine whether the proposed transmission facility “minimizes conflict with any present or planned future land use.”

4.2.1 Introduction and Summary of Results

Land uses along the preferred Cedar Street Project route were identified from several sources including reconnaissance surveys, aerial photography, and inventories/maps of land use, cultural, visual, and recreational resources. Cultural resources included archaeological sites, historic places and structures on the State and National Registers of Historic Places and town-designated historical sites. Westchester County parks, local municipal parks, and parkways were identified.

Land uses adjacent to or near the proposed transmission line consist of manufacturing/industrial uses; public parklands; transportation corridors; low-, medium-, and high-density residential uses; institutional uses; mixed-use (non-residential) development; and commercial/retail uses. Manufacturing/industrial uses in the vicinity of the proposed route include several two-story warehouses and manufacturing buildings between Washington Street and Hartford Street in Mount Vernon. Institutional uses include the Hutchinson Elementary School in Pelham and the Sound Shore Medical Center in the City of New Rochelle. Major transportation corridors traversed by the preferred route include the Metro-North Railroad and Hutchinson River Parkway in Mount Vernon and the New England Thruway (I-95) and the Metro-North and Amtrak Railroad lines in New Rochelle. Commercial uses along the preferred route include several first-story retail businesses with residential apartments above in Pelham and New Rochelle and a commercial retail district along North Avenue in New Rochelle.

The parks or recreational uses adjacent to the preferred transmission line route include Wilson Woods Park and the associated pool and recreation center in Mount Vernon and Lincoln Park and the Great Lawn in New Rochelle. No historical resources are located adjacent to the preferred route. Generalized existing land use and municipal facilities within one mile of the preferred transmission line route are presented on the NYSDOT map provided as Figure 2-1. Specific land uses adjacent to the proposed transmission corridor and the Washington Street and Cedar Street substations are identified on the series of aerial photographs provided as Figures 2-3a through 2-3d.

Planned and zoned future land uses were identified through published planning documents and outreach with municipal officials to determine the potential for conflicts with the construction and operation of the transmission facility. The transmission line will be installed within existing roadway rights-of-way, and all work at the Washington Street and Cedar Street Substations will occur within existing walls and fence line of these substations. Therefore, conflicts with present or planned land uses will be minimal. During construction, potential impacts on adjacent land uses will be mitigated by such means as minimizing work crew time on site, equipment noise reduction through use of functional equipment mufflers, prompt restoration and reopening of travel lanes on public roadways, and the implementation of traffic control measures to ensure safe and adequate flow of traffic through the Project area. Installation of the transmission line could result in the temporary restriction of access to on-street parking due to trenching, which will be mitigated by limiting the work zone to the smallest possible area, use of steel plates to cover open trenches to facilitate traffic flow, and expediting construction activities. There will be no significant land use impacts due to operation of the Project.

4.2.2 Laws, Policies, and Regulations

The following state, federal, local or county laws, policies, official plans, and regulations applicable to land use and zoning pertain to the Project:

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122(1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The proposed transmission facilities are subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission facilities and identify changes that the construction and operation of the transmission facilities might induce. 16 NYCRR §86.5(b)(2)(iv) requires that the selection of any proposed rights-of-way minimize conflict with any present or future planned land use.

c. City of Mount Vernon Planning and Zoning

The most recent comprehensive Master Plan prepared for the City of Mount Vernon, the *City Master Plan for Land Use*, was adopted on November 27, 1961. More recently the City of Mount Vernon has developed a 2005 Action Plan and a Draft 2005-2010 Consolidated Plan.

These documents focus on urban housing developments in partnership with the U. S. Department of Housing and Urban Development (HUD) and housing needs, homeless needs and community development needs, including economic development needs of the City of Mount Vernon.

The City of Mount Vernon's Zoning Ordinance, Chapter 267 (Zoning Ordinance) was adopted by Council of the City of Mount Vernon in 1963 and amended in its entirety in 1996. In addition to land use controls, the ordinance also sets minimum lot size; building areas, heights and setbacks; parking requirements; and sign restrictions. Figure 4.2-1 shows the City of Mount Vernon zoning districts in the vicinity of the Project area. Proceeding west to east, the preferred route exits the Washington Street Substation near the center of Mount Vernon at Hartford Avenue and continues east along Hartford Avenue within the General Industrial (I) District. At South Columbus Avenue the route turns north for one block to Beechwood Avenue. The route turns east along Beechwood Avenue and crosses a portion of a Commercial Business (CB) District. The remainder of the route along Beechwood Avenue lies within a Two-Family Residential (R2-4.5) District. The remainder of the preferred route in Mount Vernon through Wilson Woods Park lies within a One-Family (R1-7) District.

Under the Mount Vernon Zoning Ordinance, public utility uses are allowed within all zoning districts by special permit granted by the City Planning Board. Standards and requirements for special permits for public utility uses (§267-28H) specify that "above ground public utility uses shall...be subject to a finding... that a public necessity exists for such use and that the use of the particular site for which application is made is either necessary or appropriate from a public standpoint." Considering that the Washington Street Substation is an established use, and the Article VII Certificate will verify the public need for the Project, the proposed upgrades at the Washington Street Substation are consistent with the Mount Vernon Zoning Ordinance.

d. Village of Pelham Planning and Zoning

Master Plan

The Village of Pelham Master Plan, *A Recommendation for the Future*, was prepared in October 1989, and formally adopted by the Village Board of Trustees on September 27, 1991. This Planning document set out to identify "...a general policy framework, while both preserving unique qualities of the community as well as directing future development." The three major themes of the Master Plan are:

- The residential areas of the Village, with their special architectural and topographical features, should be preserved;
- The "downtown" shopping area should be reinforced as a convenient, attractive, and viable shopping district; and
- The necessary guidelines should be developed to assure that proper design and land use criteria are applied in the few areas where increased development is feasible.

The general objective of the Land Use Plan is to reinforce the existing land use patterns and limit any modifications to assure that these patterns are effectively maintained. The preferred route for the proposed transmission line traverses the Village of Pelham solely within the right-of-way of Lincoln Avenue. The proposed underground transmission line will not disrupt existing land use or land use plans recommended by the Village Master Plan.

Zoning

The Village of Pelham Zoning Local Law, Chapter 98 of the Village Code, was most recently amended on March 2003. Figure 4.2-2 shows the Pelham zoning districts in the vicinity of the project. Along Lincoln Avenue the preferred transmission line route is located within the Business-1 and Business-2 zoning districts between 1st Avenue and 6th Avenue and within the Residence A-3 (detached single-family) zoning district to the east of 6th Avenue. The Village of Pelham Zoning Local Law does not provide any specific reference to public utility uses such as the proposed electric transmission line.

e. *City of New Rochelle Planning and Zoning*

Comprehensive Plan

The *Comprehensive Plan* for the City of New Rochelle was adopted by the New Rochelle City Council on July 30, 1996, with several subsequent amendments. The *Comprehensive Plan* encompasses a set of planning proposals and potential implementation programs designed to shape the physical environment within the context of redevelopment, revitalization and limited new development opportunities. The *Comprehensive Plan* identifies six focus areas. The preferred transmission line route would traverse two of these areas: the Downtown area and the Center City area (generally, the North Avenue corridor); the Cedar Street Substation is located in the Downtown area. The new underground transmission line and the addition of a third, and ultimately fourth, transformer at the existing Cedar Street Substation will not interfere with the implementation of the *Comprehensive Plan*.

Zoning

The Zoning Code of the City of New Rochelle, provided in Chapter 331 of the City Code, specifies 33 zoning districts and 3 overlay districts. Figure 4.2-3 shows the zoning districts in the vicinity of the proposed Project. From the Pelham town line to Webster Avenue, the preferred route is located within the R1-7.5 (One Family Residence) District. From Webster Avenue to Lincoln Park, the preferred route is located within the RMF-0.7 (Multi-Family Residence) District. Lincoln Park is zoned Recreation Open Space (ROS), and the adjacent high-rise housing is zoned RMF-SC 4.0 (Multi-Family Senior Citizen Residence). From the intersection with Memorial Highway to the east of North Avenue, the preferred route is located within a Neighborhood Business (NB) District. The residential neighborhood around the Great Lawn is part of the Rochelle Park – Rochelle Heights Historic District, which is zoned R1-HIST. South of the New England Thruway, the preferred route as well as the Cedar Street Substation are located in a Downtown Mixed Use (DMU) District; the area to the east of Cedar Street includes a Light Industry (LI) District and a Large Scale Retail (LSR) District, reflecting existing land use. The corridor for the New England Thruway including Interchange 16 is not zoned by the City of New Rochelle.

Under the New Rochelle Zoning Ordinance, public utility uses are allowed within all zoning districts by special permit. Standards and requirements for special permits for public utility uses (§331-106) specify that "above ground public utility uses shall...be subject to a finding...that a public necessity exists for such use and that the use of the particular site for which application is made is either necessary or appropriate from a public standpoint." Considering that the Cedar Street Substation is an established use, and the Article VII Certificate will verify the public need for the Project, the proposed upgrades at the Cedar Street Substation are consistent with the New Rochelle Zoning Ordinance.

f. Westchester County Planning Board

The Westchester Planning Board conducts research and publishes policy-oriented planning documents containing findings and recommendations on a range of economic, development, environmental, zoning, and planning issues facing Westchester as a whole and its local jurisdictions. Of pertinence to this Application is the document entitled *Patterns for Westchester (1996)*. *Patterns for Westchester* describes the County's policies and strategies to guide land use development.

Following the Introduction (Section I), the twelve policies developed by the County are outlined in Section II. The Project will not interfere with the development of the twelve policies. Section III defines the four levels of concentrated centers found in Westchester; the Project will traverse the general area of the Pelham local center and terminate at the Cedar Street Substation near the major center of New Rochelle. The preferred transmission line route is also in the general area of an east-west transportation corridor between Yonkers and New Rochelle, created primarily by the Cross County Parkway. Both Sections IV and V encourage local and County governments to "take a broad view of issues that transcend borders." Section VI, The Patterns for Westchester Map, describes the features of the land use map presented in this section. According to this map, the preferred route traverses (from west to east) High Density Urban categories (HDU-4-6 and HDU 5-7) in Mount Vernon, the county park (Wilson Woods), the Medium Density Suburban category (MDS 3-5) in Pelham and New Rochelle, and finally the High Density Urban categories (HDU 4-6 and HDU 6-8) in New Rochelle. The Patterns Program, Section VII, addresses strategies to be executed by County and local governments to effectively implement the County Planning Board's policies. Section VIII, Epilogue, concludes that the Plan is "dedicated to sustainable development which balances economic and environmental concerns and serves the needs of a changing population."

4.2.3 Existing Land Use

Existing land use adjacent to or in the immediate vicinity of the preferred transmission line route is generally presented on the NYSDOT map provided as Figure 2-1, and major land uses are identified on the aerial photographs provided as Figures 2-3a through 2-3d.

The new 138 kV transmission line will be constructed within existing roadway rights-of-way for virtually its entire length. Along this route, the right-of-way is adjacent to the following land uses:

Industrial. The Washington Street Substation is located in an industrial area in Mount Vernon. Industrial land uses predominate along Hartford Avenue through the intersection with South Columbus Avenue. This is the only industrial area along the preferred transmission line route.

Residential. After the industrial/commercial area at the intersection of Beechwood Avenue and South Columbus Avenue, Beechwood Avenue becomes residential with two-family and single-family residences up to the intersection with Bradford Road, where the route turns north to cross the Metro North Railroad and enter Wilson Woods Park. The other residential area along the preferred transmission line route is located along Lincoln Avenue from 6th Avenue in Pelham up to Lincoln Park in New Rochelle. This section of the preferred route is lined mostly with single-family residences with the notable exception of a church and multi-story apartment building on the north side of Lincoln Avenue east of Webster Avenue. Other multi-story residential buildings are located at the intersection of Lincoln Avenue and 6th Avenue in Pelham and along Lincoln Avenue between Lincoln Park and North Avenue in New Rochelle. A large townhouse development is located on the south side of Lincoln Avenue between Memorial Highway and North Avenue. East of North Avenue, the preferred route traverses a historic neighborhood of single-family residences (the Rochelle Park – Rochelle Heights Historic District) located around the Great Lawn in New Rochelle.

Commercial. Commercial land use predominates along Lincoln Avenue between the Hutchinson River Parkway and 6th Avenue in Pelham. Commercial uses in this area include gas stations and small retail establishments, many with residential apartments above. A strip of commercial establishments occupies the north side of Lincoln Avenue to the west of the Hutchinson River Parkway. Commercial land uses are also located at the intersection of Lincoln Avenue and North Avenue and along Cedar Street in New Rochelle.

Government, Transportation and Institutional Facilities. Major transportation corridors traversed by the proposed route include the Metro-North Railroad, the Hutchinson River Parkway, the New England Thruway (I-95), and the Metro-North / Amtrak corridor. The Hutchinson Elementary School is located on the north side of Lincoln Avenue in Pelham. Other

institutional uses in New Rochelle include two churches and a New Rochelle neighborhood government service center along the north side of Lincoln Avenue. Lincoln Towers (Joseph Evans Apartments) is a high-rise residence for senior citizens located adjacent to Lincoln Park in New Rochelle.

Parks and Recreational Facilities. The preferred route traverses Wilson Woods Park, a 23-acre county park in Mount Vernon. This park is primarily wooded but includes an aquatic recreational center – Wilson’s Waves – that features a wave pool, slides and fountains (open to Westchester County residents only). Under the New York State Environmental Quality Review Act (SEQRA), 6 NYCRR 617.14(g), both county and local governmental agencies can designate lands with exceptional or unique characteristics as Critical Environmental Areas (CEAs). According to the New York State Department of Environmental Conservation (NYSDEC) website (www.dec.state.ny.us), all Westchester County parks, which would include Wilson Woods Park, are designated CEAs. Lincoln Park is located on the south side of the preferred route on Lincoln Avenue, west of Memorial Highway in New Rochelle. Lincoln Park includes a baseball field, basketball courts and playground. The Great Lawn in New Rochelle is a large open area in the Rochelle Park – Rochelle Heights Historic District that provides for passive recreation.

4.2.4 Environmental Effects and Mitigation

The use of existing roadway rights-of-way along virtually the entire length of the preferred transmission line route avoids potential impacts to adjacent and nearby present and future land uses. Once installed, the transmission facilities will not affect surrounding land uses. Being underground, the transmission facilities will not be visible or audible. Operation of the proposed transmission line will generate no air or water pollutants, odors, traffic, or disturbance to visual or historic resources. As established in Section 4.10 of this Exhibit, electric and magnetic fields produced by the Project will not exceed applicable State standards nor will they endanger the public or surrounding property. No residential areas, public recreation parks or facilities, or critical environmental areas will be impacted by construction or operation of the Project.

Temporary noise and traffic disruption during construction will be the primary impact to land uses along the transmission line route (Potential traffic and noise impacts resulting from the construction of the proposed Project are detailed in Sections 4.8 and 4.9 of this Exhibit, respectively). During trench excavation and duct bank installation, access to driveways and parking lots may be temporarily curtailed. On-street parking spaces may be temporarily restricted. Mobilization of a sufficient contractor workforce will ensure that construction proceeds as quickly as possible. Trench width and the amount of vegetation disturbed will be kept to a minimum. Backfilling of trenches, soil stabilization, and surface restoration will follow immediately after duct bank installation.

Con Edison will implement the following mitigation measures to minimize potential construction impacts on adjacent land uses to the extent practicable:

- Provide timely information to the institution, owner and/or tenants regarding the planned construction activities and schedule.
- Coordinate with local officials and NYSDOT, as applicable, to develop and implement a Maintenance and Protection of Traffic Plan to ensure safe and adequate traffic operations along all local roads, Lincoln Avenue, the Hutchinson River Parkway, and the New England Thruway (I-95), as well as to provide adequate ingress and egress access to industrial, commercial and institutional land uses adjacent to the proposed transmission line route.
- Construction practices appropriate to suburban and urban areas will be used, such as the designation of alternative circulation routes around work areas by channeling them with barriers and signs; the use of steel plates to cover the trench; and installation of barricades and fencing to secure the construction work area and dissuade vehicles and pedestrians from entering construction zones.
- To avoid impacts related to the loss of essential services, Con Edison or its excavation contractors will notify appropriate utility companies prior to conducting excavation activities within 100 feet of an underground facility as well as conduct in-the-field meetings with appropriate local utility representatives (e.g., gas, electric, telephone and cable television), the NYSDOT, Westchester County Department of Public Works, and the local public works officials, as needed, to detail all utility and roadway crossings.

During the course of the pre-application phase of the Cedar Street Project, Con Edison has conducted outreach meetings with potentially local officials, including Westchester County, the City of Mount Vernon, the Village of Pelham, and the City of New Rochelle. During final design of the Project, Con Edison will continue to work with the WCDPW and other local officials to ensure that the construction and operation of the Project does not have any impacts to existing infrastructure and community services. Adherence to the above-described measures, and any future measures developed as a result of ongoing consultation with the local officials will ensure, to the maximum extent practicable, that all potential land use impacts from the construction and operation of the Cedar Street Project are avoided.

4.2.5 Cumulative Impacts

With the implementation of the standard mitigation measures described above, no adverse cumulative impacts are anticipated as a result of the construction and operation of the Project. In addition to the mitigation measures identified above, potential cumulative impacts are avoided by: 1) the brevity of transmission facility installation activity; 2) the use of noise suppression

devices on construction equipment; and 3) the implementation of a Maintenance and Protection of Traffic Plan. Once the transmission feeder is installed, the roadways will be returned to their present condition.

4.2.6 References

City of Mount Vernon, *Zoning Map*, October 1997.

City of Mount Vernon, *Zoning Ordinance*, Chapter 267 of the City Code.

City of New Rochelle, *Comprehensive Plan*, adopted July 30, 1996.

City of New Rochelle, *Zoning Map*, adopted May 19, 2005.

City of New Rochelle, *Zoning Code*, Chapter 331 of the City Code.

New York State Department of Environmental Conservation, *Critical Environmental Areas*, NYSDEC website (www.dec.state.ny.us/), June 2001.

Village of Pelham, *Master Plan "A Recommendation for the Future,"* adopted October 1989.

Village of Pelham, *Zoning Local Law*, Chapter 98 of the Village Code, amended March 2003.

Village of Pelham, *Zoning Map*, June 1987.

4.3 Aesthetics and Visual Resources

In accordance with PSL §122(1)(c) and 16 NYCRR §86.5(b)(2)(i), (ii), and (8), this Exhibit includes a study of the visual and aesthetic impacts resulting from the construction and operation of the Project. The study examines the visual qualities of the transmission line and the substations and the existing visual resources within a one mile radius to determine whether the Project and its rights-of-way, "avoid scenic, recreational, and historic areas," and whether the rights-of-way have been, "routed to minimize its visibility from areas of public view."

4.3.1 *Summary of Visual Resources*

Visual and aesthetic resources are those that contribute to the quality of an area or environment by their inherent beauty or cultural significance. In defining such resources, the following considerations were used based on: 1) natural features that contribute to a landscape of high visual quality (e.g., water features, colorful or varied vegetation, unusual topography); 2) manmade features that likewise enhance a high visual quality landscape (e.g., statuary, gazebos); 3) recreational areas specially designed to be pleasing to the eye (e.g., bike paths, open gardens); and 4) landscapes of particular natural or cultural significance whose integrity depends on the preservation of original materials and/or appearances (e.g., battlegrounds, waterfalls).

An investigation was undertaken of the aesthetic and visual resources in the vicinity of the Project by: 1) inspection of maps showing locations of officially designated cultural or historic resources, scenic areas, parks, vistas, overlooks, and similar visual landmarks and highlights; 2) a field survey of the existing roadway rights-of-way to characterize their visual features and qualities; and 3) an inventory of historical resources for the study area.

4.3.2 *Laws, Policies, and Regulations*

The Project will comply with applicable state, federal, and local laws, ordinances, and policies regarding visual resources and aesthetics.

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122(1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The Cedar Street Project is subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission facility and identify changes that the construction and operation of the transmission facility might induce. The Project is subject to 16 NYCRR §86.5(b)(2)(i) and (ii) and (8), which require that, “the right-of-way (1) avoid scenic, recreational and historic areas; (2) be routed to minimize its visibility from areas of public view; and, (3) have appurtenant structures located and designed to minimize the environmental impact of the structures (including visual...).”

4.3.3 Existing Conditions

a. Aesthetic and Visual Resources

The recreational and historic areas found within one mile of the preferred transmission line route are listed in Table 4.3-1 and depicted on Figure 2-1. Table 4.3-1 lists national, state and local historical and recreational resources within one mile of the preferred route and the Washington Street and Cedar Street Substations. The “reference numbers” on the table correlate with the numbers appearing on Figure 2-1. Types of resources reviewed for proximity to the proposed facilities are: National and state historic resources, state parks, scenic parkways and designated scenic byways, state conservation areas, county parks, and local/town recreation areas.

A total of 17 historic sites and one historic district, including sites listed on the National and State Registers of Historic Places and the Westchester County Inventory of Historic Places, are located within one mile of the preferred transmission line route. The newly-listed Rochelle Park – Rochelle Heights Historic District is located on the east side of North Avenue, bordered to the south by I-95 and the Metro-North Railroad, to the north by Fifth Avenue, and to the east by Rockland Place and the west side of Potter Avenue. One National Register Listed (NRL) property and two National Register Eligible (NRE) properties are located adjacent to or within one block of the preferred transmission line route.

Other visual resources within the one-mile Project area include Westchester County recreation areas and local city or town parks and recreation areas identified in Table 4.3.1 and on Figure 2-1. Three recreation areas are located adjacent to the proposed transmission line route: Wilson Woods Park in Mount Vernon, and Lincoln Park and the Great Lawn in New Rochelle.

Table 4.3-1: Visual Resources Within One Mile of the Proposed Facilities

Type	Ref. No. ¹	Name	Notes ²
Historic Resources	H1	US Post Office-Mount Vernon 15 S. First Avenue City of Mount Vernon	NRHP; SRHP; WCIHP
	H2	First Reformed Church of Mount Vernon Lincoln Avenue and Summit Avenue City of Mount Vernon	WCIHP
	H3	First United Methodist Church 227 East Lincoln Avenue City of Mount Vernon	NRHP; SRHP; WCIHP
	H4	John Stevens House 29 West 4 th Street City of Mount Vernon	NRHP; SRHP; WCIHP
	H5	Trinity Episcopal Church Complex 335 South 4 th Avenue City of Mount Vernon	NRHP; SRHP; WCIHP
	H6	Pelhamdale 45 Iden Avenue Village of Pelham Manor	NRHP; SRHP; WCIHP
	H7	Knickerbocker Press Building 50-52 Webster Avenue City of New Rochelle	NRHP; SRHP; WCIHP
	H8	First Presbyterian Church and Lewis Pintard House Pintard Avenue City of New Rochelle	NRHP; SRHP; WCIHP
	H9	Leland Castle 29 Castle Place City of New Rochelle	NRHP; SRHP; WCIHP
	H10	Pioneer Building 14 Lawton Street City of New Rochelle	NRHP; SRHP; WCIHP
	H11	Union Baptist Church 438 Main Street City of New Rochelle	WCIHP
	H12	US Post Office New Rochelle 255 North Avenue City of New Rochelle	NRHP; SRHP; WCIHP
	H13	Wildcliff 42 Wildcliff Road City of New Rochelle	NRHP; SRHP; WCIHP
	H14	Davenport House 157 Davenport Avenue City of New Rochelle	NRHP; SRHP; WCIHP
	H15	Rochelle Park – Rochelle Heights Historic District	NRHP
	H16	Pelham Firehouse 217 Fifth Avenue Pelham	NRHP (In Process)

Table 4.3-1: Visual Resources Within One Mile of the Proposed Facilities

Type	Ref. No. ¹	Name	Notes ²
	H17	Second Presbyterian Church Complex 473-475 North Avenue City of New Rochelle	NRHP (eligible)
	H18	Huguenot Trust Co./Spoken Arts Building 310 North Avenue City of New Rochelle	NRHP (eligible)
County Parks	R1	Wilson Woods Park City of Mount Vernon	County Park Recreation
	R2	Nature Study Woods County Park City of New Rochelle	County Park Recreation
City/Town Parks	R3	Howard Street Playground Howard Street/North High Street	Mount Vernon Recreation Area
	R4	Nicholas School Playground North High Street/Bronx Street	Mount Vernon Recreation Area
	R5	Hartley Park E. Lincoln Ave./Gramatan Ave.	Mount Vernon Recreation Area
	R6	Hunts Woods Park Central Parkway/Devonia Avenue	Mount Vernon Recreation Area
	R7	Mount Vernon High School Athletic Field Alta Parkway	Mount Vernon Recreation Area
	R8	Leo Mann Park Ellwood Avenue/Sheridan Avenue	Mount Vernon Recreation Area
	R9	Lorraine Avenue Playground Lorraine Avenue/Sycamore Avenue	Mount Vernon Recreation Area
	R10	Old 7 th Avenue Playground S. 7 th Avenue/W. 2 nd Street	Mount Vernon Recreation Area
	R11	Purdy Park S. 9 th Avenue b/t W. 2 nd & 3 rd St	Mount Vernon Recreation Area
	R12	4 th Street Park W. 4 th Street/S. 6 th Avenue	Mount Vernon Recreation Area
	R13	Sophie J. Mee Playground S. 2 nd Avenue/ b/t W. 4 th & 5 th St	Mount Vernon Recreation Area
	R14	Brush Park S. 3 rd Avenue/W. 7 th Street	Mount Vernon Recreation Area
	R15	Hutchinson Field Canal Street	Mount Vernon Recreation Area
	R16	Memorial Field E. Sanford Blvd/Garden Avenue	Mount Vernon Recreation Area
	R17	Egmont Park	Mount Vernon Recreation Area
	R18	Glover Field E. Sanford Blvd/near Hutchinson Parkway	Town of Pelham Recreation Fields and Facilities
	R19	Ingalls and Franklin Fields Nyac Street/Franklin Place	Town of Pelham Recreation Fields and Facilities
	R20	Hutchinson School Fields 5 th Street/3 rd Avenue	Town of Pelham Recreation Fields and Facilities
	R21	Glenwood Lake Bergholz Drive/Lakeside Drive	New Rochelle Parks and Lakes
	R22	Huguenot Park North Avenue/Eastchester Road	New Rochelle Parks and Lakes

Table 4.3-1: Visual Resources Within One Mile of the Proposed Facilities

Type	Ref. No. ¹	Name	Notes ²
	R23	Beechmont Lake & Park Beechmont Drive/Pinebrook Blvd	New Rochelle Parks and Lakes
	R24	Flowers Park 5 th Avenue/City Park Road	New Rochelle Parks and Lakes
	R25	Lemke Park Lemke Place/Rockland Place	New Rochelle Parks and Lakes
	R26	The Great Lawn Manor Circle/The Boulevard	New Rochelle Parks and Lakes
	R27	Hartley Field Lincoln Avenue/Brook Street	New Rochelle Parks and Lakes
	R28	Lincoln Park Lincoln Avenue/Guion Place	New Rochelle Parks and Lakes
	R29	Sickles Park Sickles Avenue/May Street	New Rochelle Parks and Lakes
	R30	Feeney Park 7 th Street/Green Place	New Rochelle Parks and Lakes
	R31	Sycamore Park Kings Highway/Ronalds Avenue	New Rochelle Parks and Lakes
	R32	Library Green Lawton Street/Huguenot	New Rochelle Parks and Lakes
	R33	Faneuil Huguenot/East Main Street	New Rochelle Parks and Lakes
	R34	Stephenson Park Stephenson Blvd/Lyons Place	New Rochelle Parks and Lakes
	R35	Five Islands Park Main Street/LeFevre Lane	New Rochelle Parks and Lakes
	R36	Hudson Park & Beach Hudson Park Drive/Pelham Road	New Rochelle Parks and Lakes
	R37	Leif Erickson Park Pelham Road/Franklin Ave.	New Rochelle Parks and Lakes
	R38	Aiello Field Pelham Road/Church Street	New Rochelle Parks and Lakes

¹ Reference numbers (Ref. No.) correspond to locations on Figure 2-1.

² NRHP – National Register of Historic Places; SRHP – New York State Register of Historic Places; WCIHP – Westchester County Inventory of Historic Places.

b. Visual Setting of the Preferred Transmission Line Route

The preferred transmission line will be installed primarily within existing paved roadway rights-of-way through urban and suburban communities. Photographs provided as Figures 4.3-1a through 4.3-1d illustrate typical streetscapes along the preferred route. Along portions of the preferred transmission route through residential areas of Pelham and New Rochelle, the visual quality of the area is enhanced by the presence of mature street trees. Precautions will be taken during construction to protect street trees along the transmission line route.

No permanent vegetation clearing is anticipated since the proposed transmission line will be located primarily within existing roadway rights-of-way. If the crossing of the Hutchinson River Parkway and the Hutchinson River can be achieved using the existing bridge, no vegetation clearing will be required. However, should this crossing be installed via directional drilling, a limited area of permanent clearing may be required to accommodate the drilling and receiving pits. A small area of immature deciduous vegetation between the Great Lawn and the fence at Interchange 16 of the New England Thruway would also be cleared for construction, but restoration of this area would include revegetation.

Temporary visual characteristics of the construction will include a construction right-of-way alongside the route to accommodate the operation of equipment (e.g., backhoes and dump trucks), temporary layout of the duct bank, and adjacent work areas. Trenches will be covered with steel plates during the evening hours, and the construction right-of-way will be secured with appropriate fencing and/or barriers. Excavated material removed from the trench will be placed directly into dump trucks and removed to an approved disposal location. Excavated material will not be stockpiled along the right-of-way. Road base material and select backfill material will be imported from off-site on an "as-needed" basis. As the work progresses along the right-of-way, these visual characteristics will move, and interim restoration (i.e., filling of trenches and grading of the right-of-way) will remove most visible signs of construction.

Upon completion of the transmission line construction, few visual signs of the underground facilities will be evident. Most of the rights-of-way will not be discernible from the existing roadway and utility rights-of-way. Manholes will mark the location of the underground vaults that house the cable splices, and other aboveground markers may be used to identify the presence of underground facilities in areas not controlled by Con Edison or otherwise protected.



Photo 1: Washington Street at Lyons Place in Mount Vernon. (facing east)



Photo 2: Bradford Road at Beechwood Avenue, with MTA railroad crossing in Mount Vernon. (facing north)

**Consolidated Edison Company of New York, Inc
Cedar Street Project
Mount Vernon, Pelham and New Rochelle
Westchester County, New York**

Figure 4.3.1a Typical Streetscape

Source: TRC Environmental Corp. October 2005



Photo 3: Wilson Woods Road in Wilson Woods Park in Mount Vernon.
(facing south)



Photo 4: Lincoln Ave at the Hutchinson River Parkway Bridge in Mount Vernon. (facing west)

**Consolidated Edison Company of New York, Inc
Cedar Street Project
Mount Vernon, Pelham and New Rochelle
Westchester County, New York**

Figure 4.3.1b Typical Streetscape

Source: TRC Environmental Corp. October 2005



Photo 5 Lincoln Avenue at 6th Avenue in the Village of Pelham.
(facing east)



Photo 6 Lincoln Avenue at Glenwood Avenue in New Rochelle.
(facing east)

**Consolidated Edison Company of New York, Inc
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Mount Vernon, Pelham and New Rochelle
Westchester County, New York**

Figure 4.3.1c Typical Streetscape

Source: TRC Environmental Corp. October 2005



Photo 7 Lincoln Avenue adjacent to Lincoln Park, in New Rochelle.
(facing east)



Photo 8 Great Lawn from Manhattan Avenue in New Rochelle.
(facing north)

**Consolidated Edison Company of New York, Inc
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Figure 4.3.1d Typical Streetscape

Source: TRC Environmental Corp. October 2005

c. *Substation Appearance*

Washington Street Substation

The interconnection of the new 138 kV transmission line at the Washington Street Substation will occur within the substation property, which is located just south of Washington Street at the intersection of Lyons Place and Hartford Avenue in the City of Mount Vernon. The substation sits at the northeast corner of a stop sign intersection of Hartford Road and Lyons Place. Dominant visual elements in the vicinity of the Washington Street Substation include adjacent one- and two-story industrial buildings. The base elevation of the substation is several feet below the grade of Lyons Place and the substation and control building appear recessed below street level. The substation property has a chain link fence along a retaining wall for the Lyons Place frontage, and the Hartford Road frontage is fenced to the curb with a gated driveway. Another chain link fence follows the substation driveway bordering the adjacent industrial property. Figure 4.3-2 illustrates existing views of the Washington Street Substation.

Cedar Street Substation

The addition of the third transformer (and a fourth transformer at some future date) and associated equipment and the interconnection of the new 138 kV transmission line at the Cedar Street Substation will occur within the existing substation property located at the northwestern corner of Cedar Street and Renewal Place in the City of New Rochelle. The Cedar Street Substation is located adjacent to active railroad tracks used by Amtrak and the Metro-North Railroad. The substation is located behind an approximately 15-foot high wall and the existing transformers, switching gear and other associated structures are entirely screened from public view. The area between the wall and the adjacent roadways is landscaped with trees, shrubs and limited lawn areas. Cedar Plaza, a multi-story office park development with well-maintained landscaping, is located on the opposite side of Renewal Place, across from the substation. Figure 4.3-3 illustrates existing views of the Cedar Street Substation.



Photo 1: Hartford Avenue east of Lyons Place looking at Washington Street Substation driveway. (facing west)



Photo 2: Lyons Place at fence line and retaining wall looking at Washington Street Substation transformers and control building. (facing southeast)

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**Figure 4.3.2 Views of Washington Street
Substation**

Source: TRC Environmental Corp. October 2005

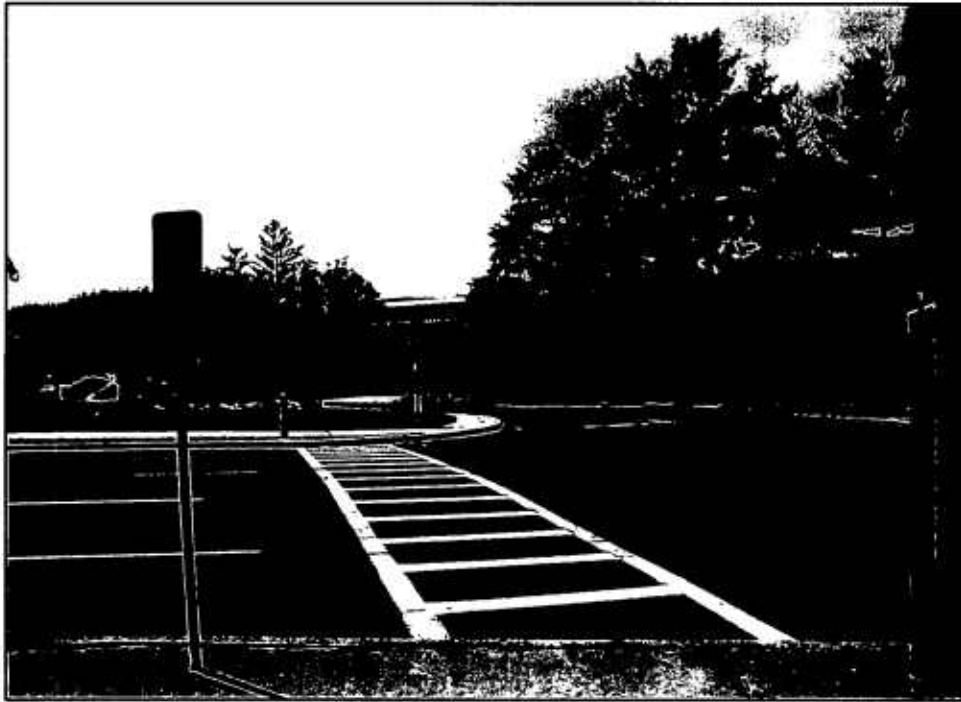


Photo 1: Cedar Street and Renewal Place intersection, Cedar Street Substation entrance gate seen at center. (facing west)

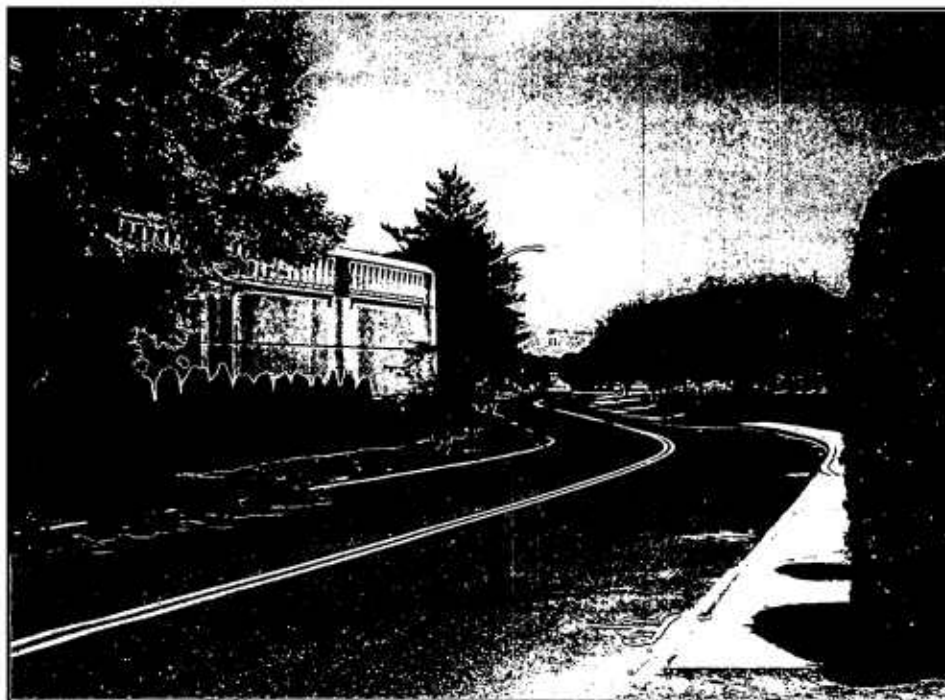


Photo 2: Renewal Place adjacent to the Cedar Street Substation. (facing northeast)

**Consolidated Edison Company of New York, Inc
Cedar Street Project
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Figure 4.3.3 Views of Cedar Street Substation

Source: TRC Environmental Corp. October 2005

4.3.4 *Environmental Effects and Mitigation*

Noted visual or aesthetic resources located in the vicinity of the proposed transmission route include the Wilson Woods Park in Mount Vernon, Lincoln Park on Lincoln Avenue in New Rochelle, and the Great Lawn in New Rochelle. The construction of the proposed transmission line would not require any major vegetation clearing in the vicinity of these recreation areas. Considering the underground installation of the 138 kV transmission line within existing road rights-of-way, there will be no significant visual impacts to these resources. Construction activities for the installation of the duct bank and subsequent cable pulling will create a temporary visual impact but will not affect recreational use at the existing park facilities. Since the transmission line will be underground, the transmission line right-of-way will not be noticeable following the temporary visual impacts associated with construction activities. Accordingly, there will be no long-term, adverse visual impacts attributable to the proposed transmission lines.

The interconnection of the new 138 kV transmission line at the Washington Street Substation and the installation of the new transformers at the Cedar Street Substation will not create any new visual elements at these locations. From public vantage points near the Lyons Place and Hartford Avenue intersection, the Washington Street Substation will be viewed in the context of a mixed industrial setting.

The Cedar Street Substation is located inside a 15-foot high masonry wall, and the facility presents an uncluttered and unidentified public façade. The addition of a third transformer (and a fourth transformer at some future date) and associated equipment at the Cedar Street Substation will not be seen from any public vantage points and will not result in any impact to visual and aesthetic resources. The existing landscaping around the perimeter wall of the Cedar Street Substation is adequate and does not require additional planting.

4.3.5 *References*

City of Mount Vernon Department of Recreation,
www.ci.mount-vernon.ny.us/departments/recreation/rec.asp

Hagstrom, *Westchester County Atlas*, 1999.

National Park Service, list of National Natural Landmarks in NY, dated May 15, 2001.

National Park Service, Park Guide. <http://165.83.219.77/parksearch/state/state.cfm?statevar=ny>.

National Register of Historic Places, National Parks Service. <http://www.cr.nps.gov/nr/>.

NYSDEC Program Policy: Assessing and Mitigating Visual Impacts, DEP-00-2, 7/31/2000.

State Lands, New York Department of Environmental Conservation, Division of Lands & Forests,
Bureau of Public Lands.

<http://www.dec.state.ny.us/website/dlf/publands/region1.html#top>.

State Parks and Historic Sites, New York State Parks, Recreation, and Historic Preservation.

<http://www.nysparks.state.ny.us/next.html>.

Town of Pelham Recreation Department,

www.townofpelham.com/recreationdepartment/fields.html.

United States Department of Transportation, Federal Highway Administration, National Scenic
Byways Program. www.byways.org/browse/states/NY.

4.4 Cultural Resources

In accordance with PSL §122(1)(c) and 16 NYCRR §§86.3(a)(1)(iii) and 86.5(b)(2)(i), this section includes a study of the cultural resource impacts resulting from the construction and operation of the Project. Cultural resources include archaeological and historic architectural resources. This section reviews the preferred transmission line route and the existing substation sites to determine the presence or likely presence of archaeological and historic structures, artifacts, sites, and areas, and the impact of the proposed facilities on these resources. Cultural resources refer to both historic and archaeologically sensitive places.

4.4.1 Laws, Policies, and Regulations

The following describes the federal, state, or local laws, policies, and regulations applicable to cultural resources.

a. *Public Service Law*

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122 (1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. *Article VII Regulations*

The Project is subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the proposed facilities and identify changes that the construction and operation of the facilities might induce. The Project is subject to 16 NYCRR §§86.3(a)(1)(iii), which requires that an Article VII application provide a map showing "any known archaeologic, geologic, historic or scenic area, park, or untouched wilderness within three miles of the right-of-way." Considering that the proposed transmission line will be underground and the work at the existing substations will be within existing fence lines, Con Edison has requested that the Commission waive the requirement of 16 NYCRR §86.3(a)(1)(iii) requiring a map showing these resources within three miles of the right-of-way and allow Con Edison to provide the DOT map showing these resources (architectural only; location information for archaeological sites is considered privileged and confidential) within one mile of the proposed facilities.

c. *National Historic Preservation Act of 1966 (Public Law 89-665; 80 Stat 915, 16 United States Code ("USC") 470 as amended)*

The most important legislation with regard to cultural resources protection is the National Historic Preservation Act ("NHPA"). The NHPA establishes a broad policy of historic preservation and encourages state and local efforts to preserve historic resources.

Section 101 of the NHPA directs the Secretary of the Interior to expand and maintain a National Register of Historic Places ("NRHP" or "National Register") and establishes criteria for NRHP eligibility. Section 101 also establishes a State Historic Preservation Officer ("SHPO") within each state and territory. The SHPO serves as the liaison agency between the federal and state governments. In New York, the Office of Parks, Recreation and Historic Preservation ("OPRHP") is the agency delegated to implement this federal review process. The Director of the OPRHP acts as the New York State SHPO.

Section 106 of the NHPA instructs every federal agency having direct or indirect jurisdiction over a proposed federal, federally assisted, or federally licensed undertaking to "take into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register." The federal agency "shall also afford the Advisory Council on Historic Preservation ("Advisory Council") an opportunity to comment with regard to such undertaking." The Advisory Council outlined the procedures for meeting the Section 106 requirements in Chapter 36, Part 800 of the Code of Federal Regulations (36 CFR 800). Section 106 and the Advisory Council's 36 CFR 800 regulations, together, establish the method for professional review of cultural resources that are included in or eligible for inclusion in the National Register during the active planning stages of all federal, federally assisted, or federally licensed undertakings. These requirements are not directly applicable to the Project because no federal permit or approval is necessary to authorize its construction.

d. *New York State Historic Preservation Act of 1980 – Article 14 of the Parks, Recreation, and Historic Preservation Law*

The State Historic Preservation Act ("SHPA") establishes the guidelines, procedures, and criteria for eligibility for the New York State Register of Historic Places ("NYSRHP"). Similar to the NHPA, projects that require permitting by state agencies must be reviewed to determine compliance with the SHPA. Under Section 14.09, the OPRHP makes a determination regarding the impacts of a project on properties listed or eligible for listing on the NYSRHP.

4.4.2 Existing Setting

The duct bank for the transmission line will be installed within an open-cut trench excavated along the preferred transmission line route within the curb-to-curb portion of street rights-of-

way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed transmission line will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, it is anticipated that the transmission line will be located within the roadway or sidewalk of the existing parkway bridge (Lincoln Avenue) with all construction from above rather than below the bridge. Alterations to the existing Washington Street and Cedar Street Substations will occur within the existing fence lines of each property.

To address the potential impacts on historic and archaeological resources, a Phase IA cultural resources survey was conducted within the right-of-way for the proposed route and at the locations of the existing substation sites.

a. Archaeological Sites

As identified in the Phase 1A Report included as Appendix D of this Application, four recorded prehistoric and three recorded historic archaeological sites were identified within one-mile of the preferred transmission line route. The prehistoric sites are summarized in Table 4.4-1. The historic sites are summarized in Table 4.4-2.

Table 4.4-1. Prehistoric Archaeological Sites Within One-Mile of the Project

Site Number	Distance from APE	Description
NYSM 2829	1416 m (4646 ft) S	No information
NYSM 5201	708 m (2323 ft) S	Possible quartz quarry
NYSM 5202	80 m (264 ft) SE	Possible shell heap
NYSM 5219	1513 m (4963 ft) S	No information

Table 4.4-2. Historic Archaeological Sites Within One-Mile of the Project

Site Number	Distance from APE	Description
A11968.000002	821 m (2693 ft) S	Foundation
A11942.000009	933 m (3062 ft) SSE	No information
A11941.000006	821 m (2693 ft) S	Foundation

b. *National Register of Historic Places ("NRHP")*

As identified in the Phase IA Report included as Appendix D of this Application, one National Register Listed (NRL) property is located within the project area; a second NRL property and two National Register Eligible (NRE) properties are located adjacent to or within one block of the preferred transmission line route. (Table 4.4-3 and see Figure 2-2).

Table 4.4-3. National Register Listed and Eligible Historic Properties within or adjacent to the Project

Number	Figure Reference No.	Name/ Address	Designation/Date of Listing
04NR05343	H15	Rochelle Park – Rochelle Heights Historic District / The Circle, The Boulevard, The Serpentine, Hamilton Avenue, and others	NRL / July 2005
03NR05112	H16	Pelham Firehouse / 217 Fifth Avenue	NRL / In process
11942.000778	H17	The Second Presbyterian Church Complex / 473-475 North Avenue (adjacent to City Hall)	NRE / n/a
11942.000767	H18	Huguenot Trust Company/Spoken Arts Building 310 North Avenue	NRE/ (form is missing from OPRHP files) /

Reference numbers (Ref. No.) correspond to locations on Figure 2-1

The newly-listed Rochelle Park – Rochelle Heights Historic District is located on the east side of North Avenue, bordered to the south by I-95 and the Metro-North Railroad, to the north by Fifth Avenue, and to the east by Rockland Place and the west side of Potter Avenue. It includes Rochelle Park, one of the first residential parks laid out in New Rochelle, and the Rochelle Heights subdivision. The entire district (late 19th – early 20th century) includes 513 contributing buildings, 38 contributing sites, and 4 contributing structures.

The Pelham Firehouse (NRL listing currently underway) was constructed in 1927 and is the only firehouse in the Village of Pelham. It is a three-story, Italian Renaissance Revival style building and a major landmark in the city's downtown commercial district.

In addition to the NRL and NRE resources reported, a building-structure inventory search for the preferred transmission line route and substations identified approximately 69-99 properties within or adjacent to the project area (the majority of which are located on Lincoln Avenue). Included in these properties is the Hutchinson River Parkway Bridge on Lincoln Avenue (11913.00004), part of the Hutchinson River Parkway System. The bridge is a good example of

20th century rustic highway design popular in the suburbs of New York City, but its eligibility for the National Register is predicated on the significance of the Hutchinson River Parkway, which is currently not a NRL or NRE property within the project area.

In accordance with 16 NYCRR §§86.3(a)(1)(iii), an additional 14 NRHP properties were identified within one-mile of the project (Table 4.4-4) and mapped (see Figure 2-2).

4.4.3 Cultural Resource Assessment Methodology

The cultural resource investigations involved three tasks: (1) preliminary research, including a literature, records, and map search; (2) sensitivity assessment and reporting, and (3) review of project design.

A thorough records and literature search was conducted to identify previously recorded archaeological sites and/or historic properties in or near the Project area. Records examined include maps and reports on file at the OPRHP. Maps, reports, and other records were used to identify sites in close proximity to the Project area.

The purpose of the Phase IA survey was to assess the Project area sensitivity for archaeological resources. The methods employed followed guidelines set forth in the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (New York Archaeological Council 1994).

Representative photographs of the Project area were taken in color digital format to document the general topography and vegetation (see Appendix D for a complete copy of the Phase IA Cultural Resources Report).

Table 4.4-4: National Register of Historic Places Properties within One-Mile of the Project				
NYSOPRHP No. NR No.	Figure Reference No.	Property Name and Address	Designation ¹	Date of NR Listing
11941.00175 90NR02480	H1	US Post Office-Mount Vernon 15 S. First Avenue City of Mount Vernon	NRHP; SRHP; WCIHP	SR 5/11/1989 NR 5/11/1989
	H2	First Reformed Church of Mount Vernon Lincoln Avenue and Summit Avenue City of Mount Vernon	WCIHP	
11941.000270 99NR01566	H3	First United Methodist Church 227 East Lincoln Avenue City of Mount Vernon	NRHP; SRHP; WCIHP	SR 10/4/1999 NR 1/7/2000
11941.000174 90NR02479	H4	John Stevens House 29 West 4 th Street City of Mount Vernon	NRHP; SRHP; WCIHP	SR 6/23/1980 NR 4/26/1972
11941.000251 97NR01276	H5	Trinity Episcopal Church Complex 324 South 3 rd Avenue City of Mount Vernon	NRHP; SRHP; WCIHP	SR 8/25/1997 NR 9/1/1998
11961.000015 90NR02548	H6	Pelhamdale 45 Iden Avenue Village of Pelham Manor	NRHP; SRHP; WCIHP	SR 9/27/1982 NR 11/4/1982
11942.000370 00NR01581	H7	Knickerbocker Press Building 50-52 Webster Avenue City of New Rochelle	NRHP; SRHP; WCIHP	SR 4/5/2000 NR 5/11/2000
11942.000748 90NR02483	H8	First Presbyterian Church and Lewis Pintard House Pintard Avenue City of New Rochelle	NRHP; SRHP; WCIHP	SR 6/23/1980 NR 9/7/1979
11942.000004 90NR02482	H9	Leland Castle 29 Castle Place City of New Rochelle	NRHP; SRHP; WCIHP	SR 6/23/1980 NR 8/27/1976

Table 4.4-4: National Register of Historic Places Properties within One-Mile of the Project				
NYSOPRHP No. NR No.	Figure Reference No.	Property Name and Address	Designation ¹	Date of NR Listing
11942.000656 90NR02485	H10	Pioneer Building 14 Lawton Street City of New Rochelle	NRHP; SRHP; WCIHP	SR 11/23/1983 NR 12/29/1983
	H11	Union Baptist Church 438 Main Street City of New Rochelle	Westchester County Inventory of Historic Places	
11942.000745 90NR02487	H12	US Post Office New Rochelle 255 North Avenue City of New Rochelle	NRHP; SRHP; WCIHP	SR 5/11/1989 NR 5/11/1989
11942.000884 02NR04923	H13	Wildcliff 42 Wildcliff Road City of New Rochelle	NRHP; SRHP; WCIHP	SR 10/25/2002 NR 12/31/2002
11942.000005 90NR02484	H14	Davenport House 157 Davenport Avenue City of New Rochelle	SRHP; WCIHP	SR 6/23/1980 NR 4/30/1980
04NR05343	H15	Rochelle Park – Rochelle Heights Historic District City of New Rochelle	NRHP	July 2005
03NR05112	H16	Pelham Firehouse 217 Fifth Avenue	NRHP	(In process)
11942.000778	H17	The Second Presbyterian Church Complex 473-475 North Avenue	NRHP (eligible); SRHP	
11942.000767	H18	Huguenot Trust Company/Spoken Arts Building 310 North Avenue	NRHP (eligible); SRHP	form is missing from OPRHP files

¹ NRHP – National Register of Historic Places; SRHP – New York State Register of Historic Places; WCIHP – Westchester County Inventory of Historic Places.

4.4.4 Impact Assessment and Mitigation

Construction of the proposed transmission line and upgrades to the existing substations will have no impact on cultural resources. The proposed transmission line will be installed primarily within the curb-to-curb portion of the rights-of-way of public roadways. Prior disturbance along these rights-of-way essentially eliminates the potential for encountering significant archaeological sites along these routes. To provide for the protection of any unknown archaeological resources, the Applicant has developed an Unanticipated Discovery Plan as part of its Phase IA survey (see Appendix D) to provide for the identification, protection and documentation of archaeological resources discovered during construction.

The proposed transmission line construction will occur within one National Register Listed property (Rochelle Park – Rochelle Heights Historic District) and adjacent to a second Listed property (Pelham Firehouse) and two National Register Eligible properties (see Table 4.4.3 and Figure 2-2). However, due to the construction design (the transmission line will be buried under existing road surfaces) the proposed project poses no adverse direct or visual effect to the Rochelle Park - Rochelle Heights Historic District, the Pelham Firehouse and the NRE properties identified.

4.5 Terrestrial Ecology and Wetlands

In accordance with PSL §122(1)(c) and 16 NYCRR §86.5(b), this section includes a study of the terrestrial resource impacts resulting from the construction and operation of the Project. Resources evaluated include vegetation, wetlands and aquatic resources, wildlife, and endangered and threatened species.

4.5.1 *Introduction and Summary of Results*

This section characterizes the existing plant communities, wetlands and wildlife present along the preferred transmission line route. Potential impacts, if any, on these communities as a result of the construction and operation of the electric transmission line have been analyzed and a discussion of the mitigation measures to be implemented to minimize impacts to these resources is presented in this section. Considering the work at the Washington Street and Cedar Street Substations will take place within the confines of existing substations and will not disturb any natural habitats, no further discussion of the substation sites is provided in this section of the Application.

The area traversed by the preferred route for the proposed transmission line does not contain any unusual or unique ecological communities. The proposed transmission line will be installed within existing paved roadways for nearly the entire length from Washington Street Substation to the Cedar Street Substation. Accordingly, the vegetative communities within the Project area consist almost entirely of roadside areas and previously developed areas that may or may not be directly affected by the Project.

4.5.2 *Laws, Policies and Regulations*

The following federal, state, or local environmental laws, policies, and regulations were reviewed to determine whether they are applicable to the Project.

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this section are set forth in PSL §122(1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The proposed transmission facilities are subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission line and associated facilities. The Application must also identify changes that the construction and operation of the transmission line and associated facilities might induce in the physical or biological process of plant life or wildlife, identify construction methods to be employed to protect natural vegetation and the protection of adjacent resources including natural habitat for wildlife. Provisions made to protect fish and other aquatic life from harm must also be identified.

c. Clean Water Act

In accordance with §404 of the Clean Water Act (33 USC 1344), which is administered by the U.S. Army Corps of Engineers ("USACE"), the USACE has jurisdiction over federal jurisdictional wetland areas of any size. A review of state and federal data sources indicates that the preferred transmission line route does not traverse any mapped wetlands. Although the preferred transmission line route would traverse the Hutchinson River, the construction of the proposed transmission line will not impact this water body or any associated wetlands that may be delineated. Therefore, §404 of the Clean Water Act is not applicable.

d. Endangered Species Act of 1973

Under Section 7 of the Endangered Species Act (16 USC 1531), federal agencies are directed to use their existing authorities to ensure that their actions do not jeopardize listed threatened and endangered species or adversely affect critical habitat. This applies to federal approval of private activities through the issuance of federal permits or other actions. The U.S. Department of the Interior's Fish and Wildlife Service ("USFWS") must be consulted if it appears that an endangered or threatened species is present in the proposed area. Con Edison has consulted with the USFWS (see Appendix A). There are no known federally listed or proposed endangered or threatened species under USFWS jurisdiction within the transmission rights-of-way. In addition, there is no habitat within the proposed transmission rights-of-way designated or proposed as "critical habitat." Therefore, no biological assessment or further Section 7 consultation under the Endangered Species Act is required.

e. Environmental Conservation Law of New York

The New York State Department of Environmental Conservation ("NYSDEC") regulates Endangered and Threatened Species of animals in New York under Article 11 of the Environmental Conservation Law and 6 NYCRR §182. This law prohibits the taking, importing, transporting, possession, or sale of any endangered or threatened species.

The State of New York regulates Protected Plants under Articles 3 and 9 of the Environmental Conservation Law and NYCRR §193.3. The State of New York prohibits picking or removal of protected plants, or application of herbicides or defoliants without the owner's permission. Correspondence from the NYSDEC Natural Heritage Program dated October 5, 2005 indicated only historical records for two plant species, one of which is considered extirpated in New York, and the other of which is found in dry rock ledges and cliffs, which are not found in the Project area. Copies of Con Edison's requests for agency review and the responses are included in Appendix A.

The NYSDEC regulates Freshwater Wetlands under Articles 3 and 24 of the Environmental Conservation Law and 6 NYCRR §663. The public policy of the State is to preserve, protect, and conserve freshwater wetlands. The Freshwater Wetlands Act regulates wetlands that are 12.4 acres in size or greater, or are of unusual local importance. This law is not applicable, as there are no designated state freshwater wetlands on or in the vicinity of the Project (See Figure 4.5-1).

4.5.3 Methodology

Prior to the field survey performed, available background information was reviewed, which included the USGS Topographic Map, White Plains Quadrangle, the New York State Department of Transportation ("NYSDOT") White Plains Quadrangle Map (previous Figure 2-1), the New York State Freshwater Wetlands Map, the National Wetlands Inventory ("NWI") prepared by the US Fish and Wildlife Service ("USFWS"), and the Putnam and Westchester County Soil Survey. NYSDEC designated wetlands and NWI wetlands in the Project area are illustrated on Figure 4.5-1. Soils mapping included within the Putnam and Westchester County Soil Survey is presented in Section 4.6.

Field surveys were conducted to characterize the limited natural vegetation and associated wildlife communities along the preferred transmission line route. Tree species observed in the field were noted by key segment area. Potential wildlife habitat was also noted while conducting fieldwork on September 28, 2005.

Information regarding ecologically significant areas and federal or state species of concern occurring within the Project area was requested from the USFWS and the NYSDEC Natural Heritage Program via letter requests on August 30, 2005.

4.5.4 Vegetation

Natural vegetation communities are generally nonexistent along the preferred transmission line route with the noted exception of Wilson Woods Park. In general, the limited vegetation along the preferred route consists of street trees and landscape plantings. The vegetation communities along the Hutchinson River in the vicinity of the proposed transmission line crossing can be characterized as disturbed. A list of tree species observed along the preferred transmission line route is provided in Table 4.5.1.

Table 4.5-1: List of Tree Species Observed Along the Preferred Route

Scientific Name	Common Name	Key Locations		
		Wilson Woods Park	Hutchinson River Crossing	Roadside Areas
<i>Acer platanoides</i>	Norway maple	✓	✓	
<i>Acer rubrum</i>	Red maple			✓
<i>Acer saccharum</i>	Sugar maple			✓
<i>Carya cordiformis</i>	Bitternut hickory	✓		
<i>Fagus grandifolia</i>	American beech	✓		
<i>Gleditsia triacanthos</i>	Honeylocust	✓		✓
<i>Liquidambar styraciflua</i>	Sweetgum	✓		
<i>Planatus occidentalis</i>	Sycamore		✓	
<i>Quercus alba</i>	White oak	✓		
<i>Quercus palustris</i>	Pin oak	✓		✓
<i>Quercus rubra</i>	Red oak	✓	✓	✓

Source: TRC Environmental, September 2005.

4.5.5 Wetlands and Aquatic Resources

The NYSDEC and National Wetlands Inventory Wetlands mapping (Figure 4.5-1) and the Putnam and Westchester County Soil Survey (1994) were reviewed to identify the potential presence of wetlands and aquatic resources along the preferred transmission line route. Figure 4.5-1 indicates that there are no state designated wetlands within the immediate Project area. The closest stated designated wetland is located approximately one mile north of the preferred route where the Hutchinson River flows through the Nature Study Woods County Park. The National Wetlands Inventory identifies several open water systems in the Project area; the nearest being Pelham Lake, located within Wilson Woods Park. This water body, formed by an impoundment of the Hutchinson River, will not be affected by construction of the proposed transmission line. The proposed transmission line will not traverse any mapped wetlands.

The Soil Survey indicates the presence of somewhat poorly to very poorly drained alluvial soils, Fluvaquents-Udfluents complex, along the Hutchinson River at the crossing of the preferred transmission line route. Most of the remaining transmission line route traverses urban land soils that are too variable to characterize drainage characteristics.

4.5.6 Wildlife

Since the proposed transmission route is located primarily along existing roadway rights-of-way, the Project area supports predominantly urban and suburban, disturbance-tolerant wildlife species. Along the Hutchinson River crossing location, the river corridor is comprised of narrow, upland habitats with few large trees and a disturbed understory.

The Project area provides habitat for an array of typical wildlife species found in forested uplands in suburban and urban areas. These species include or may include raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), striped skunk (*Mephitis mephitis*), Eastern cottontail rabbit (*Sylvilagus floridanus*), woodchuck (*Marmota monax*), Norway rat (*Rattus norvegicus*), and house mouse (*Mus musculus*). Bird species likely to utilize the site include blue jay (*Cyanocitta cristata*), black-capped chickadee (*Parus atricapillus*), tufted titmouse (*Parus bicolor*), American crow (*Corvus brachyrhynchos*), cardinal (*Cardinalis cardinalis*), common flicker (*Colaptes auratus*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*Picoides villosus*), house sparrow (*Passer domesticus*), white-breasted nuthatch (*Sitta carolinensis*), northern mockingbird (*Mimus polyglottos*), Vireos (*Vireo* spp.), gray catbird (*Dumetella carolinensis*), European starling (*Sturnus vulgaris*), cedar waxwing (*Bombycilla cedrorum*), brownheaded cowbird (*Molothrus ater*), purple finch (*Carpodacus purpureus*), house finch (*Carpodacus mexicanus*), American goldfinch (*Carduelis tristis*) and others, including neotropical migrants (e.g., warblers) during migration stop-overs.

4.5.7 Endangered and Threatened Species

Information regarding ecologically significant areas and federal or state species of concern occurring within the Project area was requested from the USFWS and the NYSDEC Natural Heritage Program via letter requests on August 30, 2005. According to correspondence received from USFWS, dated September 27, 2005, except for transient individuals, no Federally listed or proposed or threatened species under USFWS jurisdiction are known to exist in the Project area. In addition, the USFWS noted that no habitat in the project area is currently designated or proposed "critical habitat" in accordance with the Endangered Species Act.

Con Edison has consulted with the NYSDEC, Natural Heritage Program (see Appendix A). Only two vascular plants were identified based on historical records. Live-forever stonecrop

(*Sedum telephioides*), listed as endangered in New York, was last reported in New Rochelle in 1876. This perennial plant is typically found growing on dry rock ledges and cliffs. Considering this type of habitat is not found along the preferred route, the proposed Project will not affect this species. The second species identified, Purple Meadow-parsnip (*Thaspium trifoliatum* var. *aureum*) was last reported in Pelham Manor in 1889 and is considered extirpated in New York. Considering the limited area of natural habitat along the preferred route, it is not likely that this species, if extant in the Project area, would be disturbed by the proposed Project.

4.5.8 Environmental Effects and Mitigation

Construction of the transmission facilities will involve trench excavation for installation of the transmission line and manholes. Virtually the entire length of the proposed transmission line will be located within the pavement of existing roads. Therefore, impacts on terrestrial and wildlife resources due to the installation of transmission facilities will be temporary and transient. Construction operations will move quickly along the corridor to minimize impacts during construction. Backfilling of trenches, soil stabilization, and surface restoration will follow immediately after transmission line installation. Disturbed areas will be immediately seeded for grass, fertilized and mulched. Where needed due to seasonal conditions or location, temporary grass covers or geotextile stabilization fabrics may be applied atop the soil to protect exposed soils, new seeds and mulch.

Construction impacts of the transmission facilities to plant and wildlife resources will be extremely minor and temporary. Impacts to plants are negligible because the area is currently dominated by planted (grasses) and disturbance-tolerant species that can readily be replaced. Large shade trees located along portions of the right-of-way (e.g., within Wilson Woods Park and along portions of Lincoln Avenue), will be avoided to the extent possible by constructing directly within the roadway. During construction, disturbed areas will be temporarily lost for wildlife use. This minor temporary impact will only include limited loss of use by wildlife and will not impact nesting habitat for birds and amphibians. Restoration of the areas will quickly replace the habitat and wildlife usage opportunities.

Wetlands and aquatic resources along the transmission routes will not be impacted by the Project. Crossing of the Hutchinson River will occur either within the roadway or sidewalk of the existing Lincoln Avenue bridge.

As described above, no impacts to threatened and endangered species will occur as a result of the Project.

4.5.9 Cumulative Impacts

The Project has been designed in a manner that minimizes environmental impacts by selection of a preferred transmission line route that maximizes the use of paved roadways and avoids areas of natural habitat. Wetlands and aquatic resources along the transmission line route have been avoided. Impacts to vegetation and wildlife due to construction of the transmission line are limited to a temporary construction disturbance. Wildlife species using habitat along the transmission route are few in number and are common species. Any impacts to wildlife will be insignificant to the existing wildlife populations in the area of the preferred transmission line route. Continued maintenance of the right-of-way will maintain the corridor in its current condition as paved roadway.

4.5.10 References

Harlow, William H. 1957. *Trees of the Eastern and Central United States and Canada*. Dover Publications, Inc. New York.

NYSDEC Natural Heritage Program. 2005. Letter to TRC Environmental, dated October 5, 2005.

Soil Conservation Service. 1994. *Soil Survey of Putnam and Westchester Counties, New York*. USDA Soil Conservation Service in cooperation with Cornell University Agricultural Experiment Station.

TRC Correspondence. 2005. Letter to NYSDEC Natural Heritage Program, dated August 30, 2005.

TRC Correspondence. 2005. Letter to United States Fish and Wildlife Service, dated August 30, 2005.

U.S. Fish and Wildlife Service. 2005. Letter to TRC Environmental, dated September 27, 2005.

4.6 Topography and Soils

In accordance with PSL §122(1)(c) and 16 NYCRR §86.5(b) and (c), this section describes the existing topography and soils along the route of the proposed transmission line route and the impacts of the proposed construction and operation of the proposed transmission line to soils and topography. Mitigation measures, as required, are also identified.

4.6.1 Introduction and Summary of Results

The proposed 138 kV transmission line will be designed, constructed, operated and maintained to be compatible with on-site geologic conditions. The proposed facilities will be installed within existing roadway rights-of-way. The facilities will be designed and constructed in accordance with applicable building codes and other applicable local, state and federal regulations and requirements, except as noted in Exhibit 7 of the Application.

Construction of the new transmission line will be carried out through open excavation and trenching, or directional drilling and/or jacking under specific roadways. The new transmission line will have three feet of cover. A five-foot cover will be required within the portions of the proposed transmission route located within NYSDOT rights-of-way (i.e., Hutchinson River Parkway). As a consequence, within state roadway rights-of-way, all excavation activities will be less than 120 inches below ground surface. Outside of state rights-of-way, all excavation activities are anticipated to be less than 96 inches below ground surface. Within the trench, the transmission line will be placed within fiberglass reinforced epoxy ("FRE") conduits and have precast concrete manholes along all rights-of-way.

As the transmission line will be placed in existing roadway right-of-ways, soil types and topography encountered along the transmission route are ideally suited to the common construction methods to be employed. When completed, the portion of the corridor excavated for the transmission line will be returned to its original topography and drainage conditions. A state-licensed contractor will dispose of excavated soils and asphalt at an appropriately licensed facility. Due to the previously developed nature (for the most part) of the proposed transmission route and the construction activities supporting the installation of the transmission facilities, adverse impacts as a result of soil excavation should not occur.

The soil type and level topography characterizing the existing Cedar Street Substation are ideally suited to the common construction methods to be employed. Considering that the design and installation of the new third, and expected fourth, transformer will be consistent with two existing transformers at this substation, potential risks associated with seismic events are minimal.

Excavation and minimal grading will be required to promote good site drainage and control runoff and to allow for the proper installation of the transformer foundation at the Cedar Street Substation. An Environmental Management and Construction Plan (EM&CP) will be prepared in accordance with the Erosion and Sediment Control, Best Management Practices Manual Series, Westchester County, N.Y., 1991 and the New York Guidelines for Urban Erosion and Sediment Control. With the implementation of best stormwater management practices, no environmental impacts are anticipated. All soils to be transported off-site would be disposed of in accordance with all applicable rules and regulations.

4.6.2 Laws, Policies and Regulations

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122 (1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The proposed electric transmission line is subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission line as well as an identification of the changes that the construction and operation of the transmission line might induce. The transmission facilities are subject to 16 NYCRR §85.5(a), (b) and (c), which requires that an Article VII application provide information describing studies of construction and maintenance including soil stability, protection of environmental resources, site restoration, construction width clearance, and underground construction methods.

c. New York State General Business Law Article 36 and Public Service Law Section 119-b

New York State has established rules for the protection of underground facilities in order to assure public safety and to prevent damage to public and private property, as required by General Business Law Article 36 and Public Service Law Section 199-b. Industrial Code 53, Part 753 details the procedures that must be implemented by any party undertaking excavation activities in New York. To support this law, New York has established a notification service, *Dig Safely New York*, whereby anyone undertaking excavation activities notifies one entity, which subsequently notifies the affected utility companies of the intended action. Con Edison will ensure that the construction contractor and any subcontractors retained will call *Dig Safely New York* at 1-800-962-7962 to notify utility companies of all excavation activities planned along the

138 kV transmission line route. This requirement will be replicated in all construction specifications and bid documents issued by Con Edison. Additionally, Con Edison's Construction Manager will meet with the selected construction contractor, affected utility companies and Westchester County and other local officials to review plans and locate adjacent utilities.

4.6.3 Existing Conditions

a. Topography

Topography along the route of the proposed transmission line is level to slightly sloping with elevations that range from approximately 50 feet above mean sea level ("MSL") to 100 feet MSL. Although several localized areas of sharp grade change are found in the vicinity of the Washington Street Substation, Wilson Woods Park, and the Hutchinson River, the flat to gently sloping topography along the transmission line route is ideally suited to the shallow subsurface excavation required to support the construction. The general topography of the project area is illustrated on Figure 2-1 of the Application.

b. Geology and Soils

This section provides an overview of the subsurface conditions along the proposed transmission line route based on a review of the *Soil Survey of Putnam and Westchester Counties, New York*. Westchester County is located within the New England uplands physiographic province, which is geologically complex with moderate relief. There are no known unique geologic features on or within one mile of the proposed transmission route or the two existing substations. The surficial geology along the preferred transmission line route is almost exclusively Pleistocene-age glacial till derived from granite, gneiss and schist, consisting of a poorly sorted, variable mixture of silt, clay, sand, and coarse fragments of varying sizes; thickness varies from a few feet to more than 150 feet. A small portion of the preferred transmission line route may encounter water-transported sand and gravel where it crosses the Hutchinson River. Area bedrock consists of closely folded igneous and metamorphic rocks of Cambrian to Ordovician age that form northeast trending belts. Rock near the proposed transmission line derives from the Manhattan and Hartland Formations. The Manhattan Formation consists of schist, quartz, mica, and garnets and the Hartland formation consists of schist and quartzite.

The preferred transmission line route traverses three soil series mapped in the USDA *Soil Survey of Putnam and Westchester Counties, New York* (USDA Soil Conservation Service, 1994) as indicated in Figure 4.6-1. The construction limitations, as well as the soil properties relative to the soil mapping units are presented in Table 4.6-1. The proposed facilities will be installed within existing roadway rights-of-way. As a consequence, most of the soils along the transmission route have been altered during road construction and other utility installations.

The Soil Survey identifies the following soil series:

- Urban Land
- Charlton-Chatfield Complex
- Fluvaquents-Udifluvents Complex

Most of the preferred transmission line route crosses areas classified as Urban Land soils, which consist of areas where buildings, parking lots, or other impervious structures cover at least 60 percent of the surface. Urban soils typically include shopping malls, commercial parks, and other highly developed commercial areas where construction and filling have drastically altered the native soils. Most urban soil areas are nearly level, but a few small areas are gently sloping. Along the preferred transmission line route, the Urban Land soils are associated with soils derived from glacial till, which includes the Charlton, Paxton, Woodbridge, and Ridgebury soil series. These soils are very deep, medium textured and moderately coarse-textured soils derived from gneiss, granite, or schist. These soils are too variable to provide any detailed characteristics without site-specific investigations.

The Charlton-Chatfield complex soils are found in the area of Wilson Woods Park. This unit consists of the moderately to very deep and well-drained Chatfield soils and the well-drained Charlton soil. Slopes range from 2 to 15 percent. The depth to bedrock is considerably less with the Chatfield soil – 20 to 40 inches as compared to more than 60 inches with the Charlton soil. Rock outcrops are not uncommon in areas of this mapping unit.

The Fluvaquent-Udifluvents complex soils, found in the vicinity of the Hutchinson River, are formed in recent alluvial sediment. They are very deep soils that are well drained to very poorly drained. Their main characteristic is that they are subject to frequent flooding. Because they are associated with stream movement of alluvium, their characteristics vary widely.

Table 4.6.1
Soil Characteristics - Construction Suitability ¹

Soil Series & Mapping Unit	Parent Material	Depth (in)	Texture USDA	Unified ²	Percent Fragments >3 inches	Percentage Passing Sieve				Liquid Limit Percent	Plasticity Index ³	Shrink/Swell Potential	Depth to Rock (in)	Flooding Frequency	Water Table		Drainage	Limitations		
						Sieve No.									Depth (ft)	Type		Shallow Excavation	Potential Frost Action	Erosion Hazard
						4	10	40	200											
Charlton-Chatfield Complex CrC	Glacial Till	0-8	Loam	sm, ml	0-5	85-95	75-90	50-85	25-65	<25	NP-5	Low	>60	None	>6.0	--	Well drained	Moderate	Low	Moderate
		8-24	Fine sandy loam, sandy loam, gravelly loam	sm,ml	0-15	65-90	60-90	40-80	20-65	<25	NP-3	Low	>60	None	>6.0	--	--	--	--	--
		24-60	Gravelly sandy loam, fine sandy loam, loam	sm, gm	5-25	60-90	55-85	40-75	20-45	--	NP	Low	>60	None	>6.0	--	--	--	--	--
Fluvaquents-Udifluents complex, frequently flooded, Ff	Flood Plain Soil	0-5	Silt Loam	ml, sm,cl, gm	0-10	60-100	55-100	30-100	10-90	<25	NP-15	Low	>40	Frequent	+ .5-1.5	Apparent Oct-June	Somewhat poorly to very poorly drained	Severe: cutbanks caving, ponding	High	Slight
		5-72	Very gravelly sand, gravelly silt loam, silty clay loam	gm, ml, sc-sm, cl	0-15	35-100	30-100	15-100	5-90	<30	NP-20	Low	>40	Frequent	+ .5-1.5	--	--	--	--	--
Urban Land, Uf, UIC, Ub, UvB, UwB, UhB, UrB, UID, Upc, UpB				To variable.	Site-specific Investigation required								>10	None	>2.0	--	--	Variable	--	--

¹ Source: Table compiled from United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Putnam and Westchester Counties New York*, September 1994, Tables 12,16,17,18,and 19.

² Unified Soil Texture Classification System

GM - Silty gravels, gravel-sand-silt mixtures

SC - Clayey sands, sand-clay mixtures

SM - Silty sands, sand-silt mixtures

ML - Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity

CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays

³ NP- Non plastic. The range of moisture content within which the soil remains plastic.

4.6.4 Environmental Effects and Mitigation

None of the soil or geologic conditions encountered along the proposed transmission route or at the substations presents any engineering or construction issues that cannot be easily addressed through conventional construction methods. Further, considering the presence of the existing transformers at the Cedar Street Substation, the native and artificial unconsolidated strata beneath the substation are considered suitable to support the new third, and expected fourth, transformer at this location. The seismic design for the required foundation will be based on the State of New York Building Code. Adherence to these requirements would minimize potential risks associated with seismic events.

a. Soil Removal and Erosion Control

Construction activities along the preferred transmission route and at the existing substations will entail disturbance of greater than one acre. Under these conditions, state law requires that storm water discharge(s) from the construction site(s) be covered under a SPDES permit. Con Edison will comply with this requirement by requesting coverage under the State's General Permit for Storm Water Discharges from Construction Activities (GP-02-01), subject to the ongoing jurisdiction of the Commission under PSL Article VII. Con Edison will prepare a Construction Storm Water Pollution Prevention Plan ("CSWPP") as part of the EM&CP for the Cedar Street Project to address activities related to both the proposed transmission line and the installation of the Project's Phase I transformer at the Cedar Street Substation in accordance with applicable state guidelines and standards.

The Best Management Practices ("BMPs") will be implemented early in the construction process and prior to the start of major earthwork activities. The measures to be employed include but are not limited to, placement of silt fence and hay bale barriers; implementation of dust suppression practices (i.e. roadway watering); proper material storage and handling; and proper sanitary and solid waste disposal. All proposed BMPs will be designed and maintained in accordance with the Erosion and Sediment Control, Best Management Practices Manual Series, Westchester County, N.Y., 1991 and the New York Guidelines for Urban Erosion and Sediment Control.

Due to the placement of proposed transmission route within existing roadway right-of-ways and the installation of the Project's Phase I transformer within the existing Cedar Street Substation, no blasting is anticipated. If blasting is required, experienced and qualified personnel will perform all blasting activities. A site specific plan including location, blasting contractor qualifications, charge sizes and limits, quantity discrete blasts, hours of blasting operations, estimates of amounts of rocks to be blasted, warning measures and measures to ensure safe transportation, storage and handling of explosives will be prepared by a seismologist with

recognized credentials and will be filed by Con Edison as a separate Work Plan as part of the EM&CP.

Excavation contractors are required to notify appropriate utility companies prior to conducting excavation activities within 100 feet of an underground facility. In addition to contacting *Dig Safely New York*, Con Edison's construction manager will conduct in-the-field meetings with appropriate local utility representatives (e.g., gas, electric, telephone and cable television), the New York State Department of Transportation ("NYSDOT"), Westchester County Department of Public Works, and other local officials, as needed, to detail all utility and roadway crossings.

A stormwater management and erosion control plan for construction activities will be prepared to support the transmission line during construction. Excavation activities will be completed in sections to minimize the extent of open trenches. Excavated material will not be stockpiled on public streets or within or adjacent to streambeds. Due to the permeability of the soils along the proposed transmission line route, dewatering of the excavation is not anticipated.

No wetlands or streams will be impacted by the proposed excavation and construction of the transmission line. Although the construction of the transmission line involves crossing the Hutchinson River, the preferred crossing will be via an existing bridge, which would not require any disturbance to the riverbed or banks. Means of containment of falling debris will be provided during construction over the open waterway. Spoils will not be stockpiled or deposited near or on the riverbank. If it is not technically feasible to use the existing bridge, the transmission line crossing of the Hutchinson River will be accomplished using directional drilling.

Temporary fencing will be installed wherever public access to the work zone is possible. At manhole excavations of greater than five feet below ground surface or other excavation areas determined to be a potential cave-in location, the excavation will be sloped, shored, or shielded to prevent a cave-in.

Con Edison currently has a spare transformer located adjacent to the existing operating transformer units of Cedar Street Substation, which will be temporarily relocated within the station to allow for construction of a new transformer pad, moat, and firewalls. Minimal grading will be required. Con Edison will modify the existing Grading and Drainage Plan to include the new transformer containment unit, which will discharge to the existing onsite oil/water separator. Con Edison does not anticipate an increase in impervious surfaces at the Cedar Street Substation nor an increase in storm water runoff. Con Edison will modify the existing SPDES Permit No. NY 0267805 to include the new containment area that discharges to the existing oil/water separator. No environmental impacts are anticipated relative to change in grade at the site.

b. *Backfilling and Vegetation*

Excavated material, or "cut," along the proposed transmission line route and at the Cedar Street Substation will be placed directly into dump trucks and removed from the construction site rather than stockpiled for reuse. Clean, suitable material will be brought to the site for backfill. All excavated soil along the transmission line route and at the substation will be disposed of at an appropriately licensed facility. Topography along the proposed transmission route will be returned to existing conditions.

Vegetation types encountered along the transmission line route are detailed in Section 4.5 of this Exhibit. Following backfilling, unpaved disturbed areas will be immediately seeded for grass, fertilized and mulched. Where needed, due to seasonal conditions or location, temporary grass covers and/or jute netting (a coarse open mesh netting) may be applied directly on the soil to protect exposed soils, new seeds, and mulch. Pesticides or herbicides will not be used during the construction of the transmission line. Since the proposed transmission line will be constructed within existing roadway right-of-ways, maintenance or the right-of-way will not be necessary. Paved areas disturbed by construction will be returned to their original condition.

c. *Cumulative Impacts*

Cumulative impacts associated with the construction and operation of the Project are not anticipated. The Project will be designed, constructed, operated and maintained to be compatible with on-site geologic conditions in accordance with applicable building codes and other applicable local, state and federal regulations and requirements, except as noted in Exhibit 7 of this Application.

The soils to be encountered along the transmission route and at the Cedar Street Substation should allow for normal excavation (i.e. no blasting within Cedar Street Substation). Based on the depth to bedrock listed in the *Soil Survey of Putnam and Westchester Counties, New York* for the soil types associated with the proposed construction, as presented in Table 4.6-1, blasting is not expected to be required along the transmission route or at the Substation. In the event blasting is required along the transmission route, Con Edison will submit a blasting plan. Based on anticipated soil and bedrock conditions, foundations, manholes and ancillary equipment for all substation equipment and the transmission line will be of common design and will not require advanced construction techniques for installation. Finally, there are no known unique geologic features on or within one mile of the proposed transmission route. As a result, no cumulative or adverse environmental impacts on topography, soils, or other geologic resources from construction and operation associated with the proposed Cedar Street Project are anticipated.

4.6.5 References

Erosion and Sediment Control, Best Management Practices Manual Series, Westchester County, N.Y., 1991.

New York Guidelines for Urban Erosion and Sediment Control, Empire State Chapter Soil & Water Conservation Society

New York State Stormwater Management Design Manual, NYSDEC, October 2001.

Soil Survey of Putnam and Westchester Counties, New York., United States Department of Agriculture Soil Conservation Service, September 1994.

4.7 Water Resources

In accordance with PSL §122(1)(c), this section provides a description of the projected water supply and wastewater discharge requirements associated with the construction and operation of the Project and the mitigation measures to be implemented to minimize impacts to the local water resources of the area.

4.7.1 *Introduction and Summary of Results*

The discharge of storm water during the construction of the Project will be covered under a General Permit for Storm Water Discharges from Construction Activities (GP-02-01), subject to the ongoing jurisdiction of the Commission under PSL Article VII. As part of the SPDES Program, Con Edison will prepare a Construction Storm Water Pollution Prevention Plan ("CSWPP") which will be incorporated into the Environmental Management and Construction Plan (EM&CP) that provides the Best Management Practices ("BMPs") to be implemented early in the construction process and prior to the start of major earthwork activities to avoid impacts to the local environment caused by uncontrolled storm water runoff. The CSWPP Plan will be developed in accordance with applicable local and state guidelines.

The operations of the Cedar Street Substation are covered under the individual SPDES Permit No. NY 0267805. The permit allows Con Edison to discharge industrial storm water to the 24-inch County storm sewer for ultimate discharge to the Long Island Sound in accordance with local and state standards. It is important to note that the substation industrial storm water (i.e., storm water runoff collected in the transformer containment areas and industrial yard drains) is passed through an oil/water separator prior to its release to the storm sewer. Because Con Edison currently has a spare transformer and foundation located adjacent to the operating transformer units at the Cedar Street Substation, which will likely be brought online to support the Project, Con Edison does not anticipate an increase in impervious surfaces at the Cedar Street Substation nor an increase in storm water runoff. Con Edison proposes to release the storm water collected in the new transformer containment unit to the existing oil/water separator.

During final design of the Project, Con Edison will work with Westchester County and local officials to ensure that the construction and operation of the transmission line and continued operation of the existing substations do not have any impacts to existing infrastructure including the water supply distribution system, the sanitary sewer system, and the storm water sewer system.

4.7.2 Laws, Policies and Regulations

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122 (1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Federal/State Laws

The Spill Prevention, Control and Countermeasure Regulations, 40 CFR Part 112, apply to owners or operators of facilities that store or consume oil and oil products, and which might reasonably be expected to discharge oil into or upon navigable waters. Based on the bulk storage volumes of oils in the sealed transformers, Con Edison will modify the existing SPCC Plan for the Cedar Street Substation.

c. Local Laws

No connection to the water supply distribution system or sanitary sewer system will be required during the construction and/or operations of the proposed transmission line or substations; therefore, it is not necessary to describe the local standards relative to water supply, sewer services and storm water management. An overview of the local codes as they pertain to the construction and operation of the proposed Cedar Street Project is presented in Exhibit 7 of this Application.

4.7.3 Existing Conditions

a. Water Supply

The water distribution systems that serve the Project area include the municipal water system of Mount Vernon (within County Water District # CWD-1) and United Water of New Rochelle, which serves the Village of Pelham and City of New Rochelle. The Village of Pelham also operates a separate water distribution system in the Pelham Heights area that lies south of the Metro-North Railroad. There are no major reservoirs within one mile of the Project area.

b. Sewer Services

The Cedar Street Project area consists of both county and municipal sanitary sewerage systems, which are owned and maintained by Westchester County and local sewer departments. The preferred transmission line route is located within the Hutchinson Sewer District, which serves Mount Vernon, the Village of Pelham and western New Rochelle, and the New Rochelle Sanitary Sewer District, which serves the eastern area of New Rochelle.

c. Storm Water Management

Storm drainage throughout the Project area is provided by a separate system of storm sewers, complemented by the remaining natural drainage system in the area (i.e., the Hutchinson River). The entire project area is part of the Lower Long Island Sound Drainage Basins, with Mount Vernon and Pelham falling within the minor divide of the Hutchinson River Drainage Basin, and New Rochelle falling within the minor divide of the Stephenson Brook Drainage Basin.

In March 2003, the City of Mount Vernon prepared an initial storm water management program for City owned and operated facilities to control storm water runoff discharges. Storm drainage implemented by the City of Mount Vernon includes over three thousands sewer and catch basins. Storm drainage within the Village of Pelham is provided by a system of storm sewers and catch basins complimenting the natural drainage system. In March 2003 The City of New Rochelle implemented a Stormwater Management Plan in an effort to manage stormwater quality with everyday functions such as street sweeping, stormwater catch basin cleaning and refuse collection. Stormwater management controls utilized by New Rochelle to intercept runoff from developed areas include stormwater collection in swales, brooks, ponds, underground culverts, large box culvert, storm drainage catchment areas, and basins, further filtering and treating stormwater runoff, and then discharging it at a controlled rate into streams, lakes and ultimately Long Island Sound. There are no County storm drains in New Rochelle.

Prior to construction commencement, Con Edison will review the final engineering design with the City of Mount Vernon Department of Public Works, Sewer Bureau, Village of Pelham Public Works Department and the City of New Rochelle.

d. Waters of the State

Waters of the State by definition include surface water bodies and groundwater. A brief description of each is provided in the sections below.

Surface Water Bodies

The surface water bodies within one-mile of the Washington Street Substation, Cedar Street Substation and the preferred transmission line route include the Hutchinson River/Pelham Lake, Glenwood Lake, Huguenot Lake, Beechmont Lake, and Echo Bay (Long Island Sound) (See Figure 2-1). The Hutchinson River is the only water body that will be crossed by the proposed transmission line. The Hutchinson River provides the boundary between the City of Mount Vernon and the Village of Pelham. According to the New York State Department of Conservation ("NYSDEC") standards for fresh and saline waters found within Westchester County, the water quality of the Hutchinson River in the vicinity of Pelham Lake between the City of Mount Vernon and the Village of Pelham is a Class B water body. The definition for a Class B water-body according to the NYSDEC is as follows:

The best usages of Class B waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish propagation and survival. (Water Quality Regulations: Surface Water and Groundwater Classifications and Standards, 6 NYCRR, Part 701.7, August 02, 1991.)

The proposed transmission line will cross the Hutchinson River via the existing bridge (Lincoln Avenue) or, if use of the bridge is not technically feasible, via directional drilling. With either construction method, the riverbed and banks will not be disturbed.

The proposed transmission line route also traverses the 100-year flood plain of the Hutchinson River (See Figure 4.7-1). The flood elevation at the crossing location is approximately 30 feet. Construction of the proposed transmission line will not alter the riverbanks or change the existing grades of the flood plain; therefore, no impacts to the flood plain or other upstream/downstream properties are expected from the construction and operation of the transmission facilities.

Groundwater

As most locations throughout New York State, groundwater resources throughout the Project area are classified by the NYSDEC as GA, fresh groundwater that is suitable for use with or without treatment. Groundwater quality should not be impacted as a result of construction activities.

4.7.4 Impacts and Mitigation

a. Water Supply

Prior to commencement of construction, Con Edison will review the final engineering design and routing of the transmission line with WCDPW, Mount Vernon Board of Water Supply, Village of Pelham Water Department and United Water of New Rochelle to ensure that the construction and operation of the transmission line will not impact any existing water supply distribution systems.

Construction of the transmission facilities will require minimal water supply. If water is required for construction activities such as for dust control, pavement cutting, etc., water will be brought to the construction site in a tanker truck. No water supply will be required for the transmission facilities during operation.

The Cedar Street Substation is an unmanned facility, and water demand will not significantly change with the addition of the new transformers. During final engineering and design, Con Edison will verify that existing water supply and pressure is adequate to provide fire protection for these new transformers.

b. Sewer Services

Prior to the start of construction, Con Edison will review the final engineering design with the WCDPW, City of Mount Vernon Bureau of Sewers, Village of Pelham Public Works Department, and City of New Rochelle Bureau of Sewers and Drains to ensure that the construction and operation of the transmission line will not impact any existing sewer lines.

No sewer service will be required during the construction or operation of the associated transmission line. In addition, the third, and subsequent fourth, transformer at the Cedar Street Substation will not increase any wastewater flows to the sanitary sewer from the Cedar Street Substation, which will remain an unmanned facility.

c. Storm Water Management

In accordance with the conditions of the Article VII Certificate for the Cedar Street Project, Con Edison will prepare and implement an EM&CP, which will include provisions for storm water management during construction and operation of the Project. The EM&CP will be prepared in accordance with the Erosion and Sediment Control, Best Management Practices Manual Series,

Westchester County, N.Y., 1991 and the New York Guidelines for Urban Erosion and Sediment Control. With the implementation of Best Management Practices ("BMPs"), no environmental impacts are anticipated. All soils to be transported off-site would be disposed of in accordance with all applicable rules and regulations.

The BMPs will be implemented early in the construction process and prior to the start of major earthwork activities. The measures to be employed include, but are not limited to, stabilized construction entrances; placement of silt fence and hay bale barriers; and dust suppression practices (i.e. roadway watering); proper material storage and handling; and proper sanitary and solid waste disposal. The BMPs to be implemented on-site for operations at the Cedar Street Substation include, but are not limited to, the following:

- Maintenance of existing level grades;
- Minimization of impervious surfaces;
- Integration of the new Project Phase I transformer with the existing oil-water separator to capture any oils that could potentially leak from any of the sealed transformers within the substation; and
- Maintenance of the existing site drainage system to convey all storm water runoff to the local storm sewer through catchbasins and storm drains.

All proposed BMPs would be designed and maintained in accordance with the Storm Water Management, Best Management Practices Manual Series, Westchester County, N.Y., 1984 and the New York State Storm Water Management Design Manual, October 2001. With the implementation of the BMPs, which includes the oil/water separator, no environmental impacts from storm water runoff are anticipated during continued operation of the Cedar Street Substation.

d. Waters of the State

Construction activities for the Cedar Street Project will entail disturbance of greater than one acre and therefore state law requires that storm water discharge(s) from the construction site(s) be covered under a SPDES permit. Con Edison will comply with this requirement by requesting coverage under the State's General Permit for Storm Water Discharges from Construction Activities (GP-02-01), consistent with the Commission's ongoing jurisdiction under PSL Article VII. Con Edison will prepare a Construction Storm Water Pollution Prevention Plan ("CSWPP") which will be incorporated into the EM&CP to address construction activities related to storm water management along the transmission line route and substation sites in accordance with

applicable local and state guidelines. The EM&CP will be submitted to the NYSPSC and NYSDEC under separate cover.

The operations of the Cedar Street Substation will require modification of the existing SPDES Permit No. NY 0267805. The existing storm water management practices located at the Cedar Street Substation include, but are not limited to, the use of a oil/water separator unit to treat the industrial storm water (i.e., storm water collected in the two transformer containment areas and industrial yard drains) and a series of catch basins and storm drains that lead to the municipal 24-inch storm sewer system that ultimately discharges to the Long Island Sound. Because Con Edison currently has a spare transformer and foundation located adjacent to the operating transformer units at the Cedar Street Substation, Con Edison does not anticipate an increase in impervious surfaces at the Cedar Street Substation or an increase in storm water runoff. Con Edison proposes to construct the new transformer containment within the existing foundation pad and discharge the new containment unit to the existing oil/water separator.

As with all construction projects, the Cedar Street Project will require the implementation of BMPs to control storm water runoff as well as to prevent liquid fuels (gasoline and diesel) and hydraulic fluid from construction equipment from entering waters of the State. The BMPs to be implemented during construction of the transmission facilities and installation of the Project Phase I transformer at the Cedar Street Substation include but are not limited to, the following:

- All construction activities will be conducted in accordance with the conditions of the Article VII Certificate and SPDES General Permit (GP-02-01);
- An EM&CP will be prepared and implemented for construction in accordance with local and state guidelines;
- No temporary fuel storage tanks will be allowed;
- Spill control equipment will be present during all refueling activities;
- Equipment will be inspected daily for leaks and immediate repairs will be completed, if any leaks are found;
- Construction crews will be trained in procedures for handling fuel, hydraulic fluid and oil; and
- The EM&CP will instruct construction crews on preventing impacts to the environment during construction of the transmission line.

The proposed electric transmission line will cross the Hutchinson River via the existing bridge (Lincoln Avenue) or via trenchless installation if it is determined that use of the bridge is not

technically feasible. With the current plan at this time, no disturbance to the riverbed or banks is anticipated. Accordingly, no impacts to the Hutchinson River are anticipated during the construction and operation of the transmission line. Means of containment of falling debris will be provided during construction over the open waterway. Spoils will not be stockpiled or deposited near or on the riverbank.

There is no potential for groundwater or surface water contamination during operation of the transmission line in that the roadways that constitute the preferred route will be restored to their original hydraulic conditions and all construction materials are inert with no leachable components. The proposed transmission line will use solid dielectric cables that do not contain any dielectric fluids.

There is limited (if any) potential for groundwater or surface water contamination during continued operation of the Cedar Street Substation in that:

- The nearest surface water to the Cedar Street Substation is Echo Bay (Long Island Sound) located approximately 2,000 feet southeast of the site;
- Substation operations will be conducted in accordance with a modified SPDES permit issued by the NYSDEC;
- The Project Phase I transformer, and subsequent Phase II transformer, will be integrated with the existing oil/water separator and any accidental spills and/or leaks will pass through the oil/water separator prior to entering the local storm drains; and
- The existing SPCC Plan that meets the requirements of 40 CFR Part 112 will be modified to incorporate the new transformers as they become operational.

With the implementation of the BMPS presented in this section, Con Edison does not anticipate any impacts to the waters of the State due to the construction and operation of the Project.

As indicated previously, the construction and operation of the proposed transmission line will not alter the banks of the Hutchinson River or change the existing grades of the flood plain; therefore, no impacts to the flood plain or other upstream/downstream properties are expected. The Cedar Street Substation is not located in the 100-year or 500-year flood plain.

e. Cumulative Impacts

Cumulative impacts to water resources are not expected from the construction and operation of the Cedar Street Project. The Project will be designed, constructed, operated and maintained to be compatible with applicable local, state and federal requirements relative to water supply, sewer services and storm water management.

4.7.5 References

Erosion and Sediment Control, Best Management Practices Manual Series, Westchester County, N.Y., 1991.

Laws of Westchester County (Part VII Rules and Regulations of the Department of Environmental Facilities), Municipal Code Corporation, February 1, 2002.

New York Guidelines for Urban Erosion and Sediment Control, Empire State Chapter Soil & Water Conservation Society

New York State Stormwater Management Design Manual, NYSDEC, October 2001.

Stormwater Management, Best Management Practices Manual Series, Westchester County, N.Y., 1984.

4.8 Traffic and Transportation

In accordance with PSL §122(1)(c) and 16 NYCRR §§86.3(b)(1)(iii), 86.5(a), and 86.5(b)(8), this section includes a study of the traffic and noise impacts resulting from the construction and operation of the Project. The study examines the location of access and maintenance routes relative to the proposed transmission line and the traffic impacts due to construction and operation of the proposed transmission line.

4.8.1 Introduction and Summary of Results

The Project involves the construction of a new underground feeder from Washington Street Substation to the Cedar Street Substation. The locations of these facilities are illustrated in Figures 2-1, 2-2, and 2-3a through 2-3d. Construction activities associated with the proposed Project will include the connection of transmission line to the existing Washington Street and Cedar Street Substations; the excavation of trenches within the right-of-way on Hartford Avenue, South Columbus Avenue, Beechwood Avenue, Bradford / Wilson Woods Park Road, Lincoln Avenue, Manor Place, The Circle, New England Thruway (I-95), Cedar Street, and Commerce Drive; the installation of manholes every 1500 to 2000 feet along the transmission line that will serve as locations for pulling the solid dielectric cable through the individual conduits; and horizontal borings, jacking or other method acceptable to local, New York State Department of Transportation ("NYSDOT") and New York State Thruway representatives to implement the successful crossings along local roadways, New England Thruway and the Hutchinson River Parkway without disturbance of existing traffic along these roadways. The precise placement of each manhole will be determined as part of the final design of the transmission line. Also, the specific location, design, and construction methods to be employed for local roadways, the New England Thruway, and the Hutchinson River Parkway crossings will be developed through consultation with local, NYSDOT and Thruway Authority representatives. The schedule for construction and pavement restoration will be determined in consultation with state and local officials so as to not interfere with the planned Lincoln Avenue widening/improvements program for which NYSDOT has started the formal scoping process.

Construction will be temporary and will be programmed and coordinated with the City of Mount Vernon, the Village of Pelham, the City of New Rochelle, Westchester County and the NYSDOT to limit its impact on traffic flows and other conditions in the area.

During the construction of the proposed transmission line, it will not be necessary to close roads to general vehicular traffic. All construction will be conducted within public rights-of-way or within negotiated easements over previously developed Local, County and State properties. The crossing of the New England Thruway will use horizontal borings or jacking, as necessary, so as not to affect traffic along the access ramps that must be crossed.

To the extent possible, Con Edison property within the Cedar Street Substations will be used for construction laydown storage areas in support of construction activities associated with the addition of the third transformer at this substation. Additional staging in support of daily construction activities will occur within the proposed transmission line rights-of-way. The Construction Contractor will identify and lease existing commercial land and/or parking lots in the Project vicinity for construction worker parking and staging areas to support construction of the Project.

With the exception of occasional maintenance activities, no traffic will be generated in the Project area due to the operation of the transmission line.

4.8.2 Laws, Policies, and Regulations

Federal, state, county, and local environmental laws, policies, and regulations were reviewed for applicability to construction and operation of the Project. The construction of the proposed transmission line will generally not impact the adjacent roadways. During construction, the procedures contained in the New York State Manual on Uniform Traffic Control Devices ("NYSMUTCD") and the New York State Vehicle and Traffic Law will be followed. This manual sets forth the basic principles governing design, use, installation, and operation of traffic control devices. These principles are reflected throughout the text in discussions of devices, and should be followed in the selection and application of each device. The standards in this manual apply to all highways open to public travel, regardless of type or the governmental agency having jurisdiction.

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122 (1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The proposed transmission facilities are subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission facilities and identify changes that construction and operation of the transmission facilities might induce. This section discusses the requirements of 16 NYCRR §§86.3(b)(1)(iii), 86.5(a), and 86.5(b)(8) which includes the environmental impacts and mitigation related to traffic.

c. *New York State Department of Transportation, Utility Work Permit*

The NYSDOT also requires an application for a Utility Work Permit to install utilities within or adjacent to State highway rights-of-way. In addition to this permit, NYSDOT regulations require the applicant for any project with construction duration of greater than five days to retain a New York State-approved consultant inspector to oversee site activities. Con Edison will fully comply with the requirements of the Utility Work Permit, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. Con Edison will also comply with all applicable state traffic control standards.

d. *New York State Thruway Authority, Utility Work Permit*

The New York State Thruway Authority, which has jurisdiction over the portion of the New England Thruway (I-95) in Westchester County, also requires an application for a Utility Work Permit to install utilities within or adjacent to Thruway rights-of-way. In addition to this permit, the applicant is subject to follow the regulations as listed in the Rules and Regulations of the New York State Thruway Authority and to the New York State Thruway Authority Occupancy and Work Permit Accommodation Policy (TAP-401). Con Edison will fully comply with the requirements of the Utility Work Permit, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. Con Edison will also comply with all applicable state traffic control standards.

e. *Code of the City of New Rochelle*

Restrictions during periods of heavy traffic. No street openings, street obstructions or maintenance operations will be allowed in streets located in or contiguous to any commercial district, as set forth in the Zoning Ordinance of the City of New Rochelle, *Editor's Note: See Ch. 331, Zoning*, nor in streets designated as county roads, on any day during the period beginning on the second Monday in November and ending on the first day of January nor on any day during the week immediately preceding Easter Sunday nor, in the discretion of the Commissioner, on days occurring during periods of unusually heavy traffic, except in cases of emergency specifically certified by the Commissioner. No street openings, street obstructions or maintenance operations will be allowed in streets located in or contiguous to areas and uses of unusually intense vehicular or pedestrian traffic during such days and/or hours when such traffic is usually most intense, except in cases of emergency specifically certified by the Commissioner. The foregoing includes but, in the discretion of the Commissioner, is not necessarily limited to schools during school hours, the railroad station during the hours of 7:00 a.m. to 9:00 a.m. and 5:00 p.m. to 7:00 p.m. and beach clubs during summer months. [Amended 9-19-1989 by Ord. No. 226-1989]

Any such emergency work, if and when authorized as provided above, must be restricted to Mondays, Tuesdays and Wednesdays between the hours of 10:00 a.m. and 4:00 p.m. unless otherwise authorized by the Commissioner, and no material or equipment shall be allowed to obstruct the approved traffic flow between said hours. In all such cases, work is to be completed and any obstruction removed and trenches or other areas must be reusable at close of work or not later than the final day of the effective period of the permit except as otherwise authorized in advance by the Commissioner.

In the event that openings have not been backfilled and satisfactorily resurfaced, or obstructions removed, on Saturdays, Sundays or holidays or during periods of unusually heavy traffic volume, or at the expiration of the effective period of the permit as provided above, the City of New Rochelle reserves the right to backfill and resurface such openings or to remove such obstructions, by contract or otherwise, at the permittee's own expense.

On all streets within the jurisdiction of the City of New Rochelle determined by the Commissioner to be major thoroughfares, no street openings, street obstructions or maintenance operations will be allowed except between the hours of 6:00 p.m. and 8:00 a.m. [Added 9-19-1989 by Ord. No. 226-1989]

f. *Code of the Village of Pelham*

Restrictions on trucks: All trucks, tractors and tractor-trailer combinations in excess of five tons gross weight are hereby excluded from all streets and highways within the Village except for the streets or parts of streets described in Schedule IX (§ 90-48), which streets and parts of streets shall be known as a truck route system. The regulations established in this section shall not be construed to prevent the delivery or pickup of merchandise or other property along the highways from which such vehicles and combinations are otherwise excluded.

In accordance with the provisions of § 90-12, all trucks, tractors and tractor-trailer combinations in excess of five tons are excluded from Village streets, except for the streets or parts of streets described below:

Name of Street	Location
Colonial Avenue	From Pelhamdale Avenue to the Mount Vernon city line
Fifth Avenue	Entire length
First Street	From Wolf's Lane to Highbrook Avenue
Lincoln Avenue	Entire length
Station Plaza	North and south sides of tracks
Wolf's Lane	Entire length

g. *Code of the City of Mount Vernon*

No person shall obstruct, encumber or occupy in any manner or for any purposes whatsoever any public street, highway or sidewalk area without first obtaining from the Commissioner a written permit. No permit shall be required, however, for the placing of floral pieces along public thoroughfares in conjunction with any urban beautification program authorized by the City, except that such authorization for the placing of said items must be obtained from the City Council.

h. *Westchester County Department of Public Works*

The Westchester County Department of Public Works follows the procedures contained in the NYSMUTCD.

4.8.3 Existing Conditions

TRC reviewed available traffic count information in the vicinity of the site from the NYSDOT and Westchester County, as well as other sources. In addition to traffic count information, several field observations were performed during various times of the day. The review of the traffic volumes referenced indicates that the Weekday Peak Traffic Volumes along local roadways generally occur between 7:30 AM and 8:30 AM and 5:00 PM and 6:00 PM.

The aerial photographs provided as Figure 2-3a through 2-3d illustrate the local roadway network in the vicinity of the proposed Project. The following is a description of the roadways in the vicinity of the site:

- Hartford Avenue – Hartford Avenue consists of one lane per direction, flowing in an east/west direction. Hartford Avenue is under the jurisdiction of the City of Mount Vernon. Lane widths are approximately 12 feet with sidewalks along both directions of the roadway.
- South Columbus Avenue – South Columbus Avenue (NY State Route 22) consists of one lane per direction, flowing in a north/south direction. Lane widths are approximately 12 feet with sidewalks along both directions of the roadway.
- Beechwood Avenue – Beechwood Avenue consists of one lane per direction, flowing in an east/west direction. Beechwood Avenue is under the jurisdiction of City of Mount Vernon. The posted speed limit is 30 mph with lane widths of approximately 12 feet with sidewalks along both directions of the roadway.
- Bradford Road – Bradford Road extends from Beechwood Avenue and consists of one lane per direction, flowing in a north/south direction. Bradford Road is under the

jurisdiction of City of Mount Vernon and has a posted speed limit of 30 mph. Lane widths are approximately 12 feet with sidewalks along both directions of the roadway.

- Wilson Woods Park Road – Wilson Woods Park Road consists of one lane per direction, flowing in a north/south direction. Wilson Woods Park Road is under the jurisdiction of City of Mount Vernon. The posted speed limit is 25 mph. Lane widths are approximately 12 feet with a sidewalk along one side of the roadway.
- Lincoln Avenue – Lincoln Avenue travels through the City of New Rochelle, as well as the Village of Pelham and the City of Mount Vernon. The roadway consists of one lane per direction, flowing in an east/west direction. Lincoln Avenue is under the jurisdiction of the City of New Rochelle from North Avenue to the Village of Pelham City limit. Lincoln Avenue is under the jurisdiction of Westchester County from the City of New Rochelle City Limit to NY State Route 22 (North Columbus Avenue in Mount Vernon). The posted speed limit is 30 mph. Lane widths are approximately 12 feet with sidewalks along both directions of the roadway.
- Manor Place – Manor Place consists of one lane per direction, flowing in an east/west direction. Lane widths are approximately 12 feet with sidewalks along both sides of the roadway. Manor Place is under the jurisdiction of the City of New Rochelle.
- The Circle – The Circle provides one wide unmarked lane, flowing in circular direction. In the vicinity of the Project, the Circle is under the jurisdiction of the City of New Rochelle and the posted speed limit is 30 mph. Lane widths vary around the circle and can accommodate two vehicles simultaneously side by side with no sidewalks along the exterior edge of the circle.
- Cedar Street – Cedar Street consists of three lanes in the vicinity of the New England Thruway (I-95) underpass and expands to four lanes flowing in a north to south one-way direction adjacent to the Cedar Street substation. In the vicinity of the Project, Cedar Street is under the jurisdiction of New York State Thruway Authority. Lane widths are approximately 12 feet with sidewalks on both sides of the roadway. The posted speed limit is 30 mph.

The “Bee-Line Bus System”, a service of the Westchester County Department of Transportation, provides transit service in Westchester County. Table E-6-1 in Exhibit E-6 of this Application provides a listing of the ten routes that are encountered along the preferred route and identifies their location. As necessary, Con Edison will coordinate with the Westchester County Department of Transportation to temporarily relocate bus stops along the preferred route as part of the Maintenance and Protection of Traffic Plan.

4.8.4 Environmental Effects and Mitigation

a. Construction

Construction of the proposed transmission line will essentially consist of the following types of work crews: trenching, duct laying, cable pulling, splicing, manhole installation, and horizontal boring/jacking. Each crew will consist of three to six workers. Trenching crews, approximately three to four workers, will be used to dig and trench where the cables will be installed. The trenching will occur along the right-of-way and the soil removed will be loaded directly into trucks and removed from the work area. After the opening of the trench, duct bank installation crews (approximately three to four workers) will install the duct bank in the trench. After installation of the duct bank, suitable backfill material will be brought to the work area to refill the trench. It is anticipated that the trench and duct bank installation crews will work together, gradually moving along the right-of-way as the duct bank is installed. It is estimated that approximately 500 feet will be completed each day.

Because of the limited length of the cables and pulling distances, manholes will be installed along the right-of-way where the cables will be spliced together. A separate crew of approximately five workers will install the manholes. Cable pulling crews with approximately six workers will then pull the cables through the previously installed duct bank. Splicing crews (approximately three to four workers) will then splice the cables at the manholes. Finally, it is expected that a separate crew of approximately five workers will perform any horizontal boring/jacking or other specialized installation techniques to install the duct bank under roadways to avoid closure of traffic lanes. Up to three work crews of each type will be provided so that work may proceed simultaneously on various sections of the right-of-way. The amount of trips generated by the work crews for trenching, duct laying, cable pulling and splicing, horizontal boring or jacking, and manhole installation described above would be minimal and would only last for a limited period.

Truck traffic generated by construction of the proposed transmission line will consist of a one-time delivery per daily work location and removal of equipment for trenching and earth moving; plus occasional limited site visits by: trucks delivering fuel and lubricants for onsite equipment; and, trucks delivering construction supplies and equipment such as cable, conduits, precast concrete manholes, and horizontal boring equipment. Truck trips for these various purposes would be minimal.

Traffic impacts along the proposed transmission line route will be mitigated by the work that will progress over the route at multiple locations for a period of one to three days, rather than one location being the focus of construction activities for an extended period. Furthermore, not all types of crews will be needed at the same time or location. For example, after the duct bank is

installed at a location, there will be no further need for that activity at that location. Con Edison will coordinate with local jurisdictions, NYSDOT, the Thruway Authority and Westchester County, as applicable, to develop and implement a Maintenance and Protection of Traffic Plan to ensure safe and adequate traffic operations along all roads as well as the temporary relocation, if required, of Bee-Line bus stops along Lincoln Avenue and Cedar Street. All pavement surfaces removed for required excavation will be resurfaced. Appropriate construction practices will be used, such as the use of steel plates to cover the trench, barricades and fencing, to dissuade pedestrians from entering construction zones and to avoid the potential for conflicts associated with pedestrian traffic potentially present along all local roadways. All traffic control measures will be implemented according to the guidelines set forth in Subchapter H "Highway Work Zone Traffic Control" of the NYSMUTCD.

The preferred construction time will be during non-peak load periods to minimize the impacts on the Con Edison transmission system. Work activities are expected to commence in July 2006 and continue through April 2007. Furthermore, it is expected that work activities in support of the proposed transmission line will be performed during normal working hours, Monday to Friday. All proposed work shifts would commence and/or end prior to morning and evening peak periods to avoid impacts to local roadways. During the work period, construction crew availability, and the projected speed of construction, will determine the total number of crews working at one time. For example, it is expected that two to three sets of crews would be installing the trenches, ducts, and manholes at different locations along the right-of-way.

Con Edison will ensure that impacts to the surrounding community will be minimized. For example, if any detector loops at traffic signals are impacted by the construction of the transmission lines, the detector loop will be re-installed.

b. *Operations*

The proposed transmission line will not result in impacts to the local roadway network. With the exception of occasional maintenance activities, no traffic will be generated due to the operation of the transmission line.

Prior to the filing of this Article VII Application, Con Edison contacted the NYSDOT, the Thruway Authority, the Westchester County Department of Public Works, and local representatives to review the proposed Cedar Street Project.

4.8.5 Cumulative Impacts

As the construction of the proposed transmission line will generate minimal traffic, the cumulative impacts of construction will not be significant. It is not anticipated that construction

activities in support of the transmission line will block any travel lanes. Further, the construction will only take place for a very limited period in any single location along the proposed transmission routes. To the extent that there is construction at any given site, it will be temporary and during operations, there will be no long-term traffic impact as a result of transmission line installation.

4.8.6 References

City of Mount Vernon, NY, Code of the City of Mount Vernon, New York, Chapters 227 & 256, General Code Publishers Corp., Updated 04-01-2005, (Supp No. 70).

City of New Rochelle, NY, Code of the City of New Rochelle, New York, Chapters 331 & 281, General Code Publishers Corp., Updated 08 - 15 - 2005, (Supp No. 65), (Zoning Supp No. 10).

New York State Thruway Authority, Work Permit Application, TA-W41338, October 2003.

State of New York Vehicle and Traffic Law – Department of Motor Vehicles.

State of New York Codes, Rules, and Regulations Title 17 Transportation – Department of State.

Transportation Research Board, *Highway Capacity Manual – Special Report 209*, National Research Council, Washington, D.C., 1998.

Village of Pelham, NY, Code of the Village of Pelham, New York, Chapter 90, Updated 11-15-2004, (Supp No. 8).

4.9 Noise

In accordance with PSL §122(1)(C) and 16 NYCRR §§86.5(a), and 86.5(b)(8), this section includes a study of the noise impacts resulting from the construction and operation of the Project. The study identifies the location of any sensitive receptors and describes what, if any, mitigative measures will be implemented to minimize noise during both construction and operation of the Project.

4.9.1 Introduction and Summary of Results

Construction noise-related impacts from the proposed 138 kV transmission line and the immediate addition of a third transformer at the Cedar Street Substation are expected to be minimal. Construction noise, while varying according to the equipment in use, will be mitigated by the attenuating effect of distance; the intermittent and short lived character of the noise; and the use of functional mufflers on all construction equipment. Further, the nature of construction to be performed for the new 138 kV transmission line over a total distance of three miles dictates that construction activities and associated noise levels will move along the corridor and that no one residence will be exposed to significant noise levels for an extended period. When operational, the transmission line will not generate noise.

The Cedar Street Substation is enclosed within a 15-foot high masonry wall, and the Project Phase I transformer will be surrounded on three sides by a masonry block firewall. As a result, the Cedar Street Substation will generate minimal additional noise. The substation is also located adjacent to active railroad tracks and Interchange 16 of the New England Thruway, which contribute to relatively high background noise levels. With the nearest residents to the substation more than 800 feet away, no impacts to these local residences are anticipated.

4.9.2 Laws, Policies and Regulations

The following federal, state or local environmental laws, policies, and regulations were reviewed to determine whether they are applicable to the proposed Project.

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of a Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122 (1)(c), and mandate a description of the studies that have been made of the environmental impact of the transmission facilities.

b. Article VII Regulations

The proposed transmission line is subject to 16 NYCRR Part 86, which requires that an Article VII application include studies of the expected environmental impact of the transmission facilities and identify any impacts/changes that the construction and operation of the transmission facilities might induce. This section discusses the requirements of 16 NYCRR §§86.5(a) and 86.5(b)(8) that includes the environmental impacts and mitigation related to noise disturbance.

c. Local Standards

The noise standards for the City of Mount Vernon, the Village of Pelham, and the City of New Rochelle are discussed in the sections below. There are no known Westchester County, New York State or Federal noise standards applicable to the project.

City of Mount Vernon

The City of Mount Vernon has adopted a noise ordinance that contains both a nuisance and performance, or numerical standard. The nuisance standard generally prohibits any unnecessary noise. The performance standard limits noise, when measured at any residential property, to no greater than 65 dBA between the hours of 8 a.m. and 8 p.m. and 55 dBA between the hours of 8 p.m. and 8 a.m.

Village of Pelham

The Village of Pelham has a general nuisance type ordinance that generally prohibits unreasonable noise. Unreasonable noise includes construction that can be heard over any property line except for the following hours:

- Monday through Friday, excluding holidays, during the hours of 8 a.m. to 6 p.m.
- Saturday during the hours of 10 a.m. to 5 p.m.

City of New Rochelle

The City of New Rochelle adopted an enforceable noise ordinance in 1976, which was amended in 1997. The ordinance contains both a nuisance and performance standard. The nuisance standard generally prohibits any unnecessary noise that "shall mean any excessive or unusually loud sound or any sound which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of a considerable number of persons or which causes injury to animal life or damages to property or business."

The performance standards cover a variety of sources including transportation vehicles, construction equipment, garden tools and recreational vehicles. Maximum noise levels for zoning districts are also defined in the ordinance. Noise levels from any device, when measured at any residential property may not exceed 65 dBA between the hours of 8 a.m. and 10 p.m. and 55 dBA between the hours of 10 p.m. and 8 a.m.

Construction noise is regulated under the ordinance. Construction noise levels between the hours of 8 a.m. to 7 p.m. on weekdays and 10 a.m. to 5 p.m. on Saturdays and Sundays is limited to 70 dBA at 400 feet from the site. No construction that generates an unreasonable noise (i.e., if it can be heard beyond the perimeter of the property from which it originates) is allowed during any other hours.

4.9.3 Existing Conditions

The preferred transmission line route and the existing Washington Street and Cedar Street Substations are located in urban and suburban areas that are traversed by several major transportation corridors, which contribute to the background noise levels. Existing noise sources in the area include vehicular traffic (Hutchinson River Parkway, New England Thruway), railroad operations (Metro North and Amtrak), aircraft and natural sounds (e.g., birds, insects).

4.9.4 Environmental Effects and Mitigation

a. Transmission Facilities

The proposed 138 kV transmission line will be placed within existing roadway rights-of-way. Construction of the transmission line is anticipated to occur over a 6 to 8 month period. Work in the vicinity of any single general receptor along the transmission line route will likely last three days to one week, as construction activities move along the corridor. Construction activities associated with horizontal boring or jacking (to cross the access ramp(s) at Interchange 16 of the New England Thruway), however, may require a one-to-two week timeframe. Construction will typically include the following activities:

- Trenching and duct laying;
- Manhole installation;
- Cable pulling/splicing;
- Horizontal boring/jacking (if required);
- Backfilling and right-of-way restoration;
- Electrical equipment installation; and
- Commissioning and start-up.

For the purposes of this analysis, the aforementioned construction activities have been addressed by construction phases. A variety of construction equipment sources will be associated with each phase. Provided in Table 4.9-1 is a listing of typical ranges of equipment sound levels from the construction equipment associated with each construction phase at a standard distance of 50 feet and a distance of 400 feet.

Table 4.9-1: Construction Phase Noise Levels of the Transmission Line

Construction Phase	Construction Equipment Noise Levels (dBA)	
	50 Feet	400 Feet
Trenching	60 to 90	42 to 72
Duct Laying/Manhole Installation	50 to 90	32 to 72
Backfilling	73 to 84	35 to 66
Cable Pulling/Splicing	50 to 80	32 to 62

Source: Ebasco Environmental –Sound Cable Project (1987).

As presented in the above table, maximum noise levels associated with the construction equipment are anticipated to not exceed 90 dBA at a distance of 50 feet. The noise levels presented in Table 4.9-1 are those that would be experienced by people outdoors. A building will provide significant attenuation of associated construction noise impacts. For instance, sound levels can be expected to be up to 27 dBA lower indoors with windows closed. Even in homes with windows open, indoor sound levels can be reduced by up to 17 dBA (USEPA, 1978).

A significant reduction in the potential impact of construction noise associated with the transmission line construction is that construction will occur over relatively short 50-400 foot stretches. Work in the proximity of any single general location on the transmission line will likely last no more than three days to one week, as construction activities move along the corridor. Therefore, no single receptor will be exposed to significant noise levels for an extended period. Additionally, because construction equipment does not operate continually, construction noise is expected to be intermittent. The construction equipment to be used is similar to that used during typical public works projects (e.g., road resurfacing, storm sewer installation, natural gas line installation, etc.). As a general construction practice, functional mufflers will be maintained on all equipment to maintain noise levels as low as reasonably achievable.

Construction activities associated with horizontal boring or jacking may occur within a one to two week timeframe. Only a limited number of residences in closest proximity to the potential location for this type of construction would be affected by noise generated during the somewhat longer timeframe required for drilling activities.

Once operational, the underground transmission line will not generate noise, and no regular maintenance activities will be necessary for the transmission feeders installed within roadway rights-of-way.

Based on the data presented in Table 4.9-1 above, the estimated construction phase noise levels anticipated during construction of the proposed transmission line are expected to generally be in compliance with all local noise standards.

b. Washington Street Substation

Interconnection of the new 138 kV transmission line at the Washington Street Substation will require only the installation of the duct bank and cable within the substation yard and electrical work at an existing bus position. Therefore, construction noise will be limited in terms of intensity and duration and will have no appreciable affect on the surrounding industrial neighborhood. No additional noise generating equipment will be installed at the Washington Street Substation, so operational noise levels will remain unchanged.

c. Cedar Street Substation

Installation of the Project Phase I transformer at the Cedar Street Substation is expected to occur in the following phases:

- Grading and excavation
- Foundation installation
- Transformer and duct bank installation
- Electrical

Equipment to be used at the Cedar Street Substation will differ somewhat from construction phase to construction phase. In general, heavy equipment (bulldozers, dump trucks, cement mixers) will only be used on a very limited basis during excavation and foundation installation activities. Noise is generated during construction primarily from two sources: 1) diesel engines that power the equipment; and 2) impact noise from pile drivers and jackhammers. Exhaust noise usually is the predominant source of diesel engine noise, and contractors will be required to maintain functional mufflers on all relevant equipment.

Noise levels of construction equipment typically utilized for this type of project are presented in Table 4.9-2 (BBN, 1971). It is important to note that each piece of equipment presented in the table is not used in each phase of construction. Further, any equipment used is generally not operated continuously. Average site sound levels for each phase of construction are presented in Table 4.9-3. The highest site average sound levels (89 dBA at 50 feet) are associated with excavation and pile driving (if necessary). The residential receptors, however, are located at

various distances from the noise locus, with the nearest residential areas being more than 800 feet distant. The expected range of sound levels from the equipment associated with each construction phase are presented below at a standard distance of 50 feet, a distance of 400 feet, and at 800 feet, the approximate distance of the closest residential receptor.

Table 4.9-2: Maximum Noise Levels of Major Construction Equipment for the Cedar Street Substation

Equipment Type	Construction Equipment Noise Levels (dBA)		
	50 Feet	400 Feet	800 Feet
Pile Driver	105	87	81
Crane	83	65	59
Dump Trucks	90	72	66
Roller	89	71	65
Grader	86	68	62
Concrete Mixer	85	67	61
Bulldozers	85	67	61
Pickup Trucks	65	47	41
Backhoes	85	67	61

Source: (BBN, 1971).

Table 4.9-3: Typical Site Average Noise Levels By Construction Activity (dBA)

Construction Phase	50 Feet	400 Feet	800 Feet
Site Clearing	84	66	60
Excavation	89	71	65
Foundations	77	59	53
Building Assembly	84	66	60
Finishing	89	71	65

Source: (BBN, 1971).

Noise levels during construction will vary, depending on which pieces of equipment are operating at any given time. At times, construction noise levels may be at or below ambient noise levels when either quieter equipment is in use, or no equipment is in operation.

Construction noise will be attenuated by distance from the site. Noise levels will be reduced an additional 6 dBA with each doubling of distance (e.g. the maximum 65 dBA at 800 feet sound level due to excavation will be reduced to 59 dBA at 1,600 feet and further reduced to 53 dBA at 3,200 feet, etc.). Other, less significant attenuation factors, such as atmospheric absorption,

vegetative ground cover and the masonry wall that surrounds the existing substation will act to further reduce offsite sound levels. The noise levels presented in Tables 4.9.2 and 4.9.3 are those that would be experienced by people outdoors. A building will provide significant attenuation for those within the structure. Sound levels can be expected to be up to 27 dBA lower indoors with the windows closed. Even in homes with the windows open, indoor sound levels can be reduced by up to 17dBA (USEPA, 1974).

The City of New Rochelle noise standard limits construction noise levels between the hours of 8 a.m. to 7 p.m. on weekdays and 10 a.m. to 5 p.m. on Saturdays and Sundays to 70 dBA at 400 feet from the site. Based on the data presented in Tables 4.9-2 and 4.9-3, it is anticipated that, in general, construction-related noise from the Project will comply with the City standard.

The nearest residences to the Cedar Street Substation are approximately 800 feet distant and the new transformer will be placed within a masonry block firewall within the walled confines of the substation. Consequently, no impacts on ambient noise quality are anticipated from the operations of the Cedar Street Substation. Operational noise levels, at the location of the nearest residential receptors, are expected to comply with the specified City of New Rochelle standards.

4.9.5 References

Bolt, Beranek and Newman, Inc. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

City of Mount Vernon, NY, Code of the City of Mount Vernon, New York, Chapter 178, General Code Publishers Corp., Updated 04-01-2005, (Supp No. 70).

City of New Rochelle, NY, Code of the City of New Rochelle, New York, Chapter 213, General Code Publishers Corp., Updated 08 - 15 - 2005, (Supp No. 65), (Zoning Supp No. 10).

United States Environmental Protection Agency, 1978. Protective Noise Levels. Office of Noise Abatement & Control. Report Number EPA 550/9-79-100. Washington, D. C. 20460.

Village of Pelham, NY, Code of the Village of Pelham, New York, Chapter 68, Updated 11-15-2004, (Supp No. 8).

4.10 Electric and Magnetic Fields

In accordance with PSL §122(1)(c) and 16 NYCRR §86.5(a), this section analyzes the electric and magnetic field ("EMF") impacts associated with the Project's transmission feeders and summarizes the results of calculations of electric and magnetic fields ("EMF") produced during peak load conditions (i.e., worst case load condition). The transmission feeder EMF calculations were performed with EPRI's Underground Workstation program.

4.10.1 Introduction

a. Units of Measure

Magnetic flux densities ("B") are reported using units of gauss ("G"). However, it is usually more convenient to report magnetic fields using milligauss ("mG"), which is equal to one-thousandth of a gauss (i.e., $1 \text{ mG} = 0.001 \text{ G}$). Some technical reports also use the unit Tesla ("T") or microTesla ("μT"; $1 \text{ μT} = 0.000001 \text{ T}$) for magnetic flux densities. The conversion between these units is $1 \text{ mG} = 0.1 \text{ μT}$ and $1 \text{ μT} = 10 \text{ mG}$. Milligauss is the unit most often used to measure the strength of magnetic fields around electric transmission lines.

b. General Description of Magnetic Fields

Any object with an electric charge has a voltage (potential) at its surface and can create an electric field. When electrical charges move together (an electric current) they create a magnetic field, which can exert force on other electric currents. All currents create magnetic fields. Magnetic fields occur throughout nature and are one of the basic forces of nature. The strength of the magnetic field depends on the current (higher currents create higher magnetic fields), the configuration/size of the source, spacing between conductors, and distance (magnetic field strength decreases as the distance from the source increases).

Magnetic fields can be static/unchanging in direction (caused by "direct current", "DC") or changing/alternating in direction ("alternating current", "AC"). Some electrical devices operate on a DC system while others operate on an AC system. The magnetic field from AC sources (such as the electrical equipment in substations) differs from DC fields (like those produced by the Earth) because the field is due to alternating currents ("AC") which changes direction at a rate of 60 cycles per second or 60 Hertz.

The characteristics of magnetic fields can differ depending on the field source. A magnetic field near an appliance decreases rapidly with distance away from the device. The magnetic field also decreases with distance away from line sources, such as power lines, but not as rapidly as it does with appliances. Electric transmission line magnetic fields attenuate at a rate that is inversely proportional to the distance squared, whereas magnetic fields from appliances attenuate at a rate

proportional to the distance cubed. Substation equipment is a mixture of line and point sources. As such, the dependence of the magnetic field versus distance is very complex. For electric transmission lines, EMF levels are highest next to the transmission lines (typically near the center of the electric transmission line right-of-way) and decrease as the distance from the transmission corridor increases.

Magnetic fields cannot easily be shielded. Most materials (such as those that make up buildings, trees, and the ground) do not shield magnetic fields. Ferromagnetic materials (nickel, iron, and cobalt) are a special group of metals that can provide effective shielding. In some cases, the magnetic field can also be shielded with materials that are conductive, like copper or aluminum. In other cases, layers of ferromagnetic and conductive materials are used together to provide shielding.

4.10.2 Laws, Policies, and Regulations

a. Public Service Law

Article VII of the PSL governs the siting of major utility transmission facilities in the State of New York. PSL §122 sets forth the requirements for an application seeking issuance of an Article VII Certificate of Environmental Compatibility and Public Need. The requirements applicable to this Section are set forth in PSL §122(1)(c), and mandate a description of the studies that have been made of the environmental impacts of the transmission facilities.

b. Article VII Regulations

The proposed transmission facilities are subject to 16 NYCRR §86, which requires that an Article VII application include studies of the expected environmental impact of the electric transmission line(s) and identify changes that the construction and operation of these transmission lines might induce.

c. New York State Public Service Commission Standards

The applicable electric field strength standards established by the NYSPSC are set forth in Opinion No. 78-13 (issued June 19, 1978). The magnetic field standards established by the NYSPSC are set forth in the NYSPSC's Interim Policy Statement on Magnetic Fields, issued September 11, 1990, (Interim Policy).

Opinion No. 78-13 established an electric field strength interim standard of 1.6 kV/m for Article VII electric transmission lines, at the edge of the right-of-way, one meter above ground level, with the line at the rated voltage. The Interim Policy establishes a magnetic field strength interim standard of 200 mG, measured at one meter above grade, at the edge of the right-of-way, at the

point of lowest conductor sag. The measurement is based on the expected circuit phase currents being equal to the winter-normal circuit rating.

4.10.3 Transmission Line Analysis

A new underground 138 kV feeder from the Washington Street Substation will supply the new third transformer at the Cedar Street Substation. The 138 kV underground feeder will be connected to a 65 MVA (nameplate rating) transformer, however, for EMF modeling purposes, 80 MVA (maximum capacity) was used for peak load worst-case assessment. The 80 MVA maximum capacity loading represents a worst case operating condition for the 65 MVA nameplate rated transformers, i.e., operation pending emergency replacement of a failed transformer or ancillary equipment in the Substation.

The current proposed design foresees the immediate construction of a single 138 kV electric transmission underground feeder consisting of three individual copper conductor solid dielectric insulated cables housed in buried ducts. The duct bank will include additional conduits as spare capacity for an additional feeder to support future area load growth.

a. Cable Construction

The 138 kV transmission circuit will consist of three individual 1500 kcmil copper conductors with a nominal diameter of 1.3 inches. The cables will be constructed using 725 mils of cross-link polyethylene ("XLPE") insulation and a corrugated aluminum and/or copper sheath. The cable outer diameter over the insulating jacket will be 3.5 inches.

b. Circuit Loading

The 138 kV transmission feeders will each be connected to a 65 MVA (nameplate rating) transformer; however, for EMF modeling purposes, 80 MVA maximum capacity was used for peak load worst-case assessment. On this basis, current in the feeder will be 425 amperes. For the purpose of evaluating magnetic fields, phase A will have a phase angle 0 degrees, phase B will have a phase angle 120 degrees and phase C will have a phase angle 240 degrees. Two configurations are being evaluated for loading conditions.

Case 1a: One cable per phase (3 cables total) with single point sheath bonding carrying 425 amperes per cable phase.

Case 1b: One cable per phase (3 cable phases total) with multi-point sheath bonding carrying 425 amperes per cable phase.

Case 2-a: Two cables per phase (6 cable phases total) with single-point sheath bonding carrying 425 amperes per cable phase.

Case 2-b: Two cables per phase (6 cable phases total) with multi-point sheath bonding carrying 425 amperes per cable phase.

c. Calculation Procedure

Magnetic field calculations are typically done by evaluating Biot-Savart's law and superposition of the magnetic fields generated by each current carrying element.

For the purpose of the calculations prepared by Con Edison, each phase conductor is assumed to be infinitely long and carrying current with the magnitude and phase angle specified. For the cases where the cable metallic sheath is multi-point grounded, circulating current will also be introduced in the concentric neutral sheath. EPRI's Underground Workstation computer program has been used for the magnetic field calculations for the 138 kV transmission feeders.

d. Results

The results of the calculations are shown in Table 4.10-1. The table shows the sheath connection ("SPB" – "Single Point Bonding", "MPB" – "Multi Point Bonding") for each case. All calculations were made along a line perpendicular to the underground cables and at 3.28 feet (39.4 inches or 1 meter) above ground level. For all cases, balanced three phase loads were assumed.

Table 4.10-1: Calculated Peak Magnetic Field for Single/Multi Point Bonding

Case	Number of 3 Phase Circuits (3 Cables/CKT)	Number of Cables	Circuit Load per Phase (A)	MAGNETIC FIELD (mG)		
				Maximum	50 ft. from Center Line	Shield Ground
138 kV supply to the Cedar Street Substation						
1-a	1	3	425	75.3	1.6	SPB ¹
1-b	1	3	425	1.3	0.03	MPB ²
2-a	2	6	425	17.1	0.5	SPB
2-b	2	6	425	0.6	0.05	MPB

Notes: ¹ SPB – Single Point Sheath Bond

² MPB – Multi-Point Sheath Bond

Source: Con Edison, September 2005.

e. Standards

There are no federal standards for 60 Hz electric and magnetic fields. A few states, including New York, have electric and magnetic field standards for transmission lines. The New York State limits electric and magnetic field strength to 1.6 kV/m and 200 mG at the edge of right-of-way. Where there is no edge of right-of-way defined, the field level shall not exceed the value specified above at a horizontal distance of (a) 75 feet from the centerline of the transmission circuit operating at 345 kV, (b) 60 feet from the centerline of the transmission circuit operating at 230 kV and (c) 50 feet from the centerline of the transmission circuit operating at a lower voltage.

The International Commission on Non-Ionizing Radiation Protection ("ICNIRP") published EMF guidelines in 1998. Those guidelines for 60 Hz fields are:

Table 4.10-2: ICNIRP Exposure Characteristics to Electric and Magnetic Fields

Exposure Characteristics	Electric Field Stress (kV/m)	Magnetic Flux Density (mG)
General Public	4.2	833
Occupational	8.3	4200

The American Conference of Governmental Industrial Hygienists has also established EMF threshold limits for occupational exposure. The electric field limits are 25 kV/m for all workers and 1 kV/m for workers with cardiac pacemakers. Similarly, the magnetic field limits are 10,000 mG for all workers and 1,000 mG for workers with cardiac pacemakers.

f. Conclusion

The cables will not produce an electric field external to the concentric cable shield and metallic sheath. With both multi-point bonded and single point bonded configurations, the shield and sheath are grounded at a minimum of one location along each section. Therefore, no electric field from the energized phase conductor can exit outside of the grounded shield and sheath.

The magnetic field levels produced by the proposed underground cable circuit(s) at 1 meter above ground at all locations along the proposed cable route, including directly above the cables, would not exceed any of the limits listed above.

4.10.4 References

American Conference of Governmental Industrial Hygienists ("ACGIH"), "Threshold Limit Values for Chemical Substances and Physical Agents", Cincinnati, ISBN 1-88-2417-40-2, 2001.

International Commission on Non-Ionizing Radiation Protection ("ICNIRP"), "Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (Up To 300 Ghz)", Health Physics, 74: 494-522, 1988.

New York State Public Service Commission, "Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities", September 11, 1990.

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Cedar Street Project

Exhibit 5

Design Drawings

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EXHIBIT 5: DESIGN DRAWINGS

This Exhibit addresses the requirements of 16 NYCRR §86.6.

5.1 Introduction

Construction of the proposed transmission line will involve the installation of underground, solid dielectric 138 kV cable and associated manholes. The transmission line will be installed wholly within existing Con Edison property, public roadway rights-of-way, and within easements to be acquired from the NYSDOT and the NYSTA.

Additional 138 kV equipment will be added at the Con Edison Cedar Street and Washington Street Substations to accommodate the proposed transmission feeders that will originate from the Washington Street Substation. A third transformer and associated equipment will be installed at the Cedar Street Substation to connect to the proposed Phase I feeder. Additional equipment to support the third transformer is anticipated to include a circuit switcher, circuit interrupter, potheads and switchgear. Further modifications to the existing control room at the Cedar Street Substation will be required for the operation and monitoring of the new equipment. This new work will be conducted within the existing footprint and property lines of the Washington Street and Cedar Street Substations. As part of the proposed construction activities, Con Edison proposes to install an additional transformer pad at its Cedar Street Substation to accommodate prospective installation of a fourth transformer in connection with the second Project feeder (Phase II) expected to serve future area load growth.

5.2 Design Standards

The transmission line and equipment additions to the Washington Street and Cedar Street Substations will be designed to meet the New York Independent System Operator's (NYISO) design requirements while Con Edison's design criteria for the additional 138/13 kV transformer at the Cedar Street Substation is in accordance with Con Edison's Substation and Engineering Department Engineering Design Guideline Specification EI-2002, Rev. 3. This Guideline specifies that a substation's components and systems shall meet and conform to all applicable ANSI, EIA, IEEE, NEMA and OSHA standards, as well as all Con Edison specifications and procedures. In addition, the proposed facilities will meet all guidelines or standards of the Association of Edison Illuminating Companies (AEIC) Standard CS-7; Insulated Cable Engineers Association (ICEA) S-66-524; and American Society of Testing and Materials (ASTM) Standard B-3. System design will comply with applicable sections of the latest version of the National Electrical Code (NEC) and National Electrical Safety Code (NESC).

5.3 Solid Dielectric 138 kV Cable Design

The Phase I 138 kV feeder will consist of three-single conductor solid dielectric cables, each consisting of a 1,500,000 circular mils (1,500 kcmil) copper conductor (approximately 1.3 inches in diameter) and cross-linked polyethylene insulation surrounded by a metallic sheath and a polyethylene outer jacket. The total outer diameter of each cable will be approximately 3½ inches. Figure 5-1 shows a cross-sectional diagram of a typical cable. The cable design and performance will meet all aspects of the latest version of Association of Edison Illuminating Companies (AEIC) Standard CS-7, Insulated Cable Engineers Association (ICEA) Standard S-66-524, and American Society for Testing & Materials (ASTM) Standard B-3. System design will comply with applicable sections of the National Electrical Code (NEC) and the National Electrical Safety Code (NESC). Each cable will be installed in a 6-inch fiberglass reinforced epoxy (FRE) conduit. Three conduits will be installed for a future feeder that will run from Washington Street to Cedar Street. The conduits will be arranged in a duct bank with the eight conduits for the proposed feeder circuit and spare circuit buried approximately 3 feet below grade (5 feet within NYSDOT and NYSTA rights-of-way).

Due to limitations on the continuous available length of solid dielectric cable, manholes will be installed approximately every 1500 to 2000 feet along the routes. The manholes will serve as locations for pulling the solid dielectric cable through the individual conduits and for splicing the cable. The manholes will be underground structures approximately 18 feet long by 8 feet wide, accessible via two manholes and set flush to grade. The precise placement of each manhole will be determined as part of the final design of the transmission lines.

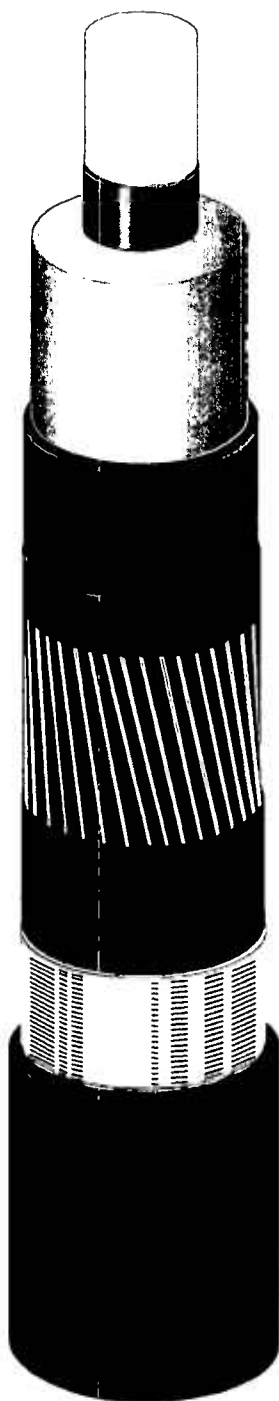
5.4 Washington Street 138 kV/13.8kV Transmission Substation

The Washington Street 138kV/13.8 V Substation is illustrated in the following drawings: Figure 5-2 (Drawing A-131050) provides a one line diagram of the Washington Street Substation, Figure 5-3 (Drawing A-151118-06) provides a general arrangement of the substation, and Figure 5-4 (Drawing 349574-00) provides equipment arrangement and elevation for transformer #1 and shows the position of the new 138 kV feeder terminations.

5.5 Cedar Street 138 kV/13.8kV Transmission Substation

The Cedar Street 138 kV/13.8kV Substation is a walled area substation that consists of two transformer banks with a proposed initial equipment build-out to a total of five transformer banks. Major equipment includes transformers, potheads, circuit switches, switchgear and other supporting facilities.

Figure 5-5 (Drawing 217813-MP) shows an electrical one-line diagram for the Cedar Street Substation. Figure 5-6 (Drawing 217755-12) provides a general arrangement for the proposed Cedar Street Substation improvement. Figure 5-7 (Drawing 350386-00) provides a plan and elevation drawing for the new third transformer at the Cedar Street Substation. Additional design drawings for the Cedar Street Substation, including a utility plan, a grading and drainage plan, and soil erosion and sedimentation control plan will be provided as part of the Environmental Management and Construction Plan to be submitted to the NYSPSC in a future filing.



1X 1500 KCMIL CABLE DESIGN

138 kV XLPE-INSULATED CABLE

Designation	FXLJ 1x1500	kcmil
Rated voltage	80/138	kV
Maximum system voltage	145	kV
Impulse level	650	kV
CONDUCTOR		
- type	round, compacted longitudinal water sealed	
- material	Copper	
- cross-section	1500	kcmil
- diameter	1.7" (43.1 mm)	inches
CONDUCTOR SCREEN		
	Thickness semi-cond. 40	mils N
INSULATION		
- type	triple extruded, dry cured	
- material	XLPE	
- thickness	725 (18,4 mm)	mils
- diameter over insulation	2,76" (70,0 mm)	inches
INSULATION SCREEN		
- diameter over ins. screen	Thickness semi-cond. 50 2,85" (72,4 mm)	mils inches
METALLIC SCREEN		
- type	Cu-wires, longitudinal waterblock	
-diameter of wires	44 (1,11 mm)	mils
-number of wires	74	pcs
-Cross-section of screen	140	kcmil
-OUTER COVER		
- material	laminated Al and PE	
- thickness Al	8 (0,2 mm)	mils
- thickness PE	110 (2,8 mm)	mils
- outer diameter	3500 (88.9 mm)	mils
COMPLETE CABLE		
- weight	7,7 (11,5 kg/m)	lb/foot

All values are nominal.

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Westchester County, NY

Figure 5-1. Typical Transmission Line Cable Cross-
Section

Source: Con Edison/ABB High Voltage Cables Cable design 2001-02-07

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Cedar Street Project

Exhibit 6

Economic Effect of Proposed Facility

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EXHIBIT 6: ECONOMIC EFFECTS OF PROPOSED FACILITY

This Exhibit addresses the requirements of 16 NYCRR §86.7.

6.1 Introduction and Summary of Findings

Construction of the Cedar Street Project will require a contract work force of fewer than 80 workers (contractors and/or Con Edison employees) in various disciplines assigned to carry out the process of trenching, duct bank installation, and manhole installation. Installation of the third transformer at the Cedar Street Substation will require a contract work force of approximately 30 workers (contractors and/or Con Edison employees) for up to 12 months, with a peak construction staff of 40 workers for a period of approximately 3 months. Construction activities at the Cedar Street Substation site will include site preparation for the transformer, switchgear, potheads and associated equipment. Con Edison employees will conduct the cable pulling and splicing and will complete the electrical transmission interconnections and installation of electrical equipment at both substations.

Specialized teams varying in size from three to six workers will perform the Cedar Street Project transmission line work. Multiple three or four person crews working at various locations along the rights-of-way will complete the trenching, duct bank installation, and splicing. Special teams may work independently at any locations requiring specialized construction techniques, such as the crossing of the New England Thruway where directional drilling or horizontal boring may be required. The post construction operation and maintenance of the Washington Street and Cedar Street Substations will require no additional work force other than the Con Edison personnel currently employed.

The Project's cost and the relatively short duration of its installation will not impact the local economy sufficiently to induce any significant changes in the local residential, commercial, or industrial land use patterns. In addition, installation of the cable within the public roadway rights-of-way and other existing rights-of-way will not disrupt any retail establishments or otherwise cause a loss of business income. Therefore, no mitigation measures are required.

6.2 Demographics

The Cedar Street Project will be located within the City of Mount Vernon, Village of Pelham and City of New Rochelle, in Westchester County, New York. Because of the urban nature of the project area, a relatively large number of people live within one mile of the Project's transmission line and substations. The population of the municipal jurisdictions affected by the Cedar Street Project, according to Census 2000 tabulations, is presented in Table 6-1.

Table 6-1: Population of Communities Within the Cedar Street Project Area

Municipal Jurisdiction	Population
Westchester County	923,459
City of Mount Vernon	68,381
Village of Pelham	6,400
City of New Rochelle	72,182

Source: U.S. Bureau of the Census, 2000.

6.3 Construction Effects and Mitigation

Land use pattern changes are typically induced by a significant change in one or more influential variables such as: 1) large-scale physical improvements to some aspect of the local infrastructure; 2) a change in the regulatory environment; or 3) major employment and/or income growth trends in the local economy. Given an adequate level of demand, such changes tend to enhance land for development, induce construction that responds to the demand, and hence cause changes in residential, commercial and/or industrial land use patterns.

Because the transmission line will be placed underground in existing public rights-of-way, there will be no perceptible change in local infrastructure. In addition, the improvements at the Cedar Street Substation will not be visible since they will be enclosed within a walled structure. The increased reliability and capacity brought by the Project to the local electric distribution system will support continued growth in the study area. Therefore, the Project itself will not directly induce any land use changes or land development.

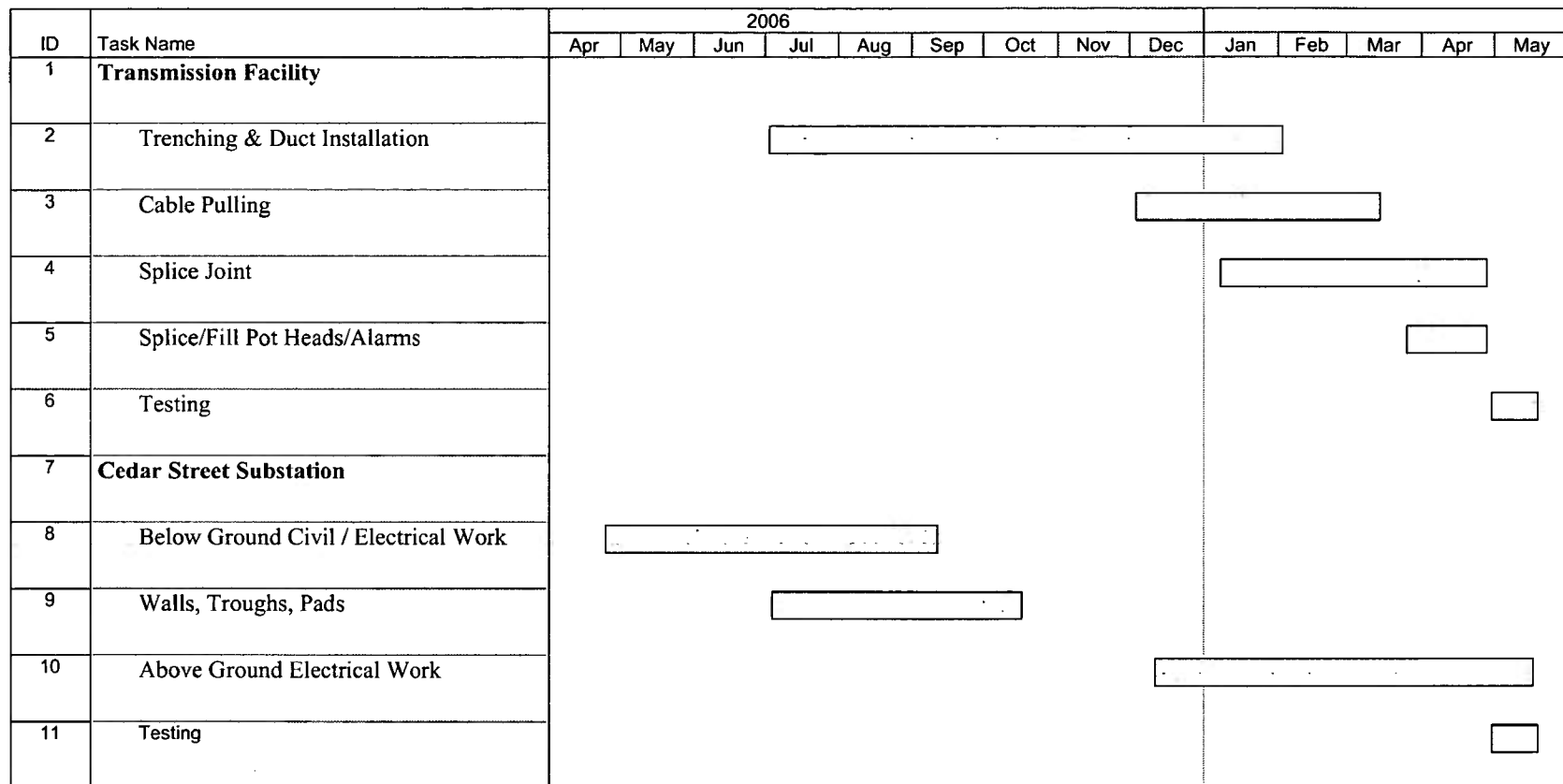
6.3.1 Construction Schedule and Major Phases

The overall construction period for the proposed underground transmission line is estimated to be approximately 8 to 10 months. The major overlapping phases of the transmission line construction and the approximate durations are listed below and illustrated on Figure 6-1:

- Trenching/Duct Bank Installation 7 months
- Cable Pulling/Splicing 3 months
- Splice Joints 4 months
- Splice/Fill Pot Heads/Alarms 1 month
- Testing 1 month

Figure 6-1 Proposed Construction Schedule

**Consolidated Edison Company of New York
Cedar Street 138 kV Transmission Line and Substation**



6.4 Operational Effects and Mitigation

The transmission line does not require a full-time work force for its operation and maintenance. Therefore, there will be no direct economic impact from the operation of the line. Its operation will be underground in a paved or otherwise maintained right-of-way, which will obviate any direct physical impact on adjoining land uses.

The Project is an essential reinforcement of the electrical distribution system that will support the long-term economic health and growth of Westchester County and constitutes its principal contribution to the economy of Westchester County.

For the reasons cited above, construction and operation of the Cedar Street Project will cause no foreseeable alterations to the residential, commercial, or industrial land use patterns in the proximate area. Accordingly, no mitigation is necessary.

References:

Census 2000 Website

<http://quickfacts.census.gov/qfd/states/36000.html>

City of Mount Vernon Website:

<http://www.ci.mount-vernon.ny.us>

City of New Rochelle Website:

<http://www.newrochelleny.com/>

Village of Pelham Website:

<http://www.pelhamgov.com/>

Westchester County Planning Department Website:

<http://www.westchestergov.com/planning/>

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit 7

Local Ordinances

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EXHIBIT 7: LOCAL ORDINANCES

This Exhibit addresses the requirements of 16 NYCRR §86.8.

7.1 Introduction

This Exhibit identifies the local ordinances deemed applicable or potentially applicable to the construction and operation of the Cedar Street Project. Under Public Service Law §130, no municipality or agency thereof that has received notice of the filing of an Article VII application may require any approval, consent, permit, certificate, or other condition for the construction or operation of a major facility with respect to which an application for an Article VII certificate has been issued. Thus, in accordance with PSL §130, Con Edison will not be applying for local approvals or permits in connection with the Project. With the exception of specified local laws or regulations described below, for which waivers are being requested from the Public Service Commission, the Project will comply with the substantive requirements of all applicable local laws, rules and regulations.

The following local ordinances were reviewed:

- Westchester County Code
- City of Mount Vernon
- Village of Pelham
- City of New Rochelle

7.2 Westchester County Code

Chapter 693—Water Conservation

- § 693.11 Restricts water usage during droughts

Chapter 712—Use of County-owned Property

- § 712.191 Prohibits the disturbance of any County-owned property
- § 712.311 Prohibits disturbance of trees, shrubs, and grass
- § 712.314 Prohibits disturbance of certain trees
- § 712.475 Prohibits vehicle idling
- § 712.531 Prohibits stopping and parking vehicles in certain areas

Chapter 803—Construction of Buildings and Structures

- § 803.21 Imposes conditions on driveways and traffic
- § 803.31 Imposes drainage requirements
- § 803.41 Imposes roadway requirements

Chapter 813—Road Construction Specifications

- § 813.51 Imposes conditions on work

- § 813.71 Restricts storage of material on County roads to 20% of area or 100 feet in length

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County. Con Edison's most recent ten-year load forecast projects a 6-megawatt overload on the remaining Cedar Street transformer as early as summer 2007. This projected overload condition at Cedar Street, if left uncorrected, would threaten network reliability in southeastern Westchester County and Con Edison's customers served from this substation. In an effort to complete the Cedar Street Project expeditiously to ensure that the required improvements are in place by summer 2007, Con Edison will seek to install over 100 feet of the transmission line per day, potentially requiring storage of materials in an area exceeding 100 feet in length. Allowing storage in excess of 100 feet will promote the rapid completion of construction and minimize impacts on traffic. To ensure safe and adequate traffic operations along County roads during construction, Con Edison will implement a Maintenance and Protection of Traffic Plan. Accordingly, Con Edison believes that this Westchester Code section is unduly restrictive and requests that its application be waived.

- § 813.81 Imposes conditions on use of construction equipment
§ 813.91 Prohibits damage to trees
§ 813.101 Regulates curb cuttings

7.3 City of Mount Vernon

<u>Chapter 178</u>	<u>Noise</u>
§178-4	Prohibits excessive, unnecessary and unusually loud noise
§178-4.10	Prohibits use of air compressors at greater than 20 db
§ 178-4.11	Prohibits use of certain pavement breakers
§ 178-4.14A	Prohibits excessive noise in residential areas
§ 178-4.14B	Prohibits excessive noise in commercial areas
§ 178-4.14C	Prohibits excessive noise in manufacturing areas
§ 178-4.14D	Prohibits excessive noise in construction area
§ 178-4.14E	Prohibits excessive noise in noise-sensitive zones

The Project is designed to meet both near-term and anticipated long-term electric load growth in southern Westchester County and is intended to comply with the City of Mount Vernon noise regulations. However, to maintain network reliability and the provision of reliable electric service to Con Edison's customers who are served by the Cedar Street Substation, Con Edison requires the ability to extend construction activities beyond the hours prescribed in these sections to ensure that the required improvements are in place by summer 2007.

Accordingly, Con Edison believes that §§178-4.14A-E are unduly restrictive and requests that their application be waived.

Chapter 227 Streets and Sidewalks

- § 227-12 Regulates the construction, removal, replacement and repair of sidewalks, curbs, and driveways
- § 227-14 Requires adequate protection and minimal inconvenience of pedestrian and vehicular traffic for sidewalk work
- § 227-22 Requires written notice to any Company whose pipes, conduits, or other structures are in the street in the work area
- § 227-23 Requires adequate protection and minimal inconvenience of pedestrian and vehicular traffic for street work
- § 227-25 Regulates the placement of excavated materials
- § 227-28 Regulates backfilling of excavations
- § 227-35 Regulates temporary resurfacing after backfilling an excavation
- § 227-36 Regulates concrete pavement resurfacing
- § 227-37 Regulates bituminous pavement resurfacing
- § 227-38 Prohibits certain street obstructions
- § 227-47 Requires adequate protection and minimal inconvenience of pedestrian and vehicular traffic for street obstructions
- § 227-50 Prohibits the opening of newly paved streets for a period of three (3) years

The Project is intended to comply with the City of Mount Vernon street and sidewalk regulations. However, Con Edison requires the ability to open streets paved within the last three years. The criteria considered by Con Edison in selecting the preferred route is detailed in Exhibit 3, Alternatives. Streets that are disturbed during construction of the Project, will be restored by Con Edison in accordance with applicable requirements. Inasmuch as portions of the roadways that comprise the preferred transmission route may have been paved within the last three years and would need to be disturbed as part of the installation of the Project, which is proposed to ensure network reliability in southeastern Westchester County, Con Edison believes that §227-50 is unduly restrictive and requests that its application be waived.

Chapter 252 Trees

- § 252-2 Restricts cutting and pruning of trees
- § 252-3 Prohibits destruction and removal of trees
- § 252-8 Prohibits placement of wires or other conductors of electricity in a manner that will damage or destroy trees.

7.4 Village of Pelham

Chapter 33 Excavation and Digging

- § 33-11 Regulates the placement of excavated materials

Chapter 35 Fire Prevention

§ 35-16 Imposes restrictions on welding and cutting

Chapter 82 Solid Waste

§ 82-9 Requires that site be kept clear of garbage and rubbish

Chapter 68 Peace and Good Order

Article VII Noise Control

§ 68-26 Prohibits unreasonable noise

§ 68-26A Prohibits construction activities

§ 68-26B Prohibits excessive noise from blasting, jack hammering, pile driving and rock crushing

§ 68-26C Restricts the operation of power tools or equipment

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County and is intended to comply with the Village of Pelham noise regulations. However, to maintain network reliability and the provision of reliable electric service to Con Edison's customers who are served by the Cedar Street Substation, Con Edison requires the ability to extend construction activities beyond the hours prescribed in these sections to ensure that the required improvements are in place by summer 2007. Accordingly, Con Edison believes that §§68-26A-C are unduly restrictive and requests that their application be waived.

7.5 City of New Rochelle

Chapter 111 Building Construction

§111-23 Requires written notice of an excavation to the owner of each neighboring building or structure if the safety of the building or structure may be affected

Chapter 147 Fire Prevention

§ 147-14 Regulates the storage of Hazardous Materials at the site

Chapter 213 Noise

§ 213-4 Prohibits unreasonable noise

§ 213-14 Prohibits use of air compressors at greater than 20 db

§ 213-14 Prohibits use of emergency generators at greater than 70 db

§ 213-15 Prohibits use of certain pavement breakers

§ 213-19 Prohibits excessive noise in residential areas

§ 213-20 Prohibits excessive noise in commercial areas

§ 213-21 Prohibits excessive noise in manufacturing areas

§ 213-22 Prohibits excessive noise in construction area

§ 213-23 Prohibits excessive noise in noise-sensitive zones

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County and is intended to comply with the City of New Rochelle noise regulations. However, Con Edison's most recent ten-year load forecast projects a 6-megawatt overload on the remaining Cedar Street transformer as early as summer 2007. This projected overload condition at Cedar Street, if left uncorrected, would threaten network reliability in southeastern Westchester County and Con Edison's customers served from this substation. Therefore, to expedite construction of the Project in an effort to ensure that the required transmission improvements are in place by summer 2007, Con Edison requires the ability to extend construction activities beyond the hours prescribed in these sections. Accordingly, Con Edison believes that §§213-19-23 are unduly restrictive and requests that their application be waived.

Chapter 281 Streets and Sidewalks and Public Places

- § 281-1 Prohibits the disposal of dirt and waste on public streets
- § 281-2 Prohibits placement of offensive material on the public streets or in a storm drain
- § 281-10 Prohibits the opening of newly paved streets for a period of three (3) years

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County and is intended to comply with the City of New Rochelle street and sidewalk and public places regulations. However, Con Edison requires the ability to open streets paved within the last three years. The criteria considered by Con Edison in selecting the preferred route is detailed in Exhibit 3, Alternatives. Inasmuch as portions of the roadways that comprise the preferred transmission route may have been paved within the last three years and would need to be disturbed as part of the installation of the Project, which is proposed to ensure network reliability in southeastern Westchester County, Con Edison believes that §281-10 is unduly restrictive and requests that its application be waived.

- § 281-33 Prohibits street openings, street obstructions, or maintenance operations in streets contiguous to any commercial districts or any designated county roads from the second Monday in November through the first of January or any day during the week immediately preceding Easter Sunday.

The Project is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County and is intended to comply with the City of New Rochelle street and sidewalk and public places regulations. Con Edison's most recent ten-year load forecast projects a 6-megawatt overload on the remaining Cedar

Street transformer as early as summer 2007. This projected overload condition at Cedar Street, if left uncorrected, would threaten network reliability in southeastern Westchester County and Con Edison's customers served from this substation. Therefore, to ensure that the required transmission improvements are in place by summer 2007, Con Edison requires the ability to open streets during the dates restricted in § 281-33. Accordingly, Con Edison believes that §281-33 is unduly restrictive and requests that its application be waived.

- § 281-40 Regulates the clean up and removal of excavated material from the site
- § 281- 42 Regulates the construction, removal, repair, and replacement of sidewalks, curbs, and driveways
- § 281-43 Regulates street openings
- § 281-44 Regulates backfilling of excavations

Chapter 301 Trees and Shrubs

- § 301-4 Prohibits destruction, cutting, and injuring trees, plants, and shrubs
- § 301-6 Prohibits allowing deleterious substances from coming into contact with soil surrounding trees, plants, and shrubs in a manner that will destroy or injure them
- § 301-7 Prohibits placement of impervious material that restricts water to trees, plants, and shrubs in a manner that will destroy or injure them
- § 301-8 Prohibits placement of wires or other conductors of electricity in a manner that will damage or destroy trees
- § 301- 9 Restricts attaching ropes, chains, and signs to trees
- §301-11 Requires protection of trees during construction

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit 8

Other Pending Filings

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EXHIBIT 8: OTHER PENDING FILINGS

This Exhibit addresses the requirements of 16 NYCRR §86.9.

This Exhibit identifies and describes known pending applications or filings, if any, of the Applicant, or others, related to the subject matter of this Application as filed with the Commission.

In conjunction with the design, construction and operation of the proposed facilities, Con Edison will seek certain permits from other State agencies outside the scope of Public Service Law Article VII. These regulatory approvals are discussed below.

8.1 Construction-Related Regulatory Filings

8.1.1 New York State Department of Transportation – Highway Crossing and Utility Work Permits

Construction of the proposed transmission line will involve the crossing of the Hutchinson River Parkway in southern Westchester County via an existing bridge (Lincoln Avenue). Preliminary plans include the placement of the duct bank within the roadway or sidewalk of the bridge with all construction from above rather than below the bridge. With this scenario, traffic along the Hutchinson River Parkway would not be affected, but Highway Crossing and Utility Work permits may still be required from the NYSDOT, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. Upon further evaluation, if the required duct bank cannot be placed within the existing bridge structure, the proposed feeders would be installed beneath the Parkway via directional drilling or horizontal boring in a manner acceptable to the NYSDOT. That scenario would require a NYSDOT Highway Crossing Permit and approval for work within state highway rights-of-way or in accordance with a Utility Work Permit. The specific location and engineering design for the crossings would be determined in consultation with the NYSDOT and permit applications, if required, would be filed by Con Edison with the NYSDOT for the work. Con Edison would fully comply with the requirements set forth in a NYSDOT Highway Crossing Permit and Utility Work Permit for the Project. The Applicant would also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the Hutchinson River Parkway.

8.1.2 New York State Thruway Authority – Occupancy and Work Permits

Construction of the proposed transmission line will require crossing the New England Thruway via an existing entrance ramp underpass at Interchange 16. The proposed route also crosses a southbound exit ramp. Construction within the NYSTA right-of-way and the installation of the

proposed feeder within the Thruway entrance ramp will require Occupancy and Work Permits from the NYSTA, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. Con Edison will fully comply with the requirements set forth in the NYSTA Occupancy and Work Permits. The Applicant will also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the New England Thruway.

8.1.3 *Metropolitan Transit Authority*

Construction of the proposed transmission line will require crossing under the Metro-North Railroad at two locations: the Bradford Road underpass in Mount Vernon, and the Cedar Street underpass in New Rochelle. Approvals may be required from the Metropolitan Transit Authority (MTA – operator of the Metro-North Railroad) for the installation of the proposed transmission line beneath the Metro-North Railroad line. Con Edison will fully comply with the requirements set forth in any MTA permit for the Project, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. In addition, construction activities will be coordinated with MTA to ensure railroad operations are not disrupted.

8.1.4 *Amtrak*

Construction of the proposed transmission line will require crossing under the Amtrak railroad line in New Rochelle via the Cedar Street underpass. Con Edison will seek approvals from Amtrak for the installation of the proposed transmission line beneath the Amtrak railroad line, consistent with the ongoing jurisdiction of the Commission under PSL Article VII. Con Edison will fully comply with the requirements set forth in any Amtrak permit for the Project. In addition, construction activities will be coordinated with Amtrak to ensure that railroad operations and freight movements are not disrupted.

8.2 *Operational Approval*

8.2.1 *New York State Department of Environmental Conservation – SPDES Stormwater Permit*

The operations of the Cedar Street Substation are covered under the individual SPDES Permit No. NY 0267805. The permit allows Con Edison to discharge industrial storm water to the 24-inch County storm sewer for ultimate discharge to the Long Island Sound in accordance with local and state standards. Con Edison proposes to release the storm water collected in the new transformer containment unit to the existing oil/water separator which has adequate available capacity to handle the additional storm water loading generated by the new transformer containment unit as well as the oil released as a result of a catastrophic transformer failure. The

operations of the Cedar Street Substation will require modification of the existing SPDES Permit.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit 9

Cost of Proposed Facilities

EXHIBIT 9: COST OF PROPOSED FACILITIES

This Exhibit addresses the requirements of 16 NYCRR §86.10(a).

9.1 Capital Costs (§86.10(a))

A capital cost estimate of the Cedar Street Project is provided in Table 9.1.1.

The cost estimate covers approximately 3.0 miles of 138 kV solid dielectric cables installed in conduit/duct bank installation along a single route that originates at the Washington Street Substation in the City of Mount Vernon and terminates at the Cedar Street Substation in the City of New Rochelle; associated improvements at both the existing 138/13kV Washington Street Substation and 138/13kV Cedar Street Substation. The Cedar Street Substation improvements will consist of the installation of a third transformer and associated equipment including a circuit switcher, potheads, and switchgear. These improvements would be wholly located within the existing walled area that comprises the Cedar Street Substation. The Washington Street Substation installation will include the addition of circuit switchers, potheads, relays, and other miscellaneous control wiring, conduit, and cable.

9.2 Sources of Information (§86.10(b))

The costs presented in Table 9.1.1 are based upon Con Edison's experience with similar transmission line and substation construction projects in New York, and particularly in Westchester County. Labor costs for excavation, conduit/duct installation, backfilling, repavement, cable pulling and testing, etc., are based upon Con Edison's experience and/or other actual costs incurred for other recent New York and Westchester County construction projects. Easement costs are estimated based upon fair market value assessments obtained by Con Edison. Actual costs will be predicated on final agreements negotiated and formally executed by and between Con Edison and other parties as necessary.

Recent cost data for similar projects is included in Table 9.1.1.

Table 9.1.1. Estimated Capital Costs

Item	Description	Estimated Cost
1	Easement and Rights-of-Way Agreements and Surveys	\$0
2	Materials and Supplies - Cables, Splices and Associated Equipment	\$4,443,961
3	Labor (Con Edison)	\$2,998,494
4	Construction - Contracts	\$21,030,665
5	Purchased Equipment - Transformer, 138/13 kV (1) - Circuit Switches, Interrupters (1) - 13 kV Switchgear, Control Room Equipment, Fire Protection - Bus Duct, Pothead Stands, Aerial Cable, Batteries and Test Set - 138 kV Circuit Breakers, Disconnect Switches	\$5,697,479
6	Other Direct Costs including Permit Fees, Surveying, Security Services, Vendor Services, Inspection Costs, etc.	\$800,500
7	Contingencies ranging from 5 to 20 percent	\$9,445,100
8	Escalation at 4 percent	\$1,039,900
9	Administrative Overhead, including Engineering Costs, Fees for Legal and Other Services and Allowance for Funds During Construction	\$11,215,957
	Total Estimated Cost*	\$56,672,056

* Total Estimated Cost Reflects Rounding.

**Exhibit E-1 Description of
Proposed Facilities**

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-1

Description of the Proposed Transmission Facilities

EXHIBIT E-1: DESCRIPTION OF THE PROPOSED TRANSMISSION FACILITIES

This Exhibit addresses the requirements of 16 NYCRR §88.1.

Con Edison is proposing to construct and operate a new underground 138 kV electric transmission line along a preferred route in southeastern Westchester County, New York. The transmission line will contain a maximum of two feeders and will connect Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with Con Edison's 138/13.8 kV Cedar Street Substation in the City of New Rochelle. One feeder will be constructed immediately and will connect to a new transformer at the existing 138/13.8 kV Cedar Street Substation (Phase I). The transmission line will consist of three 138 kV single-phase copper conductors with solid dielectric insulation housed in a buried duct bank. The duct bank will be designed to have spare capacity to allow for future installation of the second feeder to support expected area load growth (Phase II). An additional transformer will be installed at the Cedar Street Substation at such time as the Phase II feeder is determined necessary to serve area load growth. The preferred route for the proposed transmission line is shown in Figure 2-1.

The Project's transmission line will be installed primarily within the curb-to curb portion of the rights-of-way of public roadways. The proposed route for the transmission line begins at Con Edison's Washington Street Substation and heads east along Hartford Avenue to south Columbus Avenue, then continues north along South Columbus Avenue to the intersection with Beechwood Avenue. The route turns east and continues along Beechwood Avenue to the intersection of Bradford Road. At Bradford Road the route travels northeast and passes underneath the New Haven Line of the Metro North Railroad and enters Wilson Woods Park. The route continues northeast through the park along Wilson Woods Park Road to the intersection of Lincoln Avenue, at which point the route continues east, crossing the Hutchinson River Parkway and Hutchinson River via the existing Lincoln Avenue bridge, and continues east along Lincoln Avenue to the intersection with North Avenue. East of North Avenue, Lincoln Avenue becomes Manor Place. The route continues northeast through the North Avenue intersection onto Manor Place to The Circle. The route then travels south along The Circle turning northeast along Manhattan Avenue and southeast onto vacant New York State Thruway property, adjacent to a the southbound exit lane of Interchange 16 of the New England Thruway (I-95). The route continues southeast crossing both southbound exit and entrance lanes of the thruway and passes under the New England Thruway and under Metro-North's New Haven Line (which is also used by Amtrak between New Rochelle and New Haven) to the intersection of Commerce Street and Cedar Street, at which point the route turns south and continues along Commerce Street to the gated driveway and into the walled Cedar Street Substation.

The 138 kV Phase I feeder will consist of three single-phase solid dielectric cables, each consisting of a 1,500,000 circular mils (1,500 kcmil) copper conductor (approximately 1.3 inches in diameter) and cross-linked polyethylene insulation surrounded by a metallic sheath and a polyethylene outer jacket. The total outer diameter of each cable will be approximately 3½ inches. Figure 5-1 in Exhibit 5 shows a cross-sectional diagram of a typical cable. The cable design and performance will meet all aspects of the latest version of Association of Edison Illuminating Companies (AEIC) Standard CS-7, Insulated Cable Engineers Association (ICEA) Standard S-66-524, and American Society for Testing & Materials (ASTM) Standard B-3. System design will comply with applicable sections of the National Electrical Code (NEC) and the National Electrical Safety Code (NESC). Each cable will be installed in a 6-inch fiberglass reinforced epoxy (FRE) conduit. The conduits will be arranged in duct banks with the four conduits (one for each phase plus one spare) for each circuit in a vertical configuration, buried approximately 3 feet below grade. A 3/8-inch steel plate will be placed over the duct banks to provide additional protection from external loads and unauthorized excavation.

Due to limitations on the continuous available length of solid dielectric cable, manholes will be installed approximately every 1500 to 2000 feet along the route. The manholes will serve as locations for pulling the solid dielectric cable through the individual conduits and for splicing the cable. The manholes will be underground structures approximately 18 feet long by 8 feet wide, accessible via two manholes and set flush to grade. The precise placement of each manhole will be determined as part of the final design of the transmission line. Typical cross-sectional diagrams of the vaults and duct bank and trench configurations are provided in Exhibit 5, Design Drawings, of this Application.

No overhead transmission towers or associated insulators are proposed for these transmission facilities.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-2

Other Facilities

EXHIBIT E-2: OTHER FACILITIES

This Exhibit addresses the provisions of 16 NYCRR §88.2.

Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Applicant") is proposing to construct a maximum of two new 138 kV underground feeders along a single transmission line route in southeastern Westchester County, New York. The proposed transmission feeders will connect Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with new transformers at the existing 138/13.8 kV Cedar Street Substation in the City of New Rochelle. One feeder will be constructed immediately (Phase I), and the transmission line will have spare capacity to allow for installation of an additional feeder to support expected area load growth (Phase II).

E-2.1 Washington Street 138/13.8 kV Substation

The existing Washington Street Substation is located at the northeast intersection of Hartford Avenue and Lyons Place, south of Washington Street and approximately 800 feet south of the Metro-North Railroad in the City of Mount Vernon. The Phase I feeder will be connected to the existing 138 kV bus section. A flexible disconnect link will also be installed at the new feeder position between the bus and the pothead stand where the feeder cable is connected. A new 138 kV circuit switcher will be installed to protect and improve the reliability of transformer #1. New relay equipment to provide protection for the new feeder will be installed in the Washington Street Substation control room. All of this new work will be done within the existing footprint and property line of the Washington Street Substation.

Circuit switchers will be installed at Transformer #3 at the Washington Street Substation as part of ongoing Con Edison system reliability improvements. This planned work is outside the scope of the proposed Cedar Street Project and is scheduled to start prior to the issuance of the Article VII Certificate for the Cedar Street Project.

Design drawings in support of the Project are provided in Exhibit 5 of this Application. Figure 5-3 (Drawing A151118-06) provides a general arrangement of the Washington Street Substation and Figure 5-4 (Drawing 349574.00) provides equipment arrangement and elevation for Transformer #1 at the Washington Street Substation. These drawings show the detailed bus and equipment layout that are conceptually shown in the one-line diagram for the Washington Street Substation provided as Figure 5-2 of Exhibit 5.

E-2.2 Cedar Street 138/13.8 kV Substation

The Cedar Street Substation is located adjacent to the New Haven Line of the Metro-North Railroad and approximately 500 feet south of Interchange 16 of the New England Thruway. The

Phase I feeder will be connected to a new 138/13.8 kV transformer that will be installed in the vacant third position within the existing Cedar Street Substation. Proposed major components and equipment at the Cedar Street Substation include:

- 138 kV/13.8 kV - 65 MVA Transformer;
- 138 kV Circuit Switchers and Interrupter;
- 138 kV Cable Pothead stands; and
- 13.8 kV Switchgear line-ups containing Circuit Breakers, Relay Cubicles, Potential Transformers and Pothead Compartments.

Figure 5-5 (Drawing A217813) of Exhibit 5 shows an electrical one-line diagram for the Cedar Street Substation. General arrangement and section drawings for the Cedar Street Substation are provided as Figures 5-6 (Drawing A217755) and 5-7 (Drawing 350386), respectively.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-3

Underground Construction

EXHIBIT E-3: UNDERGROUND CONSTRUCTION

This Exhibit addresses the provisions of 16 NYCRR §88.3.

The entire length of the transmission facilities will be constructed underground and will be within existing Con Edison property, public roadway rights-of-way; and within easements to be acquired from the NYSDOT and the NYSTA.

The duct bank for the transmission line will be installed within an open-cut trench excavated along the route described in the Application. The preferred route will have several major intersection crossings, including the Metro-North Rail Road, Hutchinson River Parkway, New England Thruway (I-95) and Amtrak. At certain roadway crossings, particularly the access ramps for the New England Thruway, the conduits for the transmission line may be installed using horizontal boring or jacking, or some other method acceptable to the NYSTA to avoid traffic disruption. The remainder of the route will be located within the right-of-way of public roadways or on easements obtained from the NYSDOT and the NYSTA. In most instances, the transmission line will be installed within the curb-to-curb portion of the local roadways. It is possible that in certain areas, such as within Wilson Woods Park, the transmission line will be installed in the road shoulder or grass areas within existing street rights-of-way. A temporary 30-foot wide temporary construction work area will accommodate construction vehicles, materials, and a personnel work area in these areas. Con Edison plans will incorporate efficient and economical construction techniques consistent with its corporate design requirements, to preserve vegetation and minimize any inconvenience to businesses and communities along the specified routes.

A Construction Stormwater Pollution Prevention (CSWPP) Plan will be developed and implemented during transmission line installation. The CSWPP Plan includes the identification of best management practices to be implemented during construction and operation of the transmission facilities. The CSWPP will also identify monitoring and reporting requirements. A copy of the CSWPP Plan will be included as part of the Applicant's Environmental Management and Construction Plan (EM&CP) for the Project.

The proposed feeders will use three cables, one cable per phase. The cables to be utilized for the transmission lines will be solid dielectric type, rated at 138 kilovolts (kV) alternating current (AC,) having a copper conductor with a cross-sectional area of 1,500,000 circular mils (1,500 kcmil), cross-linked polyethylene insulation approximately 0.725 inches thick, a metallic sheath to prevent water and moisture migration into the conductor, and a polyethylene outer jacket. The total outer diameter of each cable will be approximately 3½ inches. The cable will meet all aspects of the latest version of the Association of Edison Illuminating Companies (AEIC) Standard CS-7; Insulated Cable Engineers Association (ICEA) S-66-524; and American Society

of Testing and Materials (ASTM) Standard B-3. System design will comply with applicable sections of the latest version of the National Electrical Code (NEC) and National Electrical Safety Code (NESC). Each cable will be installed within a 6-inch fiberglass reinforced epoxy (FRE) conduit. A single duct bank will be installed along the entire route. No dielectric fluids will be utilized in the new transmission line. The duct bank that will accommodate the three circuits will be approximately 2'-6" wide with 3'-0" of cover. The duct bank will require a seven-foot deep trench at varying widths depending upon right-of-way conditions. The maximum trench width will not exceed 10 feet. The specific crossings of the MTA, New England Thruway and Amtrak will be via existing roadway underpasses. The crossing of the Hutchinson River Parkway and Hutchinson River will be accomplished by installing the feeder within the roadway or sidewalk of the Lincoln Avenue bridge. Night work and steel plating, where acceptable, will be used to minimize impacts to traffic. A 3/8-inch thick steel plate will be placed over the duct bank for protection of the transmission line. Designs for situations where there will be less than 3'-0" of cover, should it be necessary, would be part of the detailed design process and will include the appropriate protection to withstand anticipated external loads. Figure E-3-1 provides a typical cross-section diagram of the duct bank and trench dimensions.

Precast concrete manholes will be used at specific locations to assist in pulling cables within the conduits and also to house cable splices and cable surge protection equipment, where needed. Cable splices will be made at specific locations based upon cable reel lengths. Sheath cross bonding techniques also will be employed at designated splice locations to minimize circulating currents and sheath voltage levels, and to maximize cable power capacity. Manholes are expected to be located at approximately 1500 to 2000-foot intervals along the transmission line route. The locations will be affected by the actual design and facilities along the transmission line route. For example, bends in the conduit could affect pulling distances and thus the location of a manhole. The final locations of the manholes will be identified as part of the detailed design work and provided, along with a plan and profile for the transmission line, as part of the Applicant's EM&CP. A cross-section of a typical manhole installation is shown on Figure E-3-2.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-4

Engineering Justification

EXHIBIT E-4: ENGINEERING JUSTIFICATION

This Exhibit addresses the requirements of 16 NYCRR §88.4.

This exhibit presents Con Edison's engineering justification for the Project, as required pursuant to 16 NYCRR §88.4(a)(1), (2), (3) and (4), including a demonstration of the relationship of the Project to the applicant's existing facilities and interconnected network; an indication of the specific benefits with respect to reliability and economy to the applicant and the interconnected network; the proposed date for completion of the transmission line and the expected impacts on the systems of the applicant and others if the scheduled Project completion date is not met; and provision of appropriate studies, showing expected flows on the line under normal, peak, and emergency conditions, including effects on the stability of the interconnected system.

E-4.1 Introduction and Relation to Existing Substation and Transmission Network

The Cedar Street Area Substation, located in the City of New Rochelle, currently supplies the electrical needs of southeastern Westchester County, from Mamaroneck on the north to Pelham on the south, and from the Long Island Sound on the east, to the City of New Rochelle on the west (see Figure E-4-1). The Cedar Street Substation has two transformers supplied from two 138 kV feeders emanating from the Dunwoodie North Switching Station in Yonkers.

As part of its ongoing electrical load planning efforts, Con Edison periodically re-evaluates its existing transmission network and substation facility infrastructure, as well as its electric supply load forecasts. The ten-year load forecast reflects projected substation peak loadings, taking into account load increases from new and imminent projects that will contribute to the anticipated electrical load growth in each region served by an area substation. The area substations and associated supply feeders must be capable of supplying their projected peak loads during a first contingency condition. A first contingency condition is defined as the loss of an area transformer and/or its associated 138 kV feeder. Area substation capabilities are determined based on this emergency condition, i.e., one facility (first contingency) being out of service.

Con Edison's most recent ten-year load forecast, updated on September 2, 2005, projects a 6-megawatt overload, during first contingency conditions, on the remaining Cedar Street transformer as early as summer 2007. This projected overload condition at Cedar Street, if left uncorrected, would threaten network reliability in southeastern Westchester County and Con Edison's customers served from this substation. This load forecast and the substation loadings and capabilities are presented as Table E-4.1.

Table E-4-1
Cedar Street Load and Capability
Based on 2006-2015 Load Forecast (issued September 2, 2005)
Independent MW Area Peaks - Summer

BEFORE LOAD RELIEF

<u>AREA SUBSTATION</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Cedar Street Load (1)	94	97	99	101	102	103	104	104	105	106
Low Voltage Capability (2)	94									
Thermal Capability (3)	87									
Emergency Transfer Availability to Washington Street (4)	13	4	9	7	6	4	2	1	0	0
Required Emergency Transfer below low voltage capability	7	7	7	7	7	7	7	7	7	7
Substation Overload		6	5	7	9	12	15	16	18	19
% Substation Overload		6%	5%	7%	10%	13%	16%	17%	19%	20%

Washington Street Load	212	221	216	218	219	221	223	224	226	227
Thermal Capability (3)	225									

AFTER LOAD RELIEF

RELIEF WORK

<u>AREA SUBSTATION</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Cedar Street Load (1)	94	97	99	101	102	103	104	104	105	106
Low Voltage Capability (2)	94	--								
Thermal Capability (3)	87	168								
Emergency Transfer Availability to Washington Street (4)	16	--								
Required Emergency Transfer below low voltage capability	7	--								

2007
Install third transformer
and 138 kV supply feeder
from Washington Street.

Note

- (1) Overloads in excess of 87 MW during a first contingency for Summer 2006 will be relieved by temporary emergency load transfer to Washington Street
- (2) Capability limited by 11% temporary low voltage below the lower limit of the bus voltage schedule following a first contingency.
- (3) Capability is with one facility out of service (single contingency design criteria).
- (4) Emergency transfer availability limited by spare capability at Washington Street.

S. Spitzer, September 7, 2005
CEDAR STREET BEFORE AND AFTER b-o September 2, 05 Forecast

Additionally, there are significant construction projects currently underway or planned for the area beyond 2005, including two new buildings under construction at the Iona College campus in the City of New Rochelle, a proposed new high school, also in the City of New Rochelle, and various planned major residential/commercial developments in the City of New Rochelle. These anticipated projects would substantially increase electric load in southeastern Westchester and further strain existing electrical supply facilities.

This potential overload could negatively impact substation service and degrade electric system reliability to residents, business, and institutions served by this substation. Based upon these electrical load projections, the inability of the existing electrical system infrastructure to support the increased demand, and after extensive evaluations of options to meet these projected overload conditions, Con Edison is proposing to install a third transformer at the Cedar Street Substation, as well as a new 138 kV solid dielectric underground transmission line supply feeder, to be connected to the existing 138 kV transmission line Feeder 38W09 adjacent to the Washington Street Area Substation in the City of Mount Vernon, as the most cost-effective means of enhancing network and system reliability. The transmission line will have spare capacity for a second feeder to be connected to an as-yet uninstalled fourth transformer at the Cedar Street Substation to support expected long-term area load growth.

E-4.2 Benefits to Reliability and Economy for Applicant

Immediate installation of the third transformer at the Cedar Street Substation, as well as the proposed 138 kV underground transmission line supply feeder, will allow Con Edison to meet expected electrical load growth in southeastern Westchester County.

The Project will also improve reliability on the Con Edison electric transmission and distribution system. First contingency overload conditions, as reflected in Con Edison's most recent Preliminary Ten-Year Load Relief Forecasts for the Cedar Street Substation, will be relieved through construction of the Project.

E-4.3 Schedule

The Cedar Street Project, with a scheduled Phase I construction completion date of May 2007, is designed to meet both near-term and anticipated long-term electric load growth in southeastern Westchester County.

E-4.4 Public Interest Considerations

The proposed new transformers at the Cedar Street Substation and the 138 kV underground transmission feeders will serve the public in several ways, including:

- Providing increased capability to the Cedar Street Substation in southeastern Westchester County to meet expected electrical growth and to avoid the potential for an overload situation;
- Assuring the continued availability and reliability of electric service in the southeastern Westchester County region through the construction of a new transmission feeder between the Washington Street and Cedar Street Substations;
- Allowing Con Edison to meet its first Contingency Design Criteria for southeastern Westchester County;
- Minimizing visual impacts by using underground cables;
- Minimizing potential environmental impacts by using solid dielectric environmental cables rather than oil filled electrical cables; and
- Minimizing potential environmental impacts through the installation of the new 138 kV transmission feeders within existing roadways.

This Project is essential to the region's electric transmission and distribution system. Construction of the Project would result in minimal environmental impacts to residential and commercial operations in the area. Additionally, potential overload conditions, which would occur as early as 2007, will be avoided and Con Edison will have an enhanced ability to meet the growing electrical demands of its residential, commercial, industrial and institutional customers in the Westchester County region.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-5

Effect on Communications

EXHIBIT E-5: EFFECT ON COMMUNICATIONS

This Exhibit addresses the requirements of 16 NYCRR §88.5.

The Project is expected to have no adverse effects on broadcast communications (i.e., television and radio), primarily because the 138kV electric transmission line will be installed underground. No adverse effect on underground communication cables (copper conductor or fiber optic lines) will occur from the installation or operation of the proposed transmission facility. Con Edison will comply with applicable sections of the latest version of the National Electrical Safety Code (NESC) related to appropriate spacing between power and communication cables, and adequate separation will be maintained between the electric transmission line and communication facilities.

New York State has established rules for the protection of underground facilities to assure public safety and to prevent damage to public and private property, as required by General Business Law Article 36 and Public Service Law Section 199-b. Industrial Code 53, Part 753 details the procedures that must be implemented by any party undertaking excavation activities in New York.

Implementing regulations establish a notification service, *Dig Safely New York*, whereby anyone undertaking excavation activities notifies one entity, which subsequently notifies the affected utility companies (including communication facilities) of the intended action. Con Edison will ensure that the construction contractor and any subcontractors retained will call *Dig Safely New York* at 1-800-962-7962 to notify utility companies of all excavation activities planned for the Project. This requirement will be replicated in all construction specifications and bid documents issued by Con Edison. Additionally, Con Edison's Construction Manager will meet with the selected construction contractor, affected utility companies, Westchester County, MTA, Amtrak, NYSTA and NYSDOT officials to review plans and locate existing underground utilities and communication lines to ensure that appropriate clearances are achieved.

The addition of new transformers at the Cedar Street Substation and the interconnection of the new 138 kV feeder at the Washington Street Substation will also have no effect on communication facilities since the required improvements will take place within the confines of the existing substations.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Exhibit E-6

Effect on Transportation

EXHIBIT E-6: EFFECT ON TRANSPORTATION

This Exhibit addresses the requirements of 16 NYCRR §88.6.

E-6.1 Roads

Prior to the filing of this Application, Con Edison consulted with the New York State Department of Transportation (NYSDOT), the New York State Thruway Authority (NYSTA) and the Westchester County Department of Public Works to review the Cedar Street Project. The Project's transmission line will be installed primarily within the curb-to curb portion of the rights-of-way of public roadways. All construction will be conducted within guidelines set forth by the NYSDOT, the NYSTA and Westchester County, as applicable. Consequently, no significant impacts on traffic due to the construction of the transmission line as a result of lane closures are anticipated. Further, all Project work will commence and/or end prior to morning and evening peak periods to avoid impacts to local roadways.

Construction of the proposed transmission line will involve the crossing of the Hutchinson River Parkway in southern Westchester County via an existing bridge (Lincoln Avenue). Preliminary plans include the placement of the duct bank within the roadway or sidewalk of the bridge with all construction from above rather than below the bridge. With this scenario, traffic along the Hutchinson River Parkway would not be affected. Upon further evaluation, if the required duct bank cannot be placed within the existing bridge structure, the proposed feeder would be installed beneath the Parkway via directional drilling or horizontal boring in a manner acceptable to the NYSDOT. The specific location and engineering design for the crossings would be determined in consultation with the NYSDOT and permit applications, if required, would be filed by Con Edison with the NYSDOT for the work, consistent with the Commission's ongoing jurisdiction under PSL Article VII. Con Edison would fully comply with the requirements set forth in a NYSDOT Highway Crossing Permit and Utility Work Permit for the Project. The Applicant would also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the Hutchinson River Parkway.

Construction of the proposed transmission line will also require crossing the New England Thruway via an existing entrance ramp underpass at Interchange 16. The proposed route also crosses a southbound exit ramp. Construction within the NYSTA right-of-way and the installation of the proposed feeder within the Thruway entrance ramp will require Occupancy and Work Permits from the NYSTA. Con Edison will fully comply with the requirements set forth in the NYSTA Occupancy and Work Permits, consistent with the Commission's ongoing jurisdiction under PSL Article VII. The Applicant will also comply with all applicable New York State traffic control standards to provide for the maintenance and protection of traffic along the New England Thruway.

Con Edison will coordinate with NYSDOT, NYSTA and Westchester County, as applicable, to finalize proposed highway crossing locations and techniques and to develop and implement a Maintenance and Protection of Traffic Plan to ensure safe and adequate traffic operations along the Hutchinson River Parkway, the New England Thruway, and other local roadways.

E-6.2 Pedestrian Traffic

Sidewalks are prevalent throughout the project area, and pedestrian traffic is expected along most of the local roadways that comprise the preferred route for the proposed transmission line. Standard construction and/or operating practices to be implemented by the Applicant seek to minimize pedestrian traffic impacts from construction. Construction practices, such as the use of steel plates to cover open trenches and the use of barricades and fencing to dissuade pedestrians from entering the construction zone, will reduce the significance of potential impacts to pedestrian traffic. Particular consideration will be accorded the area in the vicinity of the Hutchinson Elementary School on 3rd Avenue (Lincoln Avenue) in the Village of Pelham and in the vicinity of commercial and high-density residential land uses.

E-6.3 Railroads

The preferred route includes two railroad crossings: the New Haven Line of the Metro-North Railroad in the City of Mount Vernon and the Metro-North Railroad / Amtrak railroad corridor in the City of New Rochelle. Both of these crossings will be via existing road underpasses. The use of existing road crossings will preclude the need for any special construction techniques, and no impact or disruption of railroad operations is anticipated.

E-6.4 Airports

The construction and operation of the Cedar Street Project will not interfere with nor result in impacts to any airports.

E-6.5 Mass Transit

The "Bee-Line Bus System", a service of the Westchester County Department of Transportation, provides transit service in Westchester County. Table E-6-1 provides a listing of the 10 routes that are encountered along the preferred route and identifies their location. As necessary, Con Edison will coordinate with the Westchester County Department of Transportation to temporarily locate bus stops along the preferred route as part of the Maintenance and Protection of Traffic Plan to ensure safe and adequate bus operations throughout the project area during the construction of the proposed transmission line.

Table E-6-1: Bus Routes Encountered Along the Preferred Transmission Line Route

Bus Route	Type	Location on Preferred Route
Route 7 (Yonkers – Mount Vernon – New Rochelle)	Local	Along Lincoln Avenue
Route 30 (Yonkers – Bronxville – New Rochelle)	Local	Crosses Lincoln Avenue @ Webster Avenue
Route 45 (Eastchester – New Rochelle – Pelham Bay)	Local	Crosses Lincoln Avenue @ North Avenue
Route 45Q (Top-of-the-Ridge – New Rochelle)	Local	Crosses Lincoln Avenue @ North Avenue
Route 53 (Mount Vernon – Chester Heights)	Local	Crosses Lincoln Avenue @ 5 th Avenue
Route 55 (The Bronx – Mount Vernon – Yonkers)	Local	Crosses Washington Street @ Columbus Avenue
Route 61 (The Bronx – New Rochelle – Port Chester)	Local	Crosses Lincoln Avenue @ North Avenue
Route 62 (The Bronx – New Rochelle – White Plains)	Express	Crosses Cedar Street @ Garden Street
Route 66 (Dobbs Ferry – Scarsdale – New Rochelle)	Local	Along Cedar Street
Route 91 (Playland – New Rochelle – Mount Vernon – Yonkers)	Summer	Crosses Cedar Street @ Garden Street

Source: Bee-Line Bus System Map, County of Westchester, Department of Transportation, 2005.

Appendix A
Project Correspondence

Appendix A
Project Correspondence

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Appendix A

Project Correspondence



Customer-Focused Solutions

August 30, 2005

Mr. David A. Stilwell, Field Supervisor
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, NY 13045

**Subject: Consolidated Edison Company of New York, Inc.
Proposed 138 kV Underground Electric Transmission Line
City of Mount Vernon, Village of Pelham and City of New Rochelle, Westchester
County, New York**

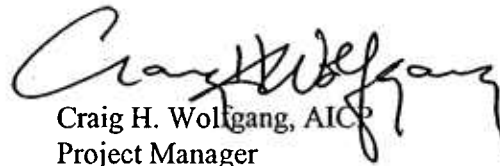
Dear Mr. Stilwell:

Consolidated Edison Company of New York, Inc. proposes to construct a 3-mile, 138 kV underground electric transmission line in the City of Mount Vernon, Village of Pelham and City of New Rochelle, Westchester County, New York. TRC Environmental, as Con Edison's environmental consultants, would like to request the input of the U. S. Fish and Wildlife Service regarding potential impacts on any ecologically significant areas and/or federal species of concern known to exist within the project area. The requested information is for the purpose of environmental review in accordance with Article VII of the New York State Public Service Law.

Please find enclosed a site location map depicting the location of the proposed electric transmission line and associated substations. The proposed 138 kV electric transmission line will originate at Con Edison's existing Washington Street Substation and travel east within public road rights-of-way within portions of eastern Mount Vernon, through the Village of Pelham to the Cedar Street substation in southern New Rochelle. The Cedar Street Substation is located south of the New England Thruway Exit 16 interchange and adjacent to an Amtrak railroad line. Please review the project location for the presence of trustee resources of concern to the U.S. Fish and Wildlife. The New York State Department of Environmental Conservation - Natural Heritage Program has also been contacted.

If you have any questions or require further information, please do not hesitate to contact me directly at (201) 933-5541 ext. 113. Thank you for your assistance.

Sincerely,
TRC Environmental Corporation


Craig H. Wolfgang, AICP
Project Manager

Enclosures

cc: Caroline Romano, Con Edison (w/attachment)
Project 48089-0100

**FAX TRANSMITTAL RE: LISTED SPECIES REQUEST****U.S. FISH AND WILDLIFE SERVICE**

New York Field Office

3817 Luker Road, Cortland, NY 13045

Phone: (607) 753-9334 Fax: (607) 753-9699



September 27, 2005

To: Craig H. Wolfgang, AICP

This responds to your August 30, 2005, request for listed species information in the vicinity of the proposed 138-kV Underground Electric Transmission Line in the Village of Pelham and Cities of Mount Vernon and New Rochelle, Westchester County, New York.

Except for occasional transient individuals, no Federally-listed or proposed endangered or threatened species under our jurisdiction are known to exist within the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Therefore, no further ESA coordination or consultation with the U.S. Fish and Wildlife Service (Service) is required. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally-listed and proposed endangered and threatened species in New York* is available for your information. If the proposed project is not completed within one year from the date of this FAX, we recommend that you contact us to ensure that the listed species presence/absence information for the proposed project is current. Should our determination change and any part of the proposed project be authorized, funded, or carried out, in whole or in part, by a Federal agency, further consultation between the Service and that Federal agency pursuant to the ESA may be necessary.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate State regional office(s),* and:

New York State Department of Environmental Conservation
New York Natural Heritage Program Information Services
625 Broadway
Albany, NY 12233-4757
(518) 402-8935

Thank you for your time. If you require additional information please contact me at (607) 753-9334.

Sincerely,

Michael F. Stoll
Endangered Species Biologist

*Additional information referred to above may be found on our website at:
<http://nyfo.fws.gov/es/section7.htm>

cc: COE, New York, NY



Customer-Focused Solutions

August 30, 2005

Natural Heritage Program
Information Services
N.Y. State Dept. of Environmental Conservation
625 Broadway, 5th floor
Albany, New York 12233-4757

**Subject: Consolidated Edison Company of New York, Inc.
Proposed 138 kV Underground Electric Transmission Line
City of Mount Vernon, Village of Pelham and City of New Rochelle, Westchester
County, New York**

Dear Environmental Reviewer:

Consolidated Edison Company of New York, Inc. proposes to construct a 3.0-mile, 138 kV underground electric transmission line in the City of Mount Vernon, Village of Pelham and City of New Rochelle, Westchester County, New York. In addition to the proposed electric transmission line, a new 138/13 kV transformer and associated equipment is proposed at the Cedar Street Substation, at the eastern terminus of the proposed transmission line, within the City of New Rochelle. TRC Environmental, as Con Edison's environmental consultants, would like to request the input of the New York Natural Heritage Program regarding potential impacts on any ecologically significant areas and/or federal or state species of concern known to exist within the project area. The requested information is for the purpose of environmental review in accordance with Article VII of the New York State Public Service Law.

Please find enclosed a site location map depicting the location of the proposed electric transmission line and associated substations. The proposed 138 kV electric transmission line will originate at Con Edison's existing Washington Street Substation and travel east within public road rights-of-way within portions of eastern Mount Vernon, through the Village of Pelham to the Cedar Street substation in southern New Rochelle. The Cedar Street Substation is located south of the New England Thruway Exit 16 interchange and adjacent to an Amtrak railroad line. Please review the project locations for the presence of trustee resources of concern to the Natural Heritage. The U.S. Fish and Wildlife Service have also been contacted.

If you have any questions or require further information, please do not hesitate to contact me directly at (201) 933-5541 ext. 113. Thank you for your assistance.

Sincerely,
TRC Environmental Corporation

Craig H. Wolfgang, AICP
Project Manager

Enclosures

cc: Caroline Romano, Con Edison (w/attachment)

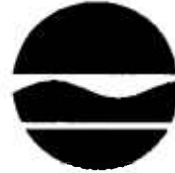
**New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources**

New York Natural Heritage Program

625 Broadway, 5th floor, Albany, New York 12233-4757

Phone: (518) 402-8935 • FAX: (518) 402-8925

Website: www.dec.state.ny.



Erin M. Crotty
Commissioner

October 5, 2005

Craig H. Wolfgang
T R C Solutions
1200 Wall Street West, 2nd floor
Lyndhurst, NJ 07071

Dear Mr. Wolfgang:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Underground Electric Transmission Line, area as indicated on the map you provided, located in the City of Mount Vernon, Village of Pelham and City of New Rochelle, Westchester County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

The presence of rare species may result in this project requiring additional permits, permit conditions, or review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information

Sincerely,

Betty Ketcham
Betty A. Ketcham, Information Services
NY Natural Heritage Program

Enc.

cc: Reg. 3, Wildlife Mgr.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Appendix B

Pre-Filed Direct Testimony

**DIRECT TESTIMONY
IN SUPPORT OF THE
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
CEDAR STREET PROJECT
ARTICLE VII APPLICATION
ADDRESSING 16 NYCRR § 86.5**

Witnesses

James Shannon
Jairo Gomez

Arnold Wong
Joseph Liberatori

Craig H. Wolfgang
Brian E. Dempsey
Raymond Pasquariello
Kevin Maher

Amitabha Mukhopadhyay

Sponsoring

Exhibit 1 (General Information);
Exhibit 6 (Economic Effects);
Exhibit 8 (Other Pending Filings)
Exhibit 9 (Cost of Project); and
Exhibit E-4 (Engineering Justification)

Exhibit 2 (Location of Facilities);
Exhibit 3 (Alternatives);
Exhibit 5 (Design Drawings)
Exhibit E-1 (Description of Proposed
Transmission Lines)
Exhibit E-2 (Other Facilities); and
Exhibit E-3 (Underground Construction)

Exhibit 4 (Environmental Studies);
Exhibit 6 (Economic Effects);
Exhibit 7 (Local Laws);
Exhibit E-5 (Effect on Communication); and
Exhibit E-6 (Effect on Transportation)

Exhibit 4 –Section 4.11(Transmission Line
Electric and Magnetic Fields)

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

CEDAR STREET PROJECT

Case No. 05-

PRE-FILED DIRECT TESTIMONY

of

**JAMES SHANNON
JAIRO GOMEZ**

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.

Pre-Filed Direct Testimony of

James Shannon

Jairo Gomez

1 **Q. Mr. Shannon, please state your full name, employer and business address.**

2 A. My name is James Shannon. I am employed by Consolidated Edison Company of
3 New York, Inc. ("Con Edison" or the "Company"). My business address is 4 Irving Place, New
4 York, New York 10003

5 **Q. In what capacity are you employed?**

6 A. I am a currently a Project Manager for Con Edison's Substation Operations
7 Department.

8 **Q. Please summarize your education and professional background.**

9 A. I received a B.S. degree in Organizational Leadership from Manhattan College in
10 1999. In addition I have also attended the following special training courses and programs: AMA
11 Planning and Scheduling; Construction Management Inspection Program; Certified Level 11 X
12 Ray Inspector; Graduate of Cornell Labor/Management Relations Program; Graduate of Con Ed
13 Business Academy.

14 I have been assigned as the project manager for many large construction projects within
15 the Con Ed system since my employment in 1986. I have managed construction projects in our
16 generating stations as well as our distribution system. Prior to joining Con Ed I worked at
17 Brooklyn union Gas Company for 12 years. During my time there I was the responsible for the
18 maintenance and construction of work within the companies LNG and SNG plants.

19 **Q. Please describe your role in the Cedar Street Project.**

20 A. I am the Project Manager for the Cedar Street Project and am therefore
21 responsible for the overall planning, development, and construction of the Project.

22 **Q. Mr. Gomez, please state your full name, employer and business address.**

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
James Shannon
Jairo Gomez

1 A. My name is Jairo Gomez. I am employed by Con Edison. My business address is
2 4 Irving Place, Room 1243-S, New York, New York 10003.

3 **Q. In what capacity are you employed?**

4 A. I am the Section Manager of Area Station Planning in Con Edison's Distribution
5 Engineering Department.

6 **Q. Please summarize your education and professional background.**

7 A. I received an Associate Degree in Electrical Technology from the New York City
8 Community College of the City University of New York in June of 1977. I received a Bachelor
9 of Engineering Science from the College of Staten Island of the City University of New York in
10 1981. I have also taken the following additional special training courses and programs:
11 Distribution System Engineering Course with Power Technologies Inc., 2000; Engineer/Scientist
12 as a Manager Program with Pennsylvania State University, 1993; Improving Managerial Skills
13 of the New or Prospective Manager with the American Management Association, 1989; Utility
14 Economics and Finance with Power Technologies Inc., 1988; and Power Engineering with
15 Power Technologies Inc., 1985.

16 I have 28 years of professional experience as an engineer. I have served in my
17 current position as Section Manager, Area Station Planning, since 1992. My responsibilities
18 include developing Ten-Year Load Relief Programs for Area Substations, Subtransmission
19 Systems and 4 kV Substations for Con Edison. I also provide input to the Five-Year
20 Construction Budget for projects sponsored by Area Station Planning, as well as provide
21 technical support to System Operation, Electrical Operation regions, and Substation and
22 Transmission Engineering.

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
James Shannon
Jairo Gomez

1 Prior to my current position, I was the Subsection Manager of Area Station
2 Planning from 1990 to 1992, Senior Engineer from 1988 to 1990, Engineer from 1984 to 1988,
3 Associate Engineer from 1981 to 1984, and Electrical Technician with Power Generation,
4 working on the Gowanus Gas Turbine Site, from 1977 to 1981.

5 **Q. Please describe your role in the Cedar Street Project.**

6 A. I am responsible for the development of Con Edison's Ten-Year Load Relief
7 Programs for Area Substations and Subtransmission Systems. As part of Con Edison's
8 evaluation of recent Westchester County electrical load projections performed by my office, it
9 was determined that the new 138 kV transmission feeder and new transformer at the Cedar Street
10 Substation was needed to allow Con Edison to address the potential for near-term first
11 contingency overload conditions and long-term electric load needs in southeastern Westchester
12 County.

13 **Q. What portions of the Application does this panel's testimony support?**

14 A. Our testimony supports the portions of the Application concerning the need for
15 the Project; the cost of the Cedar Street Project; and the development of the Project's overall
16 licensing and construction schedule. This includes the following Exhibits to the Application,
17 which were prepared by us or under our direction and supervision, and which form the bases for
18 the conclusions stated here:

- 19 • Exhibit 1 – General Information Regarding Application
- 20 • Exhibit 6 – Economic Effect of Proposed Facilities
- 21 • Exhibit 8 – Other Pending Filings
- 22 • Exhibit 9 – Cost of Project

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.

Pre-Filed Direct Testimony of

James Shannon

Jairo Gomez

- 1 • Exhibit E-4 – Engineering Justification

2 **Q. Can you please briefly discuss why Con Edison believes the Cedar Street Project is**
3 **needed?**

4 A. As part of its ongoing efforts to provide safe and reliable electric service to its
5 customers, Con Edison is continually assessing its ten-year electrical load forecasts and its
6 transmission and distribution infrastructure requirements to meet these forecasts. Based upon
7 Con Edison's most recent electrical load forecasts for the Cedar Street load area in southeastern
8 Westchester County, the Project is necessary to avoid the development of near-term first
9 contingency overload conditions on the 138 kV supply feeders from the Washington Street
10 Substation and the transformers at the Cedar Street Substation. Area substations and associated
11 supply feeders must be capable of supplying their projected peak loads during a first contingency
12 condition, defined as the loss of an area substation transformer and/or its associated 138 kV
13 feeder. Con Edison's most recent electrical load forecasts for the Cedar Street 13.8 kV load
14 pocket are detailed in Table E-4.1 of Exhibit E-4 of this Application. More importantly, there
15 are substantial construction projects currently underway or planned for southeastern Westchester
16 County beyond 2005, which, when operational, could further strain Con Edison's existing ability
17 to service the electrical demand in the region.

18 Based upon these electrical load projections, Con Edison is proposing to construct
19 and operate the Project to reliably serve continued electric load growth in southeastern
20 Westchester County. Con Edison believes that this approach, as opposed to other alternatives
21 such as demand-side management and distributed generation technology, is the most realistic and

1 prudent approach to meet both near-term overload and long-term electric load growth in
2 Westchester County.

3 **Q. Can you please elaborate on Con Edison's schedule for developing and constructing**
4 **the Cedar Street Project?**

5 A. As detailed in Exhibit E-4 of this Application, the Cedar Street Project is being
6 designed to meet both near-term and anticipated long-term electric load growth in Westchester
7 County. The potential exists, based on Con Edison's most recent electrical load forecasts, for a
8 six (6) megawatt overload situation to develop, during first contingency conditions, as early as
9 summer 2007 on the 138 kV electric supply from the Washington Street Substation and the
10 transformers at the Cedar Street Substation. These potential overloads could negatively impact
11 substation service and degrade electric system reliability to residents, businesses, and institutions
12 served by this substation. Accordingly, Con Edison is looking to complete construction of the
13 Project's transmission line and Phase I feeder by May 2007.

14 To address this potential overload scenario and reliability concerns, Con Edison
15 has also met with and discussed the need for the Project with a wide array of affected
16 stakeholders, including the Westchester County Department of Public Works, the Cities of
17 Mount Vernon and New Rochelle and the Village of Pelham; NYSDOT; and various
18 Westchester County legislators. The design of the Cedar Street Project also reflects changes
19 and/or the inclusion of mitigating measures to address comments received during and subsequent
20 to these meetings.

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
James Shannon
Jairo Gomez

1 **Q.** In addition to the Article VII certificate requested from the Commission, will you be
2 seeking other permits or approvals to design, construct and/or operate the proposed
3 facilities?

4 A. Yes. In addition to the Article VII certificate, Con Edison will be applying for
5 approvals from the NYSDOT, the New York State Thruway Authority (NYSTA), Metropolitan
6 Transit Authority, and the NYSDEC to allow the Cedar Street Project to be constructed and/or
7 operated, consistent with the Public Service Commission's ongoing jurisdiction under Public
8 Service Law Article VII. The NYSDOT approval will be for the crossing of the Hutchinson
9 River Parkway as well as for approval to construct the facilities in, or adjacent to, State highway
10 rights-of-way in accordance with the requirements of a Utility Work Permit. Approval from the
11 NYSTA will be for the crossing of the New England Thruway in the vicinity of Interchange 16.
12 Approval from the MTA will be for the crossing of the Metro-North Railroad. Two approvals
13 from NYSDEC will be applied for: 1) a State General Permit for Stormwater Discharges from
14 construction activities that will be detailed in an Environmental Management and Control Plan;
15 and 2) a modification of the SPDES Stormwater approval at the Cedar Street Substation.

16 **Q.** What conclusions have you reached with respect to the cost associated with the
17 planning, design, construction and subsequent operation of the Project?

18 A. The cost estimate presented in Exhibit 9 of the Application is justified and
19 represents Con Edison's current assessment of the cost to engineer, design, license, and construct
20 the Project. The cost estimate covers the proposed construction of approximately 3.0 miles of
21 138 kV solid dielectric cables installed in conduit/duct bank installations along the preferred
22 route, required modifications at the existing 138/13.8 kV Washington Street Substation, and the

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.

Pre-Filed Direct Testimony of

James Shannon

Jairo Gomez

1 addition, initially, of a new 138/13.8 kV transformer at the Cedar Street Substation, with an
2 additional transformer installation slated at such time as is warranted by expected area load
3 growth. The anticipated labor, construction and equipment costs are based upon Con Edison's
4 experience with similar substation and transmission line construction projects in New York, and
5 particularly in Westchester County. The cost estimate also reflects Con Edison's best estimate of
6 Project expenses that will be incurred to acquire easements, engineering and inspection surveys,
7 administrative overhead, fees for legal and other services, interest expenses during construction,
8 and contingencies.

9 **Q. Does this conclude your testimony at this time?**

10 **A. Yes.**

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

CEDAR STREET PROJECT

Case No. 05-

PRE-FILED DIRECT TESTIMONY

of

**ARNOLD WONG
JOSEPH LIBERATORI**

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Arnold Wong
Joseph Liberatori

1 **Q. Mr. Wong, please state your full name, employer and business address.**

2 A. My name is Arnold Doo Ken Wong. I am employed by Consolidated Edison
3 Company of New York, Inc. ("Con Edison" or the "Company"). My business address is 4 Irving
4 Place, New York, NY 10003.

5 **Q. In what capacity are you employed?**

6 A. I am a Project Manager with Con Edison's Substation and Transmission
7 Engineering Department.

8 **Q. Please summarize your education and professional background.**

9 A. I received a BSEE from the Polytechnic Institute of Brooklyn, New York, in
10 1975, and took courses toward my MS in Engineering Management, at Polytechnic Institute
11 from 1976 to 1978. In addition, I took the U.S. Army Engineer Officers Basic Course and the
12 Engineers Officers Advanced Course in 1975 and 1987, respectively, at Fort Belvoir, VA. I am a
13 graduate of the U.S. Army Command and General Staff College in 1995, at Ft. Leavenworth,
14 KS. I am a member of IEEE, Power Engineering Society, active with the New York City
15 Section of IEEE. I currently serve as a Lieutenant Colonel with the U.S. Army Reserve Corps of
16 Engineers.

17 I have 28 years of professional experience in utility operations, including 20 years
18 of experience with high voltage cable system design and installation from 15 to 345 kV,
19 including solid dielectric and dielectric fluid filled type transmission lines, direct buried, duct
20 and manhole, high pressure pipe type, aerial, and submarine installations. I have been employed
21 by Con Edison since 1992. My current employment with Con Edison also includes the
22 responsibilities of Underground Transmission Engineer and Rating Engineer. From 1977 to

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
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Arnold Wong
Joseph Liberatori

1 1992, I was employed by the Long Island Lighting Company as a distribution, metering and gas
2 plant project engineer.

3 **Q. Please describe your role in the Cedar Street Project.**

4 A. I serve as the Project's Senior Underground Transmission Engineer, responsible
5 for the engineering activities associated with design and construction of the Project's high
6 voltage cable feeders, as well as the development of the construction methods to be employed
7 during feeder installation.

8 **Q. Mr. Liberatori, please state your full name, employer and business address.**

9 A. My name is Joseph Liberatori. I am employed by Con Edison. My business
10 address is 4 Irving Place, New York, NY 10003.

11 **Q. In what capacity are you employed?**

12 A. I am a Project Engineer in Con Edison's Central Engineering – Project
13 Engineering and Advanced Planning Department

14 **Q. Please summarize your education and professional background.**

15 A. I received a Bachelor Engineering – Mechanical Engineering degree from
16 Manhattan College in Riverdale, New York in 1983. I am a Licensed Professional Engineer (PE)
17 in New York State.

18 I have approximately 22 years of professional experience in utility design engineering,
19 including over 17 years of experience in Project Engineering. My current employment with Con
20 Edison is as a Project Engineer. From 1984 – 1987 I was employed by the Long Island Lighting
21 Company (LILCO) as a mechanical engineering in their Power Engineering Department. From
22 1987 – 2004 I was employed by the New York Power Authority (NYPA) as a Project Engineer. I

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Joseph Liberatori

1 was employed by Entergy Nuclear Operations Inc. from 2000 – 2004 as part of the sale of the
2 nuclear assets from NYPA to Entergy.

3 **Q. Please describe your role in the Cedar Street Project.**

4 A. I serve as the Project Engineer responsible for coordinating all engineering and
5 design activities. These duties include coordinating the preparation and issuance of all
6 engineering packages for construction, as well as maintaining project schedule and budget.

7 **Q. What portions of the Application does this panel's testimony support?**

8 A. Our testimony supports the portions of the Application concerning the electrical
9 engineering design, layout and construction of the Cedar Street Project. This includes the
10 following exhibits to the Application, which were prepared by us or under our direction and
11 supervision and which form the basis for the conclusions stated here:

- 12 • Exhibit 2 – Location of Facilities;
- 13 • Exhibit 3 – Alternatives;
- 14 • Exhibit 5 – Design Drawings;
- 15 • Exhibit E-1 – Description of Proposed Transmission Line;
- 16 • Exhibit E-2 – Other Facilities; and
- 17 • Exhibit E-3 – Underground Construction.

18 **Q. Please provide a brief description of the Cedar Street Project.**

19 A. The Cedar Street Project involves the construction of a 138 kV underground
20 transmission line with a maximum of two feeders along a preferred route in southeastern
21 Westchester County, New York. The feeders will connect Con Edison's existing 138/13.8 kV
22 Washington Street Substation in the City of Mount Vernon with the existing 138/13.8 kV Cedar

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1 Street Substation in the City of New Rochelle. The new feeders will consist of three-phase
2 copper conductor solid dielectric 138 kV insulated cable circuits housed in a buried duct bank.
3 One feeder will be constructed immediately. The duct bank will have spare ducts to allow for
4 installation of a second feeder to support expected area load growth. The new feeders will each
5 be approximately 3.0 miles in length.

6 The new circuits or feeders will use three cables, one cable per phase. The cables
7 to be utilized for the transmission line will be solid dielectric type, rated at 138 kilovolts (kV)
8 alternating current (AC,) having a copper conductor with a cross-sectional area of 1,500,000
9 circular mils (1,500 kcmil), cross-linked polyethylene insulation, a metallic sheath to prevent
10 water and moisture migration into the conductor, and a polyethylene outer jacket. The total outer
11 diameter of each cable will be approximately 3 ½ inches. The cable will meet all aspects of the
12 latest version of the Association of Edison Illuminating Companies (AEIC) Standard CS-7;
13 Insulated Cable Engineers Association (ICEA) S-66-524; and American Society of Testing and
14 Materials (ASTM) Standard B-3. System design will comply with applicable sections of the
15 latest version of the National Electrical Code (NEC) and National Electrical Safety Code
16 (NESC). Each cable will be installed within a 6-inch fiberglass reinforced epoxy conduit. No
17 dielectric fluids (oils) will be utilized in the new feeders.

18 A new 138/13.8 kV transformer will be installed at the existing Cedar Street
19 Substation to accommodate the new 138 kV feeder to be installed in the near term. The new
20 transformer will occupy a vacant position within the wall surrounding the substation and will not
21 require an expansion of the substation or relocation of the existing wall. Additionally, a 138 kV
22 circuit switcher, a 138 kV circuit interrupter and 13.8 kV switchgear will be installed. New

1 ducts will be added at the existing Washington Street Substation to accommodate the proposed
2 transmission line and will terminate at an existing pothead stand. At the time that the feeder
3 outage is taken, a new circuit switcher will be installed as part of an existing substation
4 improvement program. All of this new work will be done within the existing footprint and
5 property line of the Washington Street Substation.

6 The Project's component facilities are described in greater detail in Exhibits 5, E-1
7 and E-2 of the Application.

8 **Q. What conclusions have you reached regarding the methods to be employed during**
9 **construction of the Project's transmission facilities?**

10 A. The entire length of the transmission line will be constructed underground, wholly
11 within existing roadway rights-of-way or within easements to be obtained by Con Edison.

12 The duct bank will be installed within an open-cut trench excavated along the preferred
13 route described in this Application. At major roadway and railroad crossings, such as the Metro
14 North Railroad, Hutchinson River Parkway, and the New England Thruway the conduits for the
15 transmission line will be installed within existing underpasses or bridges to avoid traffic and
16 railroad disruption. A temporary construction work area within the roadway rights-of-way will
17 accommodate construction vehicles, materials, and a personnel work area. Con Edison plans
18 will incorporate efficient and economical construction techniques consistent with corporate
19 design requirements, to preserve vegetation and minimize any inconvenience to businesses and
20 communities along the preferred route.

21 The double circuit duct bank will consist of ten ducts in a two wide by five-deep
22 configuration including two 4" diameter ducts for cable and three 6" diameter ducts to house the

1 three conductors for the new circuit. The remaining spare 6" conduits are intended for future
2 feeder use. The duct bank that will accommodate the new circuits will be approximately 2' feet
3 wide with 3 feet of cover, requiring a trench approximately 4' feet wide by seven feet deep. Pre-
4 cast concrete manholes will be used at specific locations to assist in pulling cables within the
5 conduits and also to house cable splices and cable surge protection equipment, where needed.
6 Cable splices will be made at specific locations based upon cable reel lengths. Sheath cross
7 bonding techniques also will be employed at designated splice locations to minimize circulating
8 currents and sheath voltage levels, and to maximize cable power capacity. Manholes are
9 expected to be located at approximately 1,500 to 2,000-foot intervals along the transmission line
10 route.

11 A Construction Stormwater Pollution Prevention (CSWPP) Plan will be developed and
12 implemented during transmission line installation. The CSWPP Plan reflects best management
13 practices to be implemented during construction of the transmission facilities. The CSWPP will
14 also identify Con Edison monitoring and reporting requirements.

15 The underground construction methods to be employed in support of the Project are
16 described in greater detail in Exhibit E-3 of the Application.

17 **Q. In your opinion, does the proposed routing of the Project's transmission line reflect**
18 **Con Edison's best efforts to minimize the potential environmental impacts associated with**
19 **the construction and operation of these facilities?**

20 A. Yes. The Project's design and the construction methods to be employed
21 minimize, to the extent practicable, potential environmental impacts.

22 **Q. What is your basis for this conclusion?**

1 A. Our conclusion is based upon the description and analyses of the Project's
2 environmental impacts as set forth in Exhibit 4 of the Application and the pre-filed direct
3 testimony offered in support of that Exhibit.

4 **Q. Based on your professional experience, do you believe that the Cedar Street**
5 **Project's engineering design meets applicable industry standards, codes and regulations**
6 **and addresses various concerns and issues identified during Con Edison's outreach efforts**
7 **with Westchester County and other municipal representatives?**

8 A. Con Edison has worked closely with Westchester County and other municipal
9 officials to satisfy the concerns raised during the outreach efforts initiated in support of the
10 Project. The Project has been designed to comply with applicable industry standards and New
11 York State codes. Proposed construction will comply with the substantive requirements of
12 applicable local ordinances, except where otherwise noted in Exhibit 7 of the Application. Con
13 Edison will obtain all permits, approvals and consents required from the NYSDOT, Metropolitan
14 Transit Authority and the New York State Thruway Authority for all crossings of major
15 transportation corridors, consistent with the Public Service Commission's ongoing jurisdiction
16 under Public Service Law Article VII.

17 **Q. What alternatives to the Project were evaluated by Con Edison?**

18 A. Con Edison evaluated alternative routing and transmission line technologies for
19 the proposed feeders between the existing Washington Street Substation and the existing Cedar
20 Street Substation. Con Edison also addressed alternate methods to fulfill energy requirements,
21 including a "no-action" alternative and the feasibility of demand-side management and
22 distributed generation.

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Arnold Wong
Joseph Liberatori

1 **Q. Please describe the alternate transmission line technologies considered by Con**
2 **Edison.**

3 A. High-pressure, fluid-filled pipe-type and low-pressure, fluid-filled cables for the
4 138 kV transmission line were considered. These alternative technologies were rejected because
5 of the potentially more significant environmental impacts associated with their use, including the
6 potential for accidental spills or leaks of the dielectric fluid used in these types of cable, and the
7 increased maintenance required for these technologies.

8 Con Edison only considered an underground transmission line because underground lines
9 are consistent with this type of line and voltage in Westchester County; underground lines
10 substantially minimize any environmental and visual impacts as compared to overhead facilities;
11 and underground lines significantly increase the reliability of these circuits by avoiding exposure
12 to high winds and ice.

13 **Q. Describe the alternatives to the preferred route that were evaluated by Con Edison.**

14 A. Two major, independent route alternatives were considered for the proposed
15 underground transmission line. The first route alternative is primarily located along East 3rd
16 Street, Martin Luther King Boulevard, Highbrook Boulevard and Washington Avenue (the MLK
17 Alternative). The total distance of this major route alternative is approximately 3.4 miles,
18 approximately 0.4 mile longer than the preferred route. In comparison to the preferred route, the
19 MLK Alternative is slightly longer, would require more sharp bends and manholes, and would
20 potentially be more disruptive to sensitive land uses and residents along Park Place. The second
21 route alternative is located along the south side of the Metro North Railroad corridor for nearly
22 the entire distance between the Washington Street and Cedar Street substations. During

1 preliminary discussions with the Metropolitan Transit Authority (MTA, operator of the Metro
2 North Railroad), it was conveyed to Con Edison that the required track outages along this active
3 railroad corridor would be restricted to non-peak periods during the day. These restrictions
4 would significantly impact the construction logistics, schedule and cost, and for these reasons,
5 this route alternative was eliminated from further consideration.

6 In addition to these major route alternatives, several shorter route variations were
7 evaluated for specific segments along the preferred route. These route variations included: a
8 variation of the route upon exiting the Washington Street Substation; a variation of the route
9 through Wilson Woods Park; a variation for the crossing of the Hutchinson River Parkway and
10 Hutchinson River using directional drilling instead of the existing bridge crossing; and a
11 variation of the approach to the crossing of the New England Thruway using Park Place. For
12 specific reasons, each of these route variations was considered inferior to the comparable
13 segment of the preferred route, as discussed in detail in Section 3.3.3 of Exhibit 3 of the
14 Application.

15 **Q. What other alternatives to the Project were considered by Con Edison?**

16 A. Other alternatives considered by Con Edison included a "no-action" alternative
17 and the feasibility of demand-side management and distributed generation. The no-action
18 alternative was not considered viable as Con Edison's most recent electrical load projections
19 indicate that the potential exists for development of a near-term first contingency overload
20 situation in the supply to southeastern Westchester County. Con Edison's electrical load
21 projections are detailed in Exhibit E-4 of the Application. An overload in this area would, in
22 turn, have the potential to negatively impact the existing substation servicing southeastern

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Pre-Filed Direct Testimony of

Arnold Wong

Joseph Liberatori

1 Westchester County and electric system reliability to southeastern Westchester County residents
2 and businesses served by this substation. Moreover, significant new construction in southeastern
3 Westchester County, currently underway or planned, will substantially increase electric demand
4 and further strain existing electrical supply transmission and distribution facilities. Selecting the
5 no-action alternative would not satisfactorily address the increasing electrical demands of
6 southeastern Westchester County and Con Edison's ability and obligation to meet these
7 demands.

8 Demand-side management and distributed generation programs are presently in
9 place and additional expansion of the programs were determined to not be sufficient, either due
10 to financial, permitting and/or siting issues, to meet the electric transmission and distribution
11 obligation of Con Edison. While demand-side management and distributed generation are a
12 component of current electric supply mix, the increased electric demand of southeastern
13 Westchester County necessitates the proposed construction of the Cedar Street Project. Demand-
14 side management is viewed as a short-term and temporary solution during peak demand periods
15 to a potential overload situation. Additionally, demand-side management does not address the
16 significant new construction in southeastern Westchester County, currently underway or planned
17 beyond 2005, which will substantially increase electric load in southeastern Westchester County
18 and further strain existing electrical supply facilities. Finally, distributed generation is not
19 considered an optimal solution to the situation of increased demand due to the potential
20 environmental impacts, such as construction, traffic, air quality and visual impacts, associated
21 with the siting, construction, and operation of a number of small generating units throughout the
22 southeastern Westchester region.

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.

Pre-Filed Direct Testimony of

Arnold Wong

Joseph Liberatori

1 Q. Does this conclude your testimony at this time?

2 A. Yes.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

CEDAR STREET PROJECT

Case No. 05-

PRE-FILED DIRECT TESTIMONY

of

**CRAIG WOLFGANG
BRIAN DEMPSEY
RAYMOND PASQUARIELLO
KEVIN MAHER**

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Craig Wolfgang
Brian Dempsey
Raymond Pasquariello
Kevin Maher

1 **Q. Mr. Wolfgang, please state your full name, employer and business address.**

2 A. My name is Craig Wolfgang. I am employed by TRC Environmental Corporation
3 (TRC). My business address is 1200 Wall Street West, Lyndhurst, New Jersey, 07071.

4 **Q. In what capacity are you employed?**

5 A. I am the Manager of Environmental Planning in the TRC Lyndhurst office and
6 serve as Project Manager for various electric generation and transmission projects.

7 **Q. Please summarize your education and professional background.**

8 A. I received a Master of City Planning from the Georgia Institute of Technology in
9 1979, and a Bachelor of Science in Natural Resource Conservation from the University of
10 Connecticut in 1976. I am a Member of the American Planning Association and the American
11 Institute of Certified Planners.

12 I have 23 years of professional experience as a Project Manager and
13 Environmental Planner on a variety of development and infrastructure improvement projects. I
14 have served in my present position since 1999. My work has involved overseeing permitting and
15 environmental analyses for numerous proposed electric generation, electric transmission and
16 natural gas pipeline projects. In addition, I have managed permitting and environmental analyses
17 for numerous transportation and resource assessment and planning projects.

18 Prior to joining TRC, from 1994 to 1999, I was a Principal Planner at Louis
19 Berger & Associates, Inc. From 1986 to 1994, I was Supervisor of Resources Planning at
20 Ebasco Environmental. From 1983 to 1986, I was a Licensing Specialist at the New York Power
21 Authority. From 1980 to 1983, I was an Environmental Planner at Claude Terry & Associates.

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Craig Wolfgang
Brian Dempsey
Raymond Pasquariello
Kevin Maher

1 **Q. Please describe your role in the Cedar Street Project.**

2 A. For the Cedar Street Project, I served as TRC's Project Manager, responsible for
3 the supervision of the TRC project team with regard to field survey activities and the preparation
4 of the environmental analyses required as part of the Application.

5 **Q. Mr. Dempsey, please state your full name, employer and business address.**

6 A. My name is Brian Dempsey. I am employed by TRC Environmental Corporation.
7 My business address is 7 Skyline Drive, Hawthorne, New York.

8 **Q. In what capacity are you employed?**

9 A. I am a Senior Traffic Engineer at TRC.

10 **Q. Please summarize your education and professional background.**

11 A. I received a M.B.A. in Finance from Fordham University in 1992, and my B.C.E.
12 in Civil Engineering from Villanova University in 1986.

13 I have 15 years of professional experience encompassing traffic engineering
14 studies, traffic planning studies, parking studies, environmental impact statements and traffic
15 demand management. I am a member of the Institute of Transportation Engineers. I am also a
16 certified Professional Traffic Operations Engineer in the states of New York, New Jersey,
17 Delaware, Pennsylvania and Connecticut.

18 **Q. Please describe your role in the Cedar Street Project.**

19 A. As a Senior Traffic Engineer, I am responsible for designing and conducting
20 traffic analyses for traffic engineering studies undertaken in conjunction with environmental
21 analyses required for client development projects. My duties as a Senior Traffic Engineer

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Craig Wolfgang
Brian Dempsey
Raymond Pasquariello
Kevin Maher

1 include performing analyses of existing conditions and projecting future conditions on major
2 arterials, local roadways, and parking resources. I supervised all non-aviation studies performed
3 concerning traffic in Exhibit 4.8 of the Application.

4 **Q. Mr. Pasquariello, please state your full name, employer and business address.**

5 A. My name is Raymond D. Pasquariello. I am employed by TRC Environmental
6 Corporation. My business address is 1 Richmond Square Suite 220D, Providence, RI 02906.

7 **Q. In what capacity are you employed?**

8 A. I am a Program Manager and Senior Archaeologist.

9 **Q. Please summarize your education and professional background.**

10 A. I received a B.A. in Anthropology, and a B.S. in Biology from Syracuse
11 University, New York in 1992, as well as an M.A. in Anthropology from Syracuse University,
12 New York in 1995.

13 I have more than 11 years of experience, encompassing project management,
14 prehistoric, and historic archaeological survey and excavation, cultural resource surveys, historic
15 research, and public interpretation. My responsibilities include the direction of archaeological
16 surveys, testing projects, and data recovery projects as part of the cultural resource management
17 services offered by TRC. I carry out and oversee fieldwork, laboratory processing, and analysis,
18 and I am responsible for the marketing of new and existing clients in the New England, New
19 York, and New Jersey area. I have served as Project Manager/Principal Investigator for over 20
20 projects. I manage my own projects and oversee those of others, and I regularly interact with
21 clients (both private and public sector), agency reviewers, and the public. I have research

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Pre-Filed Direct Testimony of

Craig Wolfgang

Brian Dempsey

Raymond Pasquariello

Kevin Maher

1 experience in both academic and cultural resource management settings. I have directed projects
2 for numerous clients in the New England area, New York, New Jersey and Connecticut, and also
3 have participated in archaeological projects in the Caribbean.

4 **Q. Please describe your role in the Cedar Street Project.**

5 A. I conducted a site walkover along the transmission line for the proposed 138 kV
6 electric transmission line feeder and at the Washington Street and Cedar Street Substations to
7 determine the potential for archeological resources. I also reviewed the information obtained
8 from the files of the New York State Office of Parks, Recreation and Historic Preservation
9 regarding known archeological and historic architectural resources in the Project's vicinity.
10 Based on the results of my field work and the file search, I prepared a Phase 1A Cultural
11 Resources Report that served as a basis for the assessment of cultural resources for the
12 Application. A copy of the Phase 1A Cultural Resources Report is provided as Appendix D to
13 the Application.

14 **Q. Mr. Maher, please state your full name, employer and business address.**

15 A. My name is Kevin J. Maher. I am employed by TRC Environmental Corporation.
16 My business address is 1200 Wall Street West, Lyndhurst, New Jersey, 07071.

17 **Q. In what capacity are you employed?**

18 A. I am a Project Manager in the TRC Lyndhurst office and serve as a project
19 manager and environmental planner for various electric generation and transmission projects.

20 **Q. Please summarize your education and professional background.**

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1 A. I received a Master of Planning degree from the University of Southern
2 California, School of Urban and Regional Planning in 1993, and a Bachelor of Science in
3 Environmental Planning and Design from Cook College, Rutgers University in 1990. I am a
4 Member of the American Planning Association and the American Institute of Certified Planners.

5 I have over ten years of professional experience with an expertise in
6 environmental documentation and permitting coordination on power generation and
7 infrastructure projects, primarily in New York State.

8 **Q. Please describe your role in the Cedar Street Project.**

9 A. I conducted the land use reconnaissance survey for the area surrounding the
10 proposed 138kV transmission route and the Washington Street and Cedar Street Substations and
11 prepared an assessment of potential land use and zoning impacts associated with the Project. I
12 also prepared the Exhibits pertaining to Economic Effects (Exhibit 6) and Effect on
13 Communication (Exhibit E-5).

14 **Q. What portions of the Application does this panel's testimony support?**

15 A. Our testimony supports the portions of the Application concerning the
16 environmental effects of the Cedar Street Project (with the exception of electric and magnetic
17 field effects, which is the subject of another witness panel). This includes the following exhibits
18 to Con Edison's Application, which were prepared by us or under our direction and supervision,
19 and which form the bases for the conclusions stated here:

- 20 • Exhibit 4 – Environmental Studies;
- 21 • Exhibit 6 – Economic Effects;

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- 1 • Exhibit 7 – Local Laws;
- 2 • Exhibit E-5 – Effect on Communication; and
- 3 • Exhibit E-6 – Effect on Transportation

4 **Q. What conclusions have you reached regarding the potential environmental effects of**
5 **the construction and operation of the Cedar Street Project?**

6 A. The studies we conducted found that the Project's construction and operation will
7 have minimal impact on the environment and to residents of Westchester County and the City of
8 Mount Vernon, Village of Pelham and City of New Rochelle.

9 The proposed transmission line will be installed entirely within existing public
10 road rights-of-way. Land uses adjacent to or near the proposed route consist primarily of
11 industrial/manufacturing, public park, residential, commercial/retail, and transportation corridor.
12 There are no agricultural land uses adjacent to the proposed route or substations..

13 The proposed 138/13.8 kV transformers to be installed within the enclosed Cedar
14 Street Substation will be the only new aboveground facility along the transmission route.
15 Therefore, conflicts with existing and future nearby land uses will be minimal. Construction of
16 the underground line will be the primary land use impact associated with the proposed route.
17 During construction, potential impacts on adjacent land uses will be mitigated by such means as
18 minimizing work crew time on site, implementing equipment noise reduction, promptly restoring
19 the landscaping and pavement along the public roadway rights-of-way and the implementation of
20 traffic control measures.

21 There will be no significant land use impacts due to operation of the Project.

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1 No visual or aesthetic resources are located in the vicinity of either the proposed
2 route or Cedar Street Substation, other than Wilson Woods Park and Lincoln Park. Since the
3 transmission line will be underground, the transmission line right-of-way will not be noticeable
4 following the temporary visual impacts associated with construction activities. Accordingly,
5 there will be no long-term, adverse visual impacts attributable to the proposed transmission line.
6 The additional transformers at the Cedar Street Substation will not provide a new visual element.
7 Since the additional substation equipment will be housed inside masonry walls, the new
8 transformers will not be visible to passing motorists.

9 Construction of the Cedar Street Project will have no impact on cultural
10 resources. Prior disturbance along the proposed rights-of-way essentially eliminates the potential
11 for encountering significant archeological sites. In addition, no properties listed in the State or
12 National Register of Historic Places will be impacted by this Project. Indirect visual impacts
13 from the proposed transformers at Cedar Street Substation will be avoided since the new
14 transformers will be located within the existing walls surrounding the Cedar Street Substation.
15 The proposed transmission line will be underground and will not result in any indirect visual
16 impacts to historic architectural properties.

17 The proposed transmission line route and Washington Street and Cedar Street
18 Substations sites do not contain any unusual or unique ecological communities. Much of the
19 proposed transmission line route consists of paved roadways, bridges, highway/railroad
20 corridors, existing utility rights-of-way and road shoulders. Accordingly, the vegetative

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1 communities within the Project area are primarily roadside areas and previously developed areas
2 that may or may not be directly affected by the Project.

3 Soil types and topography encountered along the transmission line route are
4 ideally suited to the common construction methods to be employed. Upon completion, the
5 portion of the corridor excavated will be returned to its original topographic and hydrologic
6 conditions. As a result, the construction activities will not impact the geologic environment.
7 Any soils that may be required to be disposed of offsite will be transported in accordance with all
8 applicable rules and regulations.

9 The impact of construction-related traffic associated with installation of the
10 transmission facilities is expected to be minimal. Construction will be temporary and will be
11 coordinated with the Cities of Mount Vernon and New Rochelle as well as the Village of
12 Pelham, Westchester County and the NYSDOT to limit its impact on traffic flows and other
13 conditions in the area. During construction of the Cedar Street Project, it will not be necessary to
14 close roads to general vehicular traffic. All construction will be conducted within public rights-
15 of-way. In addition, staging in support of daily construction activities will occur.

16 The use of existing substations means that facility operations will not generate
17 any additional vehicle trips and will not have any impact on the roadway network. Also, with
18 the exception of occasional maintenance activities, there will be no traffic generated in the
19 Project area relative to the operation of the transmission line.

20 Construction noise-related impacts from the proposed transmission line and
21 proposed improvements at the Cedar Street Substation are expected to be minimal. Construction

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1 noise, while varying according to the equipment in use, will be mitigated by the attenuating
2 effect of distance; the presence of existing vegetation; the intermittent and short lived character
3 of the noise; and the use of functional mufflers on all construction equipment. Further, the
4 nature of construction to be performed for the underground transmission line, over a combined
5 distance of approximately three miles dictates that construction activities and associated noise
6 levels will move along the corridor and that no one receptor will be exposed to significant noise
7 levels for an extended period. Finally, the availability of public rights-of-way in which the
8 proposed transmission line will be placed also serves to minimize noise impacts. The proposed
9 improvements at the Cedar Street Substation will be enclosed within a masonry walled facility,
10 which is located adjacent to the Amtrak and Metro North railroad tracks and near Interchange 16
11 of the New England Thruway. As a consequence, minimal noise will be generated from the
12 substation's equipment, and no noise impacts to the surrounding land uses are anticipated. When
13 operational, the transmission line will not generate noise.

14 The construction and operation of the transmission facilities and substation
15 improvements will not require water supply or sanitary sewer services. The Project will be
16 designed, constructed, operated and maintained to be compatible with applicable local, state and
17 federal requirements relative to water supply, sewer services and storm water management
18 requirements.

19 The transmission facilities will be appropriately marked to alert the public to their
20 locations (e.g., road, highway and railroad crossings). Because the transmission route will be

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1 located underground in existing utility or roadway rights-of-way, no additional security or
2 emergency services will be required for operation of these facilities.

3 Con Edison sited and designed the Cedar Street Project with careful consideration
4 of applicable local laws as well as expressed concerns of municipal and Westchester County
5 officials in meetings held by Con Edison with these parties. As a result, the Project will
6 substantively comply with local zoning requirements, and all other applicable local laws and
7 regulations, except as noted in Exhibit 7 of this Application.

8 The proposed electric transmission line is expected to have no adverse effects on
9 communications (i.e., television, radio, telephone, etc.), primarily because the 138kV line will be
10 installed underground and will therefore, have little or no effect on communications signals
11 transmitted through the air. No adverse effect on other underground communication cables, that
12 is, copper conductor communication cables, will occur from the installation of the transmission
13 facility. Con Edison will comply with applicable sections of the latest version of the National
14 Electrical Safety Code (NESC) related to appropriate spacing between power and
15 communication cables. Adequate separation between the electric transmission line and
16 communication facilities will be maintained. Since the proposed route is contained in the
17 existing right-of-way, interference is expected to be minimal, if any, and limited to areas where
18 the transmission line crosses highway corridors and under railroad crossings.

19 To ensure the adequate provision of essential services during construction, Con
20 Edison will require that the construction contractor and any subcontractors retained will call Dig
21 Safely New York at 1-800-962-7962 to notify utility companies of all excavation activities

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1 planned along the electric transmission line route. This requirement will be replicated in all
2 construction specifications and bid documents issued by Con Edison. Additionally, Con Edison's
3 Construction Manager will meet with the selected construction contractor affected utility
4 companies and Westchester County and NYSDOT officials to review plans and locate adjacent
5 utilities to ensure that appropriate clearances are achieved.

6 **Q. Does this conclude your testimony at this time?**

7 **A. Yes.**

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

CEDAR STREET PROJECT

Case No. 05-

PRE-FILED DIRECT TESTIMONY

of

AMITABHA MUKHOPADHYAY

CONSOLIDATED EDISON COMPANY of NEW YORK, INC.
Pre-Filed Direct Testimony of
Amitabha Mukhopadhyay

1 **Q. Mr. Mukhopadhyay, please state your full name, employer and business address.**

2 A. My name is Amitabha Mukhopadhyay. I am employed by Consolidated Edison
3 Company of New York, Inc. ("Con Edison"). My business address is 4 Irving Place, New York,
4 New York 10003.

5 **Q. In what capacity are you employed?**

6 A. I am a Senior Engineer in Con Edison's Transmission Feeder Engineering Section
7 of the Substation and Transmission Engineering Department.

8 **Q. Please summarize your education and professional background.**

9 A. I received a B.E. in Electrical Engineering from the University of Calcutta, India,
10 in 1967, as well as an M.S. in Electrical Engineering from the Polytechnic Institute of New York
11 in 1978. I am also a Senior Member of IEEE, Member EEI/IEEE - SCC - 28, and I am a
12 licensed Professional Engineer in the State of New York.

13 I have 38 years of professional experience as an electrical engineer. I have been
14 employed by Con Edison since 1987 and have been in my position as a Senior Engineer since
15 1997. In my current position, I am responsible for the analysis and installation of PCS, Mobile
16 Cell Phone Antennas and Base Stations for different telephone companies on Con Edison's high
17 voltage overhead transmission towers and rights-of-way in Westchester County. I am also
18 responsible for the engineering and installation of All Dielectric Self Supporting (ADSS) fiber
19 optic cables on Con Edison's High Voltage Transmission Lines, and I was acting as Consulting
20 Engineer to the New York City Transit Authority on the 25 Hz Cycloconversion Project.

21 From 1987 to 1997, I held the position of Engineer, responsible for electrical
22 discipline activities in the design, scheduling, funding and construction of a multibank 138 kV

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Amitabha Mukhopadhyay

1 area distribution substation, 138 kV high pressure fluid filled transmission feeders, and 138 kV/
2 345 kV overhead transmission lines. I was responsible for Inductive coordination,
3 Electromagnetic Field Management and Public Service Commission Mandated EMF studies.

4 Prior to joining Con Edison in 1987, I worked with Gibbs & Hill Inc., New York,
5 as Assistant Engineer, 1974-1978, Engineer, 1979-1982, and Senior Engineer from 1982 to
6 1987. From 1967 to 1974, I was an Assistant Engineer with the Government of India.

7 **Q. Please describe your role in the Cedar Street Project.**

8 A. For the Cedar Street Project, I served as the Senior Engineer, responsible for the
9 preparation of the electric and magnetic field evaluation of the proposed 138 kV transmission
10 line from the Washington Street Substation to the Cedar Street Substation.

11 **Q. What portions of the Application does your testimony support?**

12 A. My testimony supports the portions of the Application concerning the
13 electromagnetic field effects of the Cedar Street Substation as well as the 138 kV transmission
14 linefeeder from the Washington Street Substation to the Cedar Street Substation. This includes
15 the following Exhibit and Appendix to the Application, which were prepared by me or under my
16 direction and supervision, and which form the bases for the conclusions stated here:

- 17 • Exhibit 4, Section 4.11 – Transmission Line Electric and Magnetic Fields
- 18 • Appendix C – EMF Calculation Sheets

19 **Q. What conclusions have you reached regarding the potential electromagnetic field**
20 **effects of the construction and operation of the Cedar Street Project?**

1 A. The studies that were conducted found that the Project's construction and
2 operation will have minimal electromagnetic field effects in the project vicinity of Westchester
3 County and the Cities of Mount Vernon and New Rochelle and the Village of Pelham.

4 As stated in these studies, there are no national or federal standards in electric and
5 magnetic field exposure. However, a few states, including New York, have electric and
6 magnetic field standards for transmission lines. The New York standard specifies that the
7 electric and magnetic field strength be limited to 1.6 kV/m and 200 mG, respectively, at the edge
8 of the right-of-way.

9 Cedar Street is an existing Substation with two 138 kV transformers installed.
10 The installation of the third transformer in the near term, and a fourth transformer in the long
11 term, will have a negligible effect on the existing magnetic field.

12 With respect to the operation of the 138 kV transmission line, the magnetic field
13 levels produced by these underground cable circuits at 1 meter above the ground at all locations
14 along the lines, including directly above the cables, should not exceed any of the specified New
15 York State limits. Additionally, the transmission feeders will not produce an electric field above
16 ground due to shielding by the earth (i.e., underground installation) and the cable's metallic
17 sheathing.

18 **Q. Does this conclude your testimony at this time?**

19 A. Yes.

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Appendix C

Draft Certificate Conditions

General Conditions

1. Subject to the conditions set forth in this Opinion and Order, Consolidated Edison Company of New York, Inc. ("Consolidated Edison" or the "Company") is granted a Certificate of Environmental Compatibility and Public Need authorizing it to construct and operate an underground 138 kV electric transmission line, consisting of a maximum of two electrical feeders, along the project route detailed in the Application, and the addition of new 138-13.8 kV transformers at an area substation, as detailed in the Application, to support the new transmission line.

2. Consolidated Edison's motions dated October 31, 2005, for modifications and waivers of specified application information requirements are granted.

3. Consolidated Edison's request that the Commission refuse to apply specified provisions of the Westchester County Code, City of Mount Vernon Code, and City of New Rochelle Code as set forth in Exhibit 7 of the Application, is granted, and shall be subject to compliance with the provisions of Appendix A hereto and made part of any Environmental Management and Construction Plan ("EM&CP") for this project.

4. Construction of the Cedar Street Project shall not commence until the Consolidated Edison has received such property transfers, or consents from the New York State Department of Transportation ("NYSDOT") and the New York State Thruway Authority as are necessary to permit construction to commence, and the New York State Pollution Discharge Elimination System (SPDES) approval for the operation of the additional transformer to serve the first constructed feeder at the Cedar Street Substation as has heretofore been sought by the Applicant from the New York State Department of Environmental Conservation ("NYSDEC").

5. Consolidated Edison shall not begin site preparation or construction with respect to any portion of the certified transmission line (except for surveying, boring and such other related activities as are necessary to prepare final design plans) before it has submitted to the Commission, and the Commission has approved, an EM&CP generally consistent with the guidelines for the construction of the project's transmission line set forth in the Appendix to this opinion and order.

6. Consolidated Edison shall submit to the Commission three copies of its EM&CP for the certified transmission line and serve one copy on the Commissioner of the Department of Environmental Conservation and a copy on the Commissioner of the Office of Parks, Recreation and Historic Preservation ("OPRHP") [pursuant to 9 NYCRR Part 428 Section 428.2(c)]. The company shall also serve at least one copy of its EM&CP on any other New York State agency (and its relevant region offices), which requests it and on the active parties on the service list who request the document. Copies of the EM&CP shall also be placed for public inspection in at least one public library or other convenient location in each municipality in which construction will occur.

7. Except where this opinion and order require otherwise, the terms of the Joint Proposal submitted in the proceeding **[to be developed]** and the environmental protection measures contained in the Application (and in the related statements made by the Applicant) shall be incorporated into the EM&CP and be adhered to during construction, operation and maintenance of the certified project and the component facilities. Applicable provisions of the project's EM&CP and orders approving the EM&CP shall be incorporated into contracts associated with the project.

8. Consolidated Edison shall, within 30 days after the issuance of this opinion and order, submit to the Commission either a petition for rehearing or a verified statement that it accepts and will comply with the certificate requirements. Failure to comply with this ordering clause shall invalidate the Certificate for the project.

9. (a) Each substantive state and local law and regulation applicable to the facilities authorized by this opinion and order shall apply, except the substantive local laws or regulations which the Commission has refused to apply as being unreasonably restrictive.

(b) No state or local laws or regulations purporting to require any approval, consent, permit, certificate or other condition for the construction or operation of the facilities authorized by this opinion and order shall apply, except those of the Public Service Law and regulations and orders adopted thereunder, and those provided by otherwise applicable State law for the protection of employees engaged in the construction and operation of the facilities.

(c) Nothing in this opinion and order precludes Consolidated Edison from voluntarily subjecting itself to any such state or local approval, consent, permit, certificate or other condition.

(d) The specified sections of the Westchester County, Mount Vernon and New Rochelle Codes for which Consolidated Edison has sought waivers, as delineated in Exhibit 7 of the Application shall not apply.

10. Consolidated Edison shall secure the services of a third-party Professional Engineer, licensed and registered in New York State with the appropriate professional liability insurance, who shall determine whether the project has been designed and built

in compliance with the applicable New York State fire prevention and building codes, the Energy Conservation Construction Code of New York State and any related applicable provisions of any building codes of Mount Vernon, Village of Pelham and New Rochelle, and certify in writing to the New York State Department of Public Service and Mount Vernon, Pelham and New Rochelle that the facility is in compliance with the applicable provisions of such Codes. The third-party Professional Engineer shall not in any way be affiliated with any entity that designs or builds the project. The third-party Professional Engineer shall periodically consult with the Building Inspectors and Fire Marshalls of Mount Vernon, Village of Pelham and New Rochelle as appropriate to obtain their input. As appropriate, Consolidated Edison shall provide periodic reports of the status of compliance activities and certification dates. In addition, the company shall provide information to the Mount Vernon, Village of Pelham and New Rochelle officials as necessary for them to maintain established information databases needed to protect the environment, health and safety. Consolidated Edison may seek a variance in accordance with Section 381(1)(f) of the Executive Law.

11. Consolidated Edison shall construct the certified facilities in accordance with the provisions of Staff's Revised *Interim Standards and Practices for Environmental Management and Construction of Gas Transmission Facilities in New York State (Standards and Practices)* that are applicable to this proceeding and not specifically prescribed in the EM&CP, particularly with regards to archaeological resources, construction practices and techniques, water bodies and wetlands, erosion control, right-of-way, clearing and maintenance, and right-of-way restoration, except as otherwise specified herein.

12. Consolidated Edison shall report any proposed changes in the approved EM&CP, other than editorial or minor drawing changes, to the Department of Public Service Staff and to the Department of Environmental Conservation. DPS staff will confirm with the company and refer to the Secretary of the Commission (or a designee) reports of any proposed changes that do not cause substantial change in the project's environmental impact. DPS staff shall refer all other proposed changes in the EM&CP to the Commission for approval. Upon being advised that Staff will refer a proposed change to the Commission, Consolidated Edison staff shall notify all affected statutory and active parties, and all property owners or lessees whose property is affected by the proposed change. The notice shall describe the requested change and state that documents supporting the request are available for inspection at specified locations, and state that persons may comment by writing or calling (followed by written confirmation to) the Commission within 10 days of the notification date. Any delay in receipt of written confirmation will not delay Commission action on the proposed change. Consolidated Edison shall not execute any proposed change deemed to be substantial until it receives oral or written approval from the Commission, except in emergency situations threatening personal injury, property damage or severe adverse environmental impact or as specified in the EM&CP.

13. Consolidated Edison shall make available to the public a toll free or local phone number of an agent or employee who will receive complaints made during construction of the certified facilities. In addition, the Commission's phone number, and the phone number of its Environmental Compliance Section, shall be provided in the event of any questions or concerns. Telephone complaints shall be logged and made

available to DPS staff upon request. During Staff's compliance inspections, the company shall report to Staff every unresolved complaint.

14. Before commencing site preparation, the Consolidated Edison shall give notice to the Commissioners of Public Works for Westchester County, Mount Vernon, Village of Pelham and New Rochelle. Such notice shall contain a map and description of the project in the local area, the anticipated date for start of construction and name, address and local or toll-free telephone number of an employee or agent of the company. The notice shall also contain a statement that the project is under the jurisdiction of the Commission, which is responsible for enforcing compliance with applicable environmental and construction conditions, and which can be contacted at an address and telephone number to be provided. Whenever possible, the notice shall be written in terms reasonably understandable to the average person, as determined by the company. A copy of the notice shall be submitted to the Secretary of the Commission.

15. Consolidated Edison shall provide its construction contractors complete copies of the Certificate for the project, the project's EM&CP, and 6 NYCRR Parts 700-704.

16. The authority granted in the Certificate for the project and any subsequent Commission order(s) in this proceeding are subject to the following conditions which are necessary to ensure compliance with such order(s):

(a) Consolidated Edison shall regard the DPS staff representatives (certified pursuant to PSL Section 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of the Certificate or any other

order in this proceeding, such Staff representatives may issue a stop-work order for that location or activity.

(b) A stop-work order shall expire within 24 hours unless a single Commissioner confirms it. If a stop-work order is confirmed, Consolidated Edison may seek reconsideration from the confirming Commissioner or from the Commission. If the emergency prompting the issuance of a stop-work order is resolved to the satisfaction of the Commissioner or the Commission, the stop-work order will be lifted. If the emergency has not been satisfactorily resolved, the stop-work order will remain in effect.

(c) Stop-work authority shall be exercised sparingly and with due regard to the potential economic costs involved and possible impact on construction activities. Before exercising such authority, the DPS staff field representatives shall attempt (wherever practicable) to direct preventive or remedial action through the company's representatives possessing comparable authority. In the event that Staff field representatives issue a stop work order, neither Consolidated Edison nor the contractor will be prevented from undertaking such safety-related activities as they deem necessary and appropriate under the circumstances.

(d) In the event of any emergency involving specific construction or maintenance activities that violate or threaten to violate the terms of the Certificate or any other order in this proceeding, the DPS staff field representatives may direct the company to install appropriate mitigative measures or devices.

Notifications

17. Consolidated Edison shall inform the Secretary of the Commission, DPS staff and the Department of Environmental Conservation at least five days before commencing construction of this project.

18. The company shall provide DPS staff monthly status reports summarizing the previous month's construction activity and indicating the locations where construction is scheduled for the next month.

19. Within ten days after the facility is placed in service and is supplying customer loads, the company shall notify the Commission of this fact.

Rights-of-Way Clearing

20. Consolidated Edison shall confine clearing, where required, and subsequent maintenance activity to the certified right-of-way.

21. Any fines, penalties or environmental damage resulting from actions performed by contractor personnel working on this project (from work directly or indirectly associated with this project) shall be the contractor's responsibility. The Commission may also seek appropriate penalties from the company as a result of its contractors' actions.

Transmission Line Construction

22. Consolidated Edison shall install sedimentation/erosion control devices to prevent sedimentation into water bodies (i.e., the Hutchinson River, Pelham Lake) and associated wetlands during construction. The erosion control structures shall be installed prior to construction and shall remain in place while working within 100 feet of the water

body or wetland. Erosion and sedimentation controls will be maintained until the right-of-way has been revegetated and/or stabilized in accordance with pre-existing conditions.

23. Consolidated Edison shall take appropriate measures, as outlined in the EM&CP to minimize fugitive dust and airborne debris from construction activity.

24. Noise mitigation procedures shall adhere to the approved EM&CP, and DPS staff shall be notified at least 24 hours in advance if unplanned weekend or holiday construction becomes necessary.

25. No vehicular or equipment access across or into streams or wetlands is permitted. Equipment turnouts may be provided for machinery and equipment to pass at intervals in non-sensitive areas.

26. Consolidated Edison shall instruct its contractors to park their vehicles and equipment in designated areas, which do not interfere with normal traffic, do not cause any safety hazard or interfere with existing land uses.

Erosion Control

27. In the areas of the right-of-way or substation sites subject to soil erosion, the Applicant shall install temporary erosion control devices as soon as practicable and appropriate, and as indicated in the project's EM&CP.

Environmental Supervision

28. Consolidated Edison's environmental inspector, engineer or qualified designee shall be on site at the start-up of each field operation and during environmentally sensitive phases of construction in areas such as water crossings. Each environmental inspector, engineer or designee and construction inspector shall be

equipped with sufficient documentation, transportation and communication equipment to monitor effectively contractor compliance with the provisions of this opinion and order, applicable sections of the Public Service Law and the approved EM&CP.

29. Consolidated Edison shall organize and conduct site compliance inspections as needed, but not less frequently than once a month, during the clearing, construction and restoration phases of the project, and at least annually for two years after the project facilities are operational. Such inspections shall include a review of the status of all certification conditions, requirements, and company commitments, as well as a field review of the project, if necessary. Such inspections may also include:

(a) reviews of all complaints received, and their proposed or actual resolutions;

(b) reviews of any significant comments, concerns or suggestions made by the public, local governments, or other agencies;

(c) reviews of the status of the project in relation to the overall schedule established prior to the commencement of construction; and

(d) any other items the company or DPS staff consider appropriate. A written record of the results of such inspections will be circulated to involved agencies by the company.

Rights-of-Way and Maintenance

30. Consolidated Edison, if necessary, shall negotiate for temporary easements for construction purposes, which shall be identified in the EM&CP the Commission approves. Any temporary easement or construction areas not identified in the approved EM&CP will be requested through changes thereto. Unless otherwise specified in the

EM&CP, the company shall, following restoration, let the temporary construction area revegetate naturally or return to their original land use to the extent that forest canopy development does not interfere with the inspection, operation or maintenance of the utility facilities. Except where otherwise specified in the EM&CP, in areas where forest canopy growth precludes aerial inspections of the right-of-way, stem-specific removal of trees or side trimming shall be conducted in accordance with long-range right-of-way management plans.

31. No herbicides will be used for facility construction or maintenance. Consolidated Edison shall employ appropriate non-chemical techniques and apply environmental restrictions in the company's Detailed Specifications for Transmission Right-of-Way Vegetation Maintenance.

Conservation Measures

32. Wherever right-of-way construction requires removal of topsoil for trench excavation, the topsoil shall be removed from the site and disposed of with other excavated subsoil material in keeping with conventional construction methods. At the time of backfill, select fills shall be placed around and above placed facilities, compacted and stabilized to pre-existing conditions. Topsoil shall be restored in accordance with original soil profiles generally not to exceed a maximum of twelve inches.

Archaeological

33. Consolidated Edison has consulted with ("OPRHP"), which by letter dated _____, 2005, stated that, based upon its review of the Phase IA Cultural Resources Report submitted as part of the Application, additional testing is not required within the

construction work zone to ensure that that potential archeological resources are not impacted by the project. **[To be confirmed]**

34. Should archaeological materials be encountered during construction, the company shall, in accordance with the Unanticipated Discovery Plan provided in Appendix D of the application, stabilize the area and cease construction activities in the immediate vicinity of the find and protect the same from further damage. Within twenty-four hours of such discovery, the company shall notify DPS staff and OPHRP to determine the best course of action. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated and the need for and the scope of impact mitigation has been determined.

35. Should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be immediately halted and the remains shall be protected from further damage. Within twenty-four hours of any such discovery, the company shall notify the Commission, OPRHP, and the State and local police.

36. Consolidated Edison shall refrain from undertaking construction in areas where cultural resource surveys have not been completed and until such time as the results of any additional cultural resource surveys that are required have been reviewed by the appropriate authorities, including OPRHP and DPS staff. Staff shall be contacted prior to commencement of construction in any such areas.

Other Facilities

37. Consolidated Edison shall engineer its facilities to be fully compatible with the operation of nearby electrical, gas and telecommunication facilities. The company

shall take remedial measures with regard to any existing cathodic protection system if, upon monitoring, such measures are indicated.

38. The company shall coordinate maintenance of these facilities with those of any and all adjacent electric, gas and telecommunication facilities.

39. The company shall identify and mark-out all existing in-ground utilities in accordance with 16 NYCRR Part 753

Rights-of-Way Restoration

40. The majority of the transmission line rights-of-way and construction work zone is paved area as the transmission line will be buried under existing road surfaces. Within the limited areas where the disturbance of mowed ground cover may be required at the edges of a roadway right-of-way, a suitable seed mixture will be applied to such areas to revegetate and stabilize the right-of-way or work area.

41. All trees over four inches in diameter (measured four feet above ground) or shrubs over four feet in height that are damaged or destroyed by the Applicant's activities during construction, operation, or maintenance, regardless of where located, shall be replaced by Consolidated Edison with equivalent type trees or shrubs, except where:

- (a) permitted by any approved EM&CP;
- (b) equivalent-type replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the facility;
- (c) replacement would be contrary to sound right-of-way management practices or to any approved long-range right-of-way management plan applicable to the project; or

(d) a property owner (other than the company) on whose land the damaged or destroyed trees or shrubs were located declines a replacement.

42. Within ten days of the completion of final restoration activity, Consolidated Edison shall notify the Commission that all restoration has been completed in compliance with the EM&CP.

43. This proceeding is continued.

By the Commission,

Consolidated Edison Company of New York, Inc.

Cedar Street Project

Appendix D

Phase IA Cultural Resources Report

**PHASE IA CULTURAL REOURCES SURVEY FOR THE PROPOSED CEDAR
STREET PROJECT, MOUNT VERNON, PELHAM AND NEW ROCHELLE,
WESTCHESTER COUNTY, NEW YORK**

Prepared for:

Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Prepared by:

TRC Environmental Corporation
1200 Wall Street West
Lyndhurst, New Jersey 07071

TRC Project 48089

OPRHP Project _____

Raymond D. Pasquariello
Principal Investigator and Author

October 2005

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OPRHP Project _____

Raymond D. Pasquariello
Principal Investigator and Author

October 2005

MANAGEMENT SUMMARY

TRC Environmental Corporation (TRC) has been contracted by Consolidated Edison Company of New York, Inc. (Con Edison) to perform an initial assessment of the proposed Cedar Street Project; a 3.0-mile, 138 kV underground transmission line in southeastern Westchester County, New York with connections to Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon and the 138/13.8 kV Cedar Street Substation located in the City of New Rochelle (Figure 1). As part of the assessment, TRC performed a Phase IA survey of the proposed alignment and substation sites.

The proposed route will be primarily located within the curb-to-curb portion of the rights-of-way of public roadways. The duct bank for the transmission line will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed transmission line will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, it is anticipated that the proposed transmission line will be located within the roadway or sidewalk of the existing parkway bridge (Lincoln Avenue) with all construction from above rather than below the bridge.

The Phase IA survey identified four recorded prehistoric and three recorded historic archaeological sites within a one-mile radius of the Project area. In addition, the survey identified two National Register Listed and two National Register Eligible properties, and one significant structure within or adjacent to the Project area. An additional 14 National Register of Historic Places and/or Westchester County properties are located within one mile of the proposed transmission line and substations.

No known archaeological sites will be impacted by the construction of the proposed project, and given the project's design within existing public roadways and developed substation sites, the potential for encountering previously unrecorded sites is low. In the unlikely event that cultural resources are found during the proposed construction activities, Con Edison has provided an Unanticipated Discovery Plan as Appendix A of this report that describes procedures to ensure that any potentially significant archaeological resources discovered during construction, including human remains, are dealt with in full compliance with applicable regulations.

The proposed transmission line construction will occur within one National Register Listed property (Rochelle Park – Rochelle Heights Historic District) and adjacent to a second Listed property (Pelham Firehouse) and two National Register Eligible properties. However, due to the construction design (the transmission line will be buried under existing road surfaces) the proposed project poses no adverse direct or visual effect to the Rochelle Park - Rochelle Heights Historic District, the Pelham Firehouse and the NRE properties identified.

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1.0 INTRODUCTION

TRC Environmental Corporation (TRC) conducted a Phase IA cultural resource survey of the proposed Cedar Street Project in Mount Vernon, Pelham and New Rochelle, Westchester County, New York (see Figure 1).

The project involves a 3.0-mile, 138 kV underground transmission line in southeastern Westchester County, New York with connections to Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon and the 138/13.8 kV Cedar Street Substation located in the City of New Rochelle. Orthophotographs of the Project area that were taken in 2004 and obtained from the New York State GIS Clearinghouse are included here as Figures 2 through 5.

The proposed electric transmission line will originate at the Washington Street Substation and terminate at the Cedar Street Substation. Upon leaving Con Edison's property, the transmission route will be located within public rights-of-way along Hartford Ave, South Columbus Avenue, Beechwood Avenue, Bradford Road, Lincoln Avenue, Manor Place, Orchard Place, Manhattan Avenue, Cedar Street and Renewal Place.

The duct bank for the transmission line will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed transmission line will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, it is anticipated that the proposed transmission line will be located within the roadway or sidewalk of the existing parkway bridge (Lincoln Avenue) with all construction from above rather than below the bridge.

The following chapters document the methods and results of the Phase IA survey. Chapter 2 presents the project setting. Chapter 3 contains the cultural background of the region. Methods are described in Chapter 4. Results and recommendations are reported in Chapter 5. A list of references cited in the report concludes the report.

2.0 PROJECT SETTING

2.1 General Description of Facility Location

Con Edison is proposing to construct a 3.0-mile, 138 kV underground transmission line in southeastern Westchester County, New York. The transmission line will connect Con Edison's existing 138/13.8 kV Washington Street Substation in the City of Mount Vernon with the 138/13.8 kV Cedar Street Substation located in the City of New Rochelle. The transmission line will contain a maximum of two feeders. One feeder, to be constructed immediately (Phase I), will consist of three-phase copper conductor solid dielectric 138 kV insulated cable circuit housed in a buried duct bank. The duct bank will be designed to have spare capacity to allow for installation of an additional feeder at a future date to support future area load growth (Phase II). One fiber optic cable will be installed within the trench to provide for voice and data communications between the Washington Street and Cedar Street Substations. Equipment required to accommodate the new feeder will be added at both the Washington Street and Cedar Street Substations. A third transformer and associated equipment (a circuit switcher, potheads and switchgear) will be installed at the Cedar Street Substation to accommodate the proposed Phase I feeder. A disconnect switch will also be installed at the Cedar Street proposed feeder position between the bus and the pothead stand where the feeder cable is to be connected. Additionally, one of the existing bus ring supplies coming from the 138/13.8 kV transformer at Washington Street will be relocated to provide a two-breaker separation for the proposed feeder. New relay panels to provide the protection for new bus and feeders will be installed in the control room. An additional transformer and associated equipment will be installed at the Cedar Street Substation at such time as the Phase II feeder is determined necessary to serve area load growth. All of this new work will be done within the existing fence and property lines of the Washington Street and Cedar Street Substations.

The proposed route will be primarily located within the curb-to-curb portion of the rights-of-way of public roadways. As a consequence, there will be a limited need to acquire additional easements or rights-of-way for the Project. Con Edison will receive permission from the New York State Thruway Authority (NYSTA) for the installation of the feeder within property under control of the NYSTA in the vicinity of the Cedar Street Substation.

The duct bank for the transmission line will be installed within an open-cut trench excavated along the transmission line route within the curb-to-curb portion of street rights-of-way, with the exception of the line's crossing of the New England Thruway and the Hutchinson River/Hutchinson River Parkway. In the vicinity of the New England Thruway, the proposed feeder will be located within both the paved and grassed areas of the Exit 16 Interchange. For the crossing of the Hutchinson River/Hutchinson River Parkway, it is anticipated that the proposed feeder will be located within the roadway or sidewalk of the existing parkway bridge (Lincoln Avenue) with all construction from above rather than below the bridge. Alterations to the existing Washington Street and Cedar Street Substations will occur within the existing fence lines of each property.

2.2 Proposed Transmission Route

The proposed route begins at Con Edison's Washington Street Substation and heads east along

Hartford Avenue for a distance of approximately 1,300 feet to the intersection with South Columbus Avenue. The route continues north along South Columbus Avenue, for approximately 120 feet to the intersection with Beechwood Avenue (Photo 1). At Beechwood Avenue, the route once again turns east continuing for a distance of approximately 1,275 feet to the intersection of Bradford Road. At Bradford Road the route travels northeast for approximately 200 feet and passes underneath the New Haven Line of the Metro North Railroad and enters Wilson Woods Park. The route continues northeast through the park along Wilson Woods Park Road for approximately 2,200 feet to the intersection of Lincoln Avenue (Photo 2). At Lincoln Avenue the route continues east, crossing the Hutchinson Parkway Bridge and Hutchinson River, and continues east along Lincoln Avenue for approximately 7,600 feet to the intersection with North Avenue (Photo 3). East of North Avenue, Lincoln Avenue becomes Manor Place. The route continues northeast through the North Avenue intersection onto Manor Place for approximately 950 feet to Orchard Place. The route then travels south for approximately 500 feet, along Orchard Place crossing Manhattan Avenue and onto vacant New York State Thruway property, adjacent to a the southbound exit lane of Interchange 16 of the New England Thruway (I-95). The route continues southeast for approximately 1,300 feet, crossing both southbound exit and entrance lanes of the thruway and passes under the 8-lane New England Thruway overpass and under Metro North's New Haven Line (which is also used by Amtrak between New Rochelle and New Haven) to the intersection of Renewal Place and Cedar Street, at which point the route turns south and continues along Renewal Place for approximately 350 feet to Con Edison's parking lot for the Cedar Street Substation. At that point the route turns northwest into the substation parking lot and into the walled substation.

2.3 Substations

Washington Street Substation

The existing Washington Street Substation is located on an approximate one-acre site located at the northeast intersection of Hartford Avenue and Lyons Place, south of Washington Street and approximately 800 feet south of the Metro North Railroad in the City of Mount Vernon, Westchester County (Photo 4). The substation will accommodate a new 138 kV transmission line within the existing fence line of the substation property.

Cedar Street Substation

The Cedar Street Substation is located on an approximate two-acre site adjacent to the New Haven Line of the Metro North Railroad and approximately 500 feet south of Interchange 16 of the New England Thruway (Photo 5). The substation will accommodate the new 138kV feeders and new 138-13.8kV transformers within the existing walled substation property.

2.4 Area of Potential Effect

The Area of Potential Effect (APE) for a project is defined as that geographic area or areas within which construction, operation or maintenance of a project may directly or indirectly cause alterations in the character or use of historic properties (per Section 106 regulations, 36 CFR Part 800 Section 16(d)). There are a variety of potential effects a project may have on historic

properties, including physical effects (such as ground disturbance or destruction), noise effects or visual effects of aboveground structures on the setting of historic properties. The APE for this project includes the proposed route and the substation sites.



Photo 1 **Beechwood Avenue near Hillside looking west.**

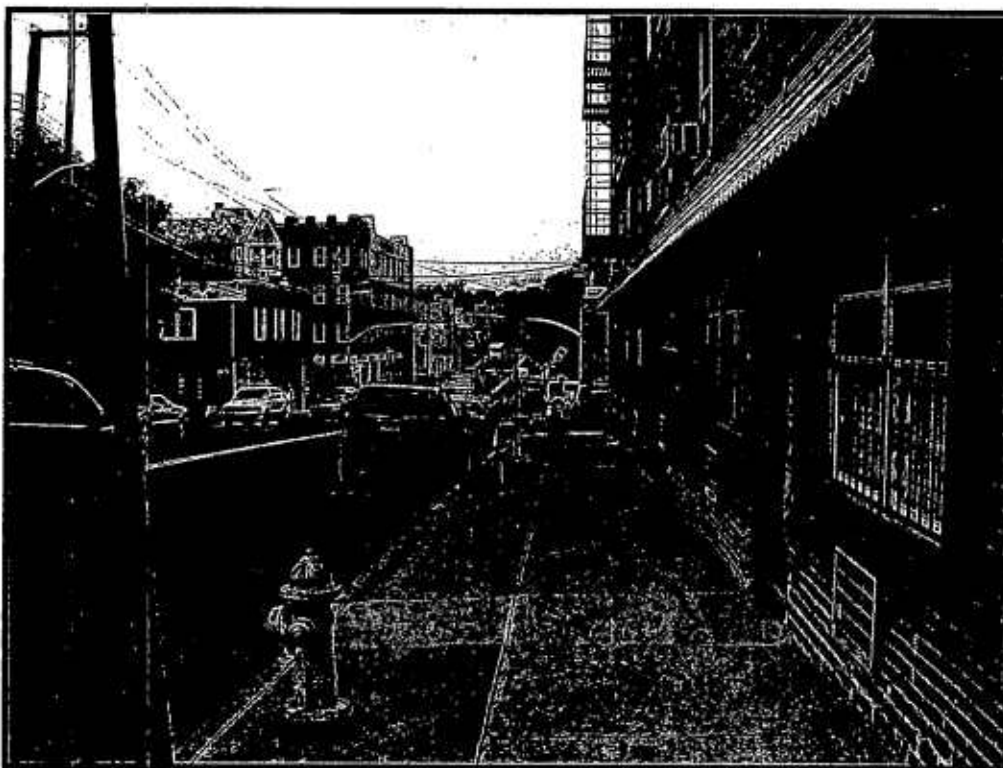


Photo 2 **Lincoln Avenue at 6th Avenue looking west.**



Photo 3 Lincoln Avenue looking toward North Avenue intersection.

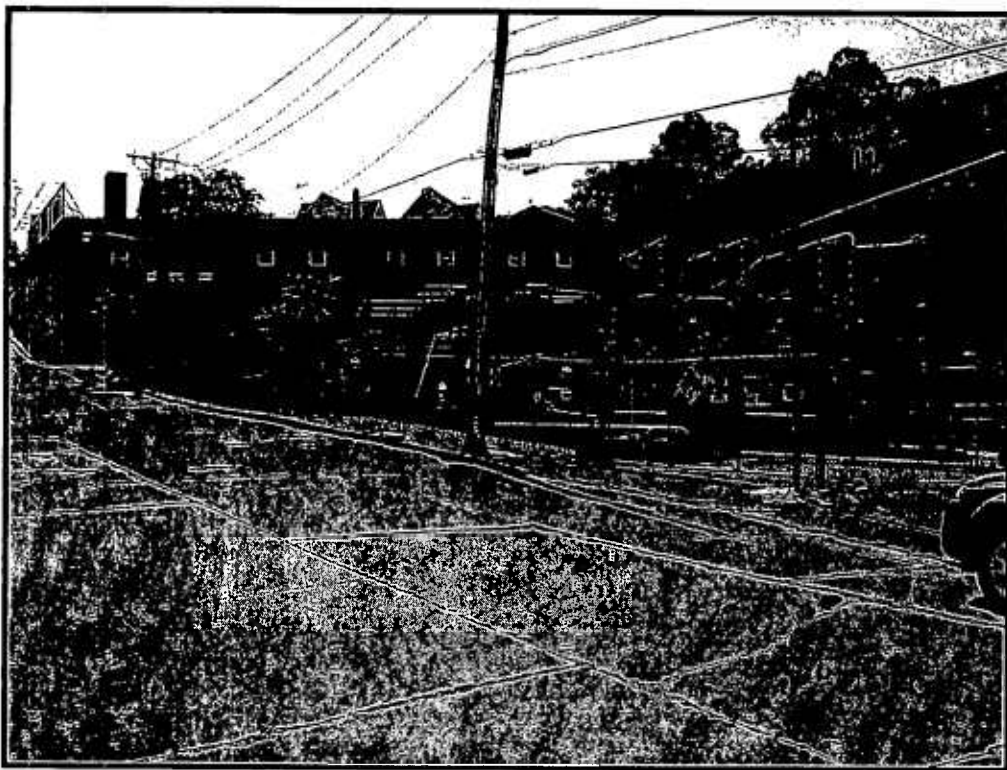


Photo 4 Washington Street Substation at the corner of Hartford and Lyons Place.

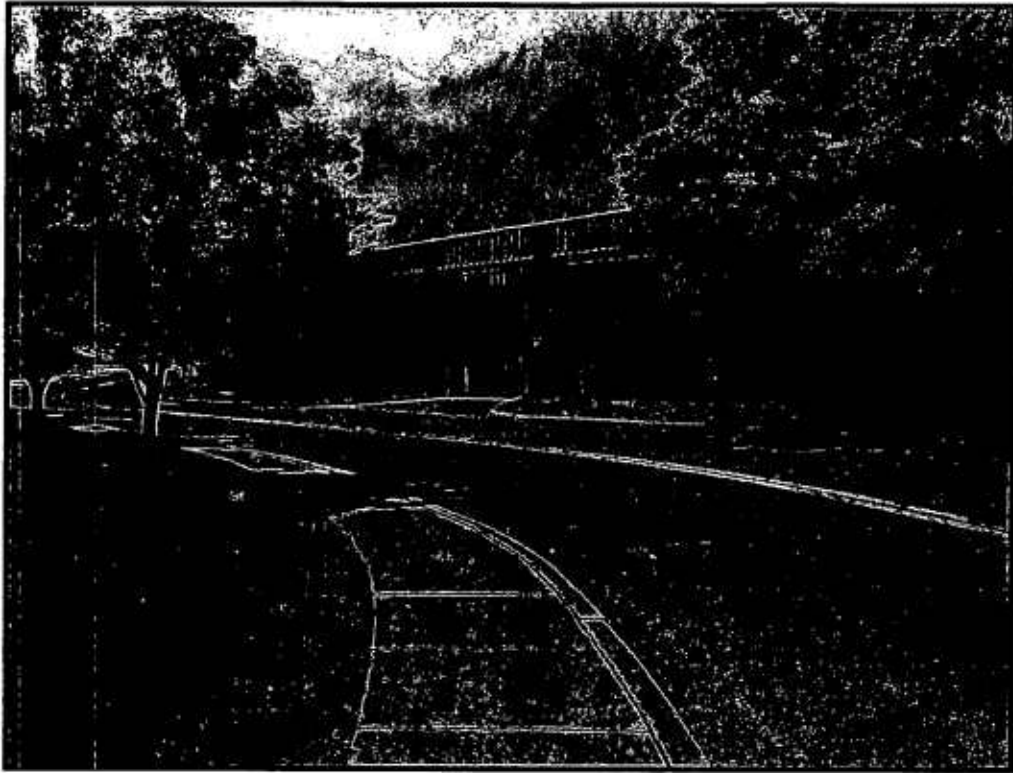


Photo 5 Cedar Street Substation at the Renewal Place gate.

3.0 CULTURAL BACKGROUND

3.1 Paleoenvironment

Before the initial Paleoindian colonization of the Northeast, the area experienced cyclic Late Pleistocene glacial climates. As the glacial ice retreated north, a cold, dry tundra was established. Fossil pollen samples collected from across the northeast (Bernabo and Webb 1977:90) indicate that the tundra was replaced by a spruce woodland around 12,000 years ago. The appearance of spruce across the Northeast indicates "a climatic amelioration...that allowed spruce to grow in regions where it was previously limited by climate" (Davis 1983:179). The changes in the pollen record during this period were broad and rapid. This trend in the pollen record continued until 7,000 B.P. (before present), when the remnants of the continental glacier that had lingered south of Hudson Bay finally melted. After this occurrence, both the speed and the magnitude of the changes in the pollen assemblages decreased (Bernabo and Webb 1977:90).

Although some investigators have attempted to identify the spruce woodlands of the Late Pleistocene–Early Holocene as an unproductive environment that would have limited the potential for human colonization (Fitting 1968; Ritchie and Funk 1971), more recent palynological studies have suggested otherwise (Snow 1980:166). Davis (1983:176) notes that "even at sites where the pollen influx indicates the presence of spruce trees, the continuing presence of herb pollen in high percentages suggests a partially open vegetation, not a closed forest like the modern boreal forest in Canada."

Davis (1983:176) also indicates that "about 10,000 years ago, forests of variable composition developed in the North, and forests underwent a series of changes as new species migrated northward." Changes in the distribution (in range and in altitude) of white pine and hemlock led Davis to suggest the following climatic trends:

The opening of the Holocene at about 10,000 years ago was marked by a change to essentially modern climate (though not of vegetational composition). Soon afterward, at least by 9000 B.P. the climate became warmer than today. Temperatures warmer than present appear to have persisted until the time of the Little Ice Age (A.D. 1450–1850) [Davis 1983:176].

A number of temperate forest species also were present at the opening of the Holocene, and the range of these trees soon expanded northward. The earliest Holocene forests included oak, elm, ash, birch, ironwood, and sugar maple (Davis et al. 1980). Davis (1983:174) has described the pollen assemblage for the early Holocene as resembling modern assemblages from the northern Great Lakes region. Significantly, ironwood was present in higher percentages than at any later time. Its presence "suggests a forest with a diffuse canopy and well-lighted forest floor" (Davis 1983:174). These early forests, however, lacked chestnut, hickory, and red maple, which became dominant in late Holocene forests. With their importance as a food source to contemporaneous populations in other areas, particularly the Southeast, the slow migration of nut-bearing trees into the region is perhaps one of the most significant factors effecting both human and animal populations.

The modern vegetation patterns in the Northeast include a pine-dominant conifer/hardwoods region in the northern sections, and oak-dominant, deciduous forests in the southern portions. The modern ecotone extends from southern Maine west along the Massachusetts/Vermont border, then southwest across southern New York, and then west across northern Pennsylvania to Lake Erie.

3.2 Prehistoric Perspective

3.2.1 Paleoindian Period (ca. 12,000–9,500 B.P.)

The Paleoindian period represents the earliest human occupation in the northeastern United States. This occupation began in the Late Pleistocene, soon after the continental ice sheet began to recede northward, once again exposing land. Approximately 15,000 years ago, the southern edge of the glacier was positioned along a line running east/west across Nantucket, Martha's Vineyard, Long Island, and Staten Island. Glacial landforms known as moraines on these islands mark the southern extent of the ice sheet.

Over the next 4,000 years, the ice melted and retreated northward towards Canada, exposing the land surface of most of New York and New England in the process. The new landscape was dotted by postglacial lakes that changed size and shape relatively quickly as the surface of the land adjusted to the loss of pressure from the ice sheet (Isachsen et al. 1991:178–179). During this time, approximately 12,000 to 13,000 years B.P., humans began moving into northeastern North America. These occupations in the terminal Pleistocene epoch indicate an adaptation to cooler climatic conditions and a different physiographic regime than those found in the modern Holocene.

Archaeological sites dating to this time period are most commonly recognized by the presence of distinctive projectile points called fluted points. Because Paleoindian sites are so old, they are relatively rare and often have been disturbed by more recent natural events and human activity.

Aboriginal groups of the period were likely small, mobile bands dependent on a hunting and gathering economy. Although they may have hunted some of the mega fauna that became extinct at the end of the Pleistocene, such as mastodon (*Mammuth americanum*), bison (*Bison antiquus*), and ground sloth (*Megalonyx* sp.), it is likely that the subsistence base was varied and included a number of plant and animal foods. West of the Mississippi River, the association between fluted points and extinct Pleistocene megafauna has led to the notion of Paleoindians being "big game hunters." However, the small number of associations in the eastern United States has led many to question the importance of the mega fauna in the subsistence of Paleoindians (McNutt 1996:189).

The oldest evidence of human occupation in the Northeast comes from the sites and assemblages associated with the Paleoindian Bull Brook phase, which dates ca. 10,600–10,200 B.P. These sites include Bull Brook, Bull Brook II, and Wapanucket #8 in Massachusetts, and the Whipple site in southwestern New Hampshire (Curran 1999). One undisturbed Paleoindian site in Connecticut, 6LF21, was excavated in 1977 and produced a radiocarbon date of 10,190 B.P. The remainder of the evidence for Paleoindian occupation comes from isolated finds of local variants of the fluted point tradition known as Clovis, which occur in scattered locations around the northeast. Many of these finds appear to be associated with former postglacial lake basins (Lavin 1984). In particular, surveys by the American Indian Archaeological Institute (AIAI) near

Robbins Swamp, located along the Housatonic River in Canaan, Connecticut, have identified numerous Paleoindian sites around the margins of this rich ecological zone (Nicholas 1988). Although several of the sites have produced fluted points, the results of more detailed investigations are not yet available.

3.2.2 *Archaic Period (ca. 9,500–3,000 B.P.)*

The Archaic period is subdivided into the Early, Middle, Late, and Terminal Archaic. Current archaeological evidence suggests that the youngest fluted point sites date to no later than approximately 9,500 years ago, marking the beginning of the Early Archaic. The Early Archaic period is not as poorly represented in the archaeological record as the preceding Paleoindian period. Most of the Early Archaic sites have been identified by the presence of projectile points analogous to dated types found in stratified Southeastern sites. In upstate New York, Funk and others excavated and dated several Early Archaic assemblages in the Susquehanna Valley (Funk and Wellman 1984), and Snow's research near Lake George in the Upper Hudson drainage identified an Early Archaic component at the Harrisena site (Snow 1980). On Staten Island, several sites have yielded Early Archaic projectile points such as Hardaway, Palmer, Kirk, and LeCroy Bicurvate types in association with early radio carbon dates (Ritchie and Funk 1971). Funk (1976:233) notes that bicurvate base projectile points are "widely but thinly spread along the Hudson Valley", but no component has been excavated in this region.

Although projectile points similar to southeastern Middle Archaic types had been found in isolated contexts throughout the Northeast, clear identification of the chronological position of the northern analogs was not established until Dincauze (1971, 1976) reported on the excavations at the stratified Neville site on the Merrimack River in New Hampshire. These excavations documented the existence of the Neville stemmed point type dating between about 7,800 and 7,000 B.P., and the Stark stemmed projectile point dating between about 7,600 and 6,400 B.P. (Dincauze 1976). In addition, the Merrimack point type was identified as dating to the end of the Middle Archaic period. The Neville and Stark point types are similar in style and age to the Stanly and Morrow Mountain types that Coe (1964) defined earlier in the Southeast.

The accumulated data for the Middle Archaic period in the Northeast suggest that its inhabitants were forming distinct bands and were settling into defined territories. These bands were establishing base camps and were occupying a greater variety of special purpose sites in a carefully planned seasonal round (Snow 1980:183). Evidence for the first use of coastal resources such as shellfish dates to this period; however, intensive exploitation of this resource base did not occur until the Late Archaic period. Several new tool types were developed during this period, including woodworking tools such as gouges and axes, and large ground stone semi-lunar knives (commonly know by their Inuit name ulu). The adaptive strategy employed during this period is generally perceived to have been a diffuse adaptation, oriented towards generalized hunting and gathering and the seasonal exploitation of resources (Dincauze and Mulholland 1977:441; McBride 1984a:96, 238). According to Dincauze (1974:45), the preference for riverine, lacustrine, and bog settings during the Middle Archaic suggest an orientation towards the exploitation of anadromous fish runs in the spring and eastern flyway bird migrations during the spring and fall.

Throughout the Northeast, archaeologists recognize the Late Archaic period as one in which the numbers and types of sites increase dramatically—what Snow (1980:187) describes as the Late Archaic "florescence." Unlike with earlier time periods, interpreters of Late Archaic assemblages have to contend with a sometimes confusing and complex array of data. In New York, Ritchie

(1980) recognized two major Late Archaic components, the Lamoka and the Laurentian, which can overlap in time and space. The Lamoka tradition is associated with the small, narrow-stemmed projectile points that are found across the northeast, such as the Sylvan and Wading River forms from Long Island and southeastern New York and the Squibnocket complex from southern New England. Snow (1980:226) calls the Laurentian complex and its related assemblages in northern New England and the St. Lawrence drainage the "Lake Forest Archaic" and the Lamoka/Sylvan/Squibnocket complexes of central and southern New York and New England the "Mast Forest Archaic." Pfeiffer (1984) has compiled evidence that the Lake Forest Archaic is a widespread tradition firmly dated to the period between 5,000 and 4,200 B.P. The "Late Archaic period also witnessed an increase in the importance of gathering activities, the employment of storage, and an expanded duration of settlement" (Pfeiffer 1984:85).

In the St. Lawrence and upper and Middle Hudson drainages, the late Archaic begins with the Vergennes phase of the Lake Forest Archaic, which is followed by the somewhat nebulous Vosburg phase. Towards the middle of the Late Archaic, Snow notes there appears to have been northward expansion of the Sylvan Lake Complex of the Mast Forest Archaic from the lower Hudson Valley such that by about 4,200 B.P. this complex was established throughout the Hudson Drainage. Artifacts comparable to the Sylvan complex on Long Island have been found at sites such as Stony Brook and Wading River (Ritchie 1959).

The final Archaic period also has been called the Transitional period, in reference to its presumed transitional status between the Archaic and Woodland periods. Since research has continued to indicate that there is actually a great deal of cultural continuity between the Archaic and Woodland periods, Snow (1980:235) has suggested that the label "Terminal Archaic" is more appropriate. In southern New England, the Susquehanna tradition (broad-stemmed projectile points and their associated assemblages) marks the early part of the Terminal Archaic. These points include a number of regional varieties, including the Genesee, Perkiomen, Snook Kill, and Susquehanna Broadspear types. Characteristics of the Susquehanna tradition include a marked preference for a riverine adaptation and a predilection for the fine-grained lithic resources of the Piedmont province, including rhyolite, felsite, argillite, and slate (Dincauze 1975:27; Turnbaugh 1975:54). The shift in settlements from inland wetlands to riverine zones coincides with an inferred economic shift from a diffuse adaptation in the interior to a focal adaptation in the floodplain locales.

The latter half of the Terminal Archaic period is marked by the appearance of narrow, tapered Orient Fishtail projectile points. Named for the original type locations at Orient Point on eastern Long Island, Orient Fishtail Points tend to be found on Long Island, the Hudson Valley, and in southern New England. Another hallmark of the Terminal Archaic period is steatite cooking vessels, which occur towards the end of the Susquehanna Tradition and throughout the Orient Tradition. The existence of these large steatite vessels suggests that the "people who made, traded, and used them had reached a point in the evolution of their settlement and subsistence systems where the use of heavy cooking vessels was advantageous" (Snow 1980:240), implying that the people lived in more sedentary settlements and utilized foodstuffs that required long processing with heat.

Pfeiffer (1984) has labeled the corresponding tradition in southern New England as the "River Plain Tradition," which is derived from its apparent settlement pattern focus along the floodplains of the major river systems. Radiocarbon dates for this tradition place it between

3,600 B.P. and 2,700 B.P. Pfeiffer (1990) describes it as the direct descendant of the Late Archaic Lake Forest adaptation of southern New England.

3.2.3 Woodland Period (ca. 3,000–450 B.P.)

Like the Archaic period, the Woodland period also is divided into four subperiods: the Early, Middle, Late, and Final Woodland. Some evidence of a population decline in the region exists for this time period (Hoffman 1985). Subsistence data from Martha's Vineyard for the Early Woodland period indicate hunting and an extensive dependence on shellfish, including clams, oysters, and scallops (Ritchie 1969:87, 224).

Two Middle Woodland phases have been identified: the Roaring Brook phase (ca. 2,000–1,250 B.P.) and the Selden Creek phase (ca. 1,250–1,000 B.P.). The Roaring Brook phase is characterized by a continuation of the quartz cobble lithic industry and an increase in the utilization of nonlocal materials. Other attributes include rocker and dentate stamped ceramics. The Selden Creek phase is identified by ceramics of the Sebonac phase of the Windsor tradition.

Site distribution during the Middle Woodland period exhibits a significant rise in frequency and occupation area, with particular increase in coastal/riverine locations and a corresponding decrease in upland base camps (Lavin 1988a:110; McBride 1984a:135, 306–315; McBride and Dewar 1981:49). McBride's research suggests that, by the end of the Middle Woodland period, "major subsistence and settlement changes were taking place as people began to aggregate along major rivers for the entire year" (Juli and McBride 1984:96). Subsistence during the Middle Woodland period of the Northeast consisted primarily of a hunting, fishing, and collecting economy, with shellfish comprising a significant part of the diet for the inhabitants of coastal sites (Ritchie 1969:227).

During the Late Woodland period (ca. 1,000–450 B.P.) the antecedents of the historically recognized Native groups become recognizable. North, central, and western New York and the Mohawk Valley were occupied by groups of Iroquoian speakers, and in these areas large, nucleated, semi-permanent sedentary villages developed. In contrast, southern New York and New England was occupied by Algonkian speakers living in smaller, less permanent settlements. Late Woodland-period characteristics include increased village sizes, increased sedentism, increased trade networks, and the utilization of cultigens such as maize, squash, and beans. Distinguishing trademarks of this period include Levanna and Madison projectile points and an increased use of non-local lithic material. Other characteristics include a highly variable ceramic assemblage that includes plain, cord-marked, fabric-impressed, brushed, stamped, and incised surface decorations.

The overall increase in site frequency, size, and length of occupation for sites in the Late Woodland period continued, with the largest sites located in coastal and estuarine settings (Lavin 1988b:110; McBride 1984a:320, 324). Settlement patterns were characterized by semi-sedentary villages or base camps located on floodplains or terraces immediately adjacent to major drainages, with temporary and task-specific camps located in the uplands (McBride 1984a:139, 322–330; McBride and Dewar 1981:49).

The subsistence system of the Late Woodland period included hunting terrestrial animals and migratory fowl, fishing, shellfish collecting, and gathering wild plants (McBride 1984a:325). In

addition, cultivated foods such as maize, beans, and squash became a part of the subsistence regime for the first time in prehistory. The earliest radiocarbon dates in the Northeast for the presence of cultigens are ca. A.D. 1100 (Mulholland 1988:146), and evidence for the exploitation of these cultigens is not abundant before the Final Woodland period, ca. A.D. 1500 (McBride and Dewar 1987:305). In addition, the earliest dates are generally associated with inland sites.

Settlements of the Final Woodland period were similar to the preceding period, and were characterized by large permanent and semi-permanent settlements in riverine areas, with small seasonal camps and a high frequency of task-specific camps located in the uplands; no temporary sites have been identified for this period (McBride 1984a:146, 337-341). With the exception of the intensification of horticulture, there were no significant changes in the subsistence economy of the Final Woodland period.

3.3 Historical Overview

Sustained European-Native American contact in the Hudson River Valley dates to 1609 when Henry Hudson sailed up the Hudson River. On September 13, 1609, Hudson anchored his ship near present-day Yonkers. He and his crew encountered Algonquian-speaking Native American people who lived in the lower Hudson Valley.

The first permanent and lasting European settlement of what became New York State was directed by the Dutch West Indian Company, which was founded in 1621. Military outposts were established at New Amsterdam and Fort Orange in 1624. European settlements increased in the Hudson Valley after 1638, and there was a dramatic decrease in the Native American population. The Dutch Colonial period lasted from 1624-1664 when the English took control of what is now New York. Westchester became a separate county in 1683. European land holding in Westchester County was concentrated in six manors: Pelham (established 1666), Fordham (1671), Philipsburgh (1693), Cortlandt (1697), Morrisania (1697), and Scarsdale (1701). The feudal landlord-tenant pattern of manorial land holding, unlike the situation further upriver, did not last long in the lower Hudson Valley. Within 20 years, much of the land of the manors had been sold.

During the American Revolution, partisans for both sides lived in Westchester County. Called the Neutral Ground, Westchester separated American troops from British forces, which occupied New York City. The county was the scene of battles at Pelham and White Plains in 1776.

In the early nineteenth century, the local economy depended on farming and increasing industrial activity. Quarries, iron furnaces, and brick manufacturing plants operated. Railroads opened in 1841 (Figures 6 and 7). Access to urban areas by railroad encouraged farmers to produce dairy products and vegetables for quick transportation and sale. At mid-century, much farmland was flooded to create reservoirs for New York City's water supply. Later, European immigrants settled in the southern communities of the county in new industrial centers, such as Yonkers. Roads also helped to move city residents to the suburbs, with suburbanization the main trend of the twentieth century.

4.0 METHODS

The Phase IA survey was designed to collect specific types of information to assist in the identification, evaluation and management of cultural resources present within proposed impact areas. This survey involved the collection and interpretation of historic and archival research, including a review of all known archaeological, historic and National Register Listed and Eligible sites in the vicinity of the project area, a review of previous cultural resource surveys conducted in the area, a review of environmental data, and a thorough site inspection of the project area. The methods employed followed guidelines set forth in the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (New York Archaeological Council 1994).

The cultural resource investigations involved three tasks: (1) preliminary research, including a literature, records, and map search; (2) project area inspection and documentation; and (3) and reporting.

4.1 Literature and Records Search

A thorough records and literature search of maps and reports on file at the OPRHP and online at the State Preservation Historic Information Network (SPHINX) was conducted to identify the following:

- (a) Previously recorded New York State Museum (NYSM) archaeological sites within a one-mile radius of the project area;
- (b) Previously recorded OPRHP archaeological sites within a one-mile radius of the project area;
- (c) Previous Archaeological Surveys conducted within a one-mile radius of the project area;
- (d) National Register Listed properties within a one-mile radius of the project area;
- (e) National Register Eligible properties and Building Inventories within or adjacent to the project area; and
- (f) Nineteenth Century maps of the project area.

4.2 Inspection of Project Area

In order to document current conditions, TRC conducted a pedestrian survey of the proposed transmission route and existing substations. With most of the proposed construction occurring within curb-to-curb portion of the rights-of-way of public roadways and existing substation sites, this inspection focused on the accuracy of route mapping in relation to adjacent historic properties.

4.3 Curation of Project Materials

All written records, photographs, and project materials are currently being curated at the TRC Environmental Corporation office in Providence, Rhode Island.

5.0 RESULTS AND RECOMMENDATIONS

5.1 Results

5.1.1 *Previous Cultural Resource Studies*

Six previous cultural resource studies have been conducted within a one-mile radius of the project area. The results from four of those studies are detailed below; reports for the two remaining surveys (both in Westchester County and numbered 31 and 133) are currently missing from the OPRHP collection. No additional information is available.

(1) Eisenberg (1981) presents the results of a completed archaeological survey for an approximate eight-mile section of the Hutchinson River Parkway from the merge with the Cross County Parkway north to the intersection with the Cross Westchester Expressway. The purpose of the survey was to determine whether construction in the area designated for impact would adversely affect significant cultural resources. The survey did not discover the presence of either prehistoric or early historic cultural resources and it was recommended that construction proceed without any further concern for possible disturbance or destruction of such resources.

(2) Kirkorian and Kearns (1989) conducted archaeological investigations along a 26-mile underground/underwater cable for the New York Power Authority (NYPA) from Westchester County across Long Island Sound to Nassau County. Archaeological field investigations were undertaken 1986 at Davenport Park, New Rochelle, New York, the landfall location for the project cable. During the 1986 site investigations, the sod and uppermost soil stratum yielded evidence of long-term or multiple occupation by prehistoric populations. The site also yielded a variety of historic materials indicative of historic period scatter. The site assemblage contained evidence of tool manufacture, ceramics, and faunal material. While no stratigraphic separation of components could be identified, the large extent of the site suggested that it may have contained horizontally discrete components. Since Davenport Park was possibly one of a very limited number of intact prehistoric archaeological sites in coastal Westchester County, OPRHP determined the site to be potentially eligible for the National Register of Historic Places based on Criterion d. NYPA investigated alternatives to construction in this area, but other constraints prevented adoption of those alternatives. A data recovery program for 10 percent of a 25 ft wide corridor, running roughly north to south from the parking lot to the shore, was executed. It was determined that there would be no adverse effect upon significant archaeological resources if data recovery excavations were undertaken prior to construction. Data recovery excavations were completed in 1989 and construction proceeded in the tested project corridor.

(3) An addendum to the above-mentioned report (Kirkorian and Kearns 1989) reports a cultural resources investigation of previously unsurveyed portions of the stipulated route of the NYPA's proposed Sound Cable Project. Archaeological fieldwork focused on a portion of the Bronx River Park from Garrett Street to a proposed boring pit along the railroad ROW along the edge of the park. The architectural survey followed Avon Road from Kensington Road to Midland Avenue. It then followed Midland Avenue to Main Street. This portion of the Stipulated Route replaces the following portions of the original Preferred Alternative: Armourville Avenue, Lake Avenue, Bronx Street, Columbus Avenue, Circuit Avenue, Limekiln Road, Wallace Street, and

Main Street. Archaeological subsurface testing was conducted within the previously unsurveyed portions of the Stipulated Route within the Bronx River Park. A total of 10 shovel test pits were excavated by a crew of two archaeologists on December 18, 1987. No significant archaeological deposits were identified during the survey.

(4) Lord (1982) presents the results of a subsurface testing phase of a reconnaissance survey that was performed along Section A2 of the Hutchinson River Parkway from the Pelham Toll Booth to the Cross County Parkway. The testing was conducted along the east and west sides of the parkway within the existing ROW to determine the existence of cultural resources within the project area prior to proposed shoulder and ramp construction. No prehistoric archaeological sites or structures were found to exist within the project area. Several ruins of structures were located but none appear to be of historic or archaeological significance, based on the documentation obtained from experts during the study.

5.1.2 Archaeological Sites

No previously recorded NYSM or OPRHP archaeological sites exist within or adjacent to the project area. However, background research identified four recorded prehistoric (Table 1) and three recorded historic archaeological sites (Table 2) within a one-mile radius of the Project area.

Table 1. Prehistoric Archaeological Sites within a One-Mile Radius of the Project

Site Number	Distance from APE	Description
NYSM 2829	1416 m (4646 ft) S	No information
NYSM 5201	708 m (2323 ft) S	Possible quartz quarry
NYSM 5202	80 m (264 ft) SE	Possible shell heap
NYSM 5219	1513 m (4963 ft) S	No information

Table 2. Historic Archaeological Sites within a One-Mile Radius of the Project

Site Number	Distance from APE	Description
A11968.000002	821 m (2693 ft) S	Foundation
A11942.000009	933 m (3062 ft) SSE	No information
A11941.000006	821 m (2693 ft) S	Foundation

5.1.3 Architectural Properties

One National Register Listed (NRL) property is located within the project area; a second NRL property and two National Register Eligible (NRE) properties are located adjacent to or within one block of the project area. (Table 3 and see Figure 1).

Table 3. National Register Listed and Eligible Historic Properties within or adjacent to the Project

Number	Figure Reference No.	Name/ Address	Designation/Date of Listing
04NR05343	H15	Rochelle Park – Rochelle Heights Historic District / The Circle, The Boulevard, The Serpentine, Hamilton Avenue, and others	NRL / July 2005
03NR05112	H16	Pelham Firehouse / 217 Fifth Avenue	NRL / In process
11942.000778	H17	The Second Presbyterian Church Complex / 473-475 North Avenue (adjacent to City Hall)	NRE / n/a
11942.000767	H18	Huguenot Trust Company/Spoken Arts Building / 310 North Avenue	NRE/ (form is missing from OPRHP files) /

The newly-listed Rochelle Park – Rochelle Heights Historic District is located on the east side of North Avenue, bordered to the south by I-95 and the Metro North Railroad, to the north by Fifth Avenue, and to the east by Rockland Place and the west side of Potter Avenue. Laid out in 1885, the District represents one of the most historic suburban areas in the country. It includes Rochelle Park (Photo 6), one of the first residential parks laid out in New Rochelle, and the Rochelle Heights subdivision. The entire district (late 19th – early 20th century) is approximately 180 acres and includes 513 contributing buildings, 38 contributing sites, and 4 contributing structures. Rochelle Park – Rochelle Heights Historic District meets National Register Criterion A for its significance in the history and evolution of residential planning.

The Pelham Firehouse, located at 217 Fifth Avenue, (NRL listing currently underway) was constructed in 1927 and is the only firehouse in the Village of Pelham. It is a three-story, Italian Renaissance Revival style building and a major landmark in the city's downtown commercial district. The Pelham Firehouse meets the requirements for listing on the National Register in accordance with Criteria A and Criteria C.

In addition to the NRL and NRE resources reported, a building-structure inventory search for the transmission route and substations identified approximately 69-99 properties within or adjacent

to the project area (the majority of which are located on Lincoln Avenue). Included in these properties is the Hutchinson River Parkway Bridge on Lincoln Avenue (11913.00004), part of the Hutchinson River Parkway System. The bridge is a good example of 20th century rustic highway design popular in the suburbs of New York City, but its eligibility for the National Register is predicated on the significance of the Hutchinson River Parkway (Photo 7), which is currently not a NRL or NRE property within the project area.

An additional 14 NRHP properties were identified within one-mile of the project (Table 4) and mapped (see Figure 1).



Photo 6 The Great Lawn, Rochelle Park Historic District.

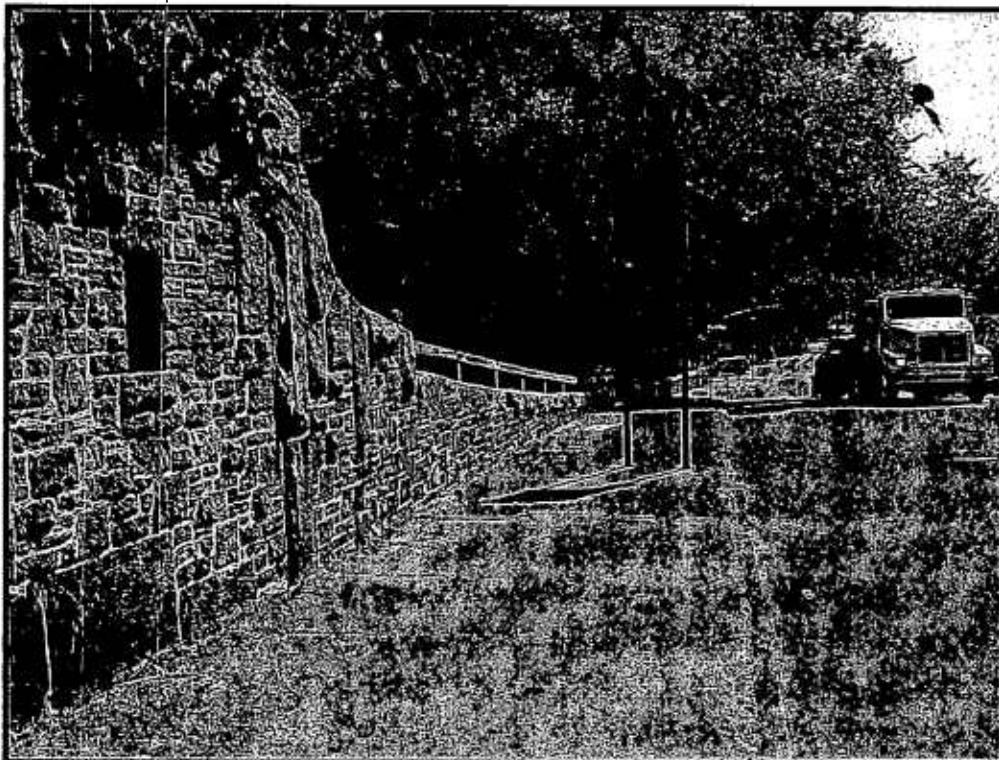


Photo 7 Hutchinson River Parkway Bridge stone work and wood rail on the north side.

Table 4 – National Register of Historic Places Properties within a One-Mile Radius of the Project				
NYSOPRHP No. NR No.	Figure Reference No.	Property Name and Address	Designation	Date of NR Listing
11941.00175 90NR02480	H1	US Post Office-Mount Vernon 15 S. First Avenue City of Mount Vernon	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 5/11/1989 NR 5/11/1989
	H2	First Reformed Church of Mount Vernon Lincoln Avenue and Summit Avenue City of Mount Vernon	Westchester County Inventory of Historic Places	
11941.00027 0 99NR01566	H3	First United Methodist Church 227 East Lincoln Avenue City of Mount Vernon	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 10/4/1999 NR 1/7/2000
11941.00017 4 90NR02479	H4	John Stevens House 29 West 4 th Street City of Mount Vernon	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 6/23/1980 NR 4/26/1972
11941.00025 1 97NR01276	H5	Trinity Episcopal Church Complex 324 South 3 rd Avenue City of Mount Vernon	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 8/25/1997 NR 9/1/1998
11961.00001 5 90NR02548	H6	Pelhamdale 45 Iden Avenue Village of Pelham Manor	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 9/27/1982 NR 11/4/1982
11942.000370 00NR01581	H7	Knickerbocker Press Building 50-52 Webster Avenue City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 4/5/2000 NR 5/11/2000

Table 4 – National Register of Historic Places Properties within a One-Mile Radius of the Project

NYSOPRHP No. NR No.	Figure Reference No.	Property Name and Address	Designation	Date of NR Listing
11942.000748 90NR02483	H8	First Presbyterian Church and Lewis Pintard House Pintard Avenue City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 6/23/1980 NR 9/7/1979
11942.000004 90NR02482	H9	Leland Castle 29 Castle Place City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 6/23/1980 NR 8/27/1976
11942.000656 90NR02485	H10	Pioneer Building 14 Lawton Street City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 11/23/1983 NR 12/29/1983
	H11	Union Baptist Church 438 Main Street City of New Rochelle	Westchester County Inventory of Historic Places	
11942.000745 90NR02487	H12	US Post Office New Rochelle 255 North Avenue City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 5/11/1989 NR 5/11/1989
11942.000884 02NR04923	H13	Wildcliff 42 Wildcliff Road City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 10/25/2002 NR 12/31/2002
11942.000005 90NR02484	H14	Davenport House 157 Davenport Avenue City of New Rochelle	NYS Register of Historic Places National Register of Historic Places Westchester County Inventory of Historic Places	SR 6/23/1980 NR 4/30/1980

5.2 Recommendations

No known archaeological sites will be impacted by the construction of the proposed project, and given the project's design within existing public roadways and developed substation sites, the potential for encountering previously unrecorded sites is low. In the unlikely event that cultural resources are found during the proposed construction activities, Con Edison has provided an Unanticipated Discovery Plan as Attachment A of this report that describes procedures to ensure that any potentially significant archaeological resources discovered during construction, including human remains, are dealt with in full compliance with applicable regulations.

Since the transmission line will be located underground and the Washington Street and Cedar Street Substations are well-screened and located in commercial (Cedar Street Substation) and industrial (Washington Street Substation) areas, visual impacts to historic sites and parks will not occur.

The proposed transmission line construction will occur within one National Register Listed property (Rochelle Park – Rochelle Heights Historic District) and adjacent to a second Listed property (Pelham Firehouse) and two National Register Eligible properties (see Table 3 and Figure 1). However, due to the underground design of the transmission facility, the proposed project poses no adverse direct or visual effect to the Rochelle Park - Rochelle Heights Historic District, the Pelham Firehouse and the NRE properties identified.

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APPENDIX A

UNANTICIPATED DISCOVERY PLAN

1.0 Introduction

Con Edison is presenting the following Unanticipated Discovery Plan for Cultural Resources and Human Burials (Plan) that may be found during construction of the Cedar Street Project. This Plan describes procedures to ensure that any potentially significant archaeological resources discovered during construction, including human remains, are dealt with in full compliance with applicable regulations. More specifically, this Plan describes procedures to:

- Ensure that personnel working on this Project are trained in basic archaeological site awareness, identification and related procedures
- Ensure that any potentially significant archaeological resources discovered during construction, including human remains, are dealt with in full compliance with applicable regulations. The Plan is intended to be consistent with federal regulations at 36 CFR 800.11, Protection of Historic and Cultural Properties. No specific State of New York regulations or procedures are applicable to this Plan. In New York State, accepted practice involves immediate notification of appropriate officials, and development of discovery-specific procedures in consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), State and local police, and medical officials.
- Ensure that procedures and lines of communication with the appropriate government officials are clearly established prior to the start of construction. In this manner, any discoveries can be addressed in a timely manner with minimal impact to construction schedules as well as cultural resources.

2.0 Training

Basic training is required for field inspectors and construction contractors to recognize potential discoveries of historic properties or human remains. Field inspectors and construction contractors must have a basic understanding of, and sensitivity to, the possibility of discovering cultural and historic resources and human remains. Specialists or archaeologists will be called upon when required following any unanticipated discoveries during construction, as described in this Plan.

The purpose of the basic training is to provide the basis for cultural resource compliance and to provide an overview of the general cultural history of the region. Basic training emphasizes the procedures to be followed, as outlined in this Plan, regarding the actions to be taken, and notifications, required, in the event of a significant unanticipated discovery of an historic property or human remains. Following training, both field inspectors and construction contractors are expected to be aware of the kinds of archaeological resources that may be encountered during construction.

Basic cultural resources training will be part of the overall environmental briefing that will be presented to field inspectors and construction contractors prior to the start of construction. Basic cultural resources training is designed to ensure that field inspectors and construction contractors understand the extent of the archaeological survey and field investigations that have been performed for this Project. Training will present the distinction between previously identified discoveries and what would constitute an unanticipated discovery.

Trainees will be instructed to be conscious of cultural resource indicators during construction, such as recognizable quantities of bone, unusual stone or ash deposits, evidence of spoil piles, or trench or foundation walls. The inspectors and construction contractors will be instructed to follow the specific procedures outlined in this Plan, in the event that potentially significant cultural resources or human remains are discovered during construction.

3.0 Procedures for Unanticipated Discoveries

All construction personnel working the Cedar Street Project and associated interconnections will be instructed to initiate the following procedures in the event that unanticipated historic properties or human remains are encountered during construction. Unanticipated discoveries that trigger initiation of the following procedures include:

- Any recognizable potentially significant concentrations of artifacts or evidence of human occupation; and
- Any evidence of human remains.

Part of the routine duties of construction personnel will involve examination of trenches, building excavations and/or spoil piles for evidence of artifacts or human remains. The following procedures will be initiated in the event of discovering unanticipated historical properties or human remains.

3.1 Unanticipated Cultural Resources

Construction contractor personnel involved in unanticipated discoveries of historic properties immediately must suspend activities that could affect the integrity of the discovery and must notify the Construction Manager and Environmental, Health and Safety (EH&S) Inspector. Notification includes information about the specific location of the construction area and the nature of the discovery. The Construction Manager involved in unanticipated discoveries of historic properties must immediately direct construction contractors to suspend activities that could affect the integrity of the discovery.

If any artifacts or historic property remains are discovered in an area that was not previously cleared for construction, the Construction Manager or EH&S Inspector will inform a designated Con Edison contact who will authorize a certified archaeologist to review the discovery. Any personnel with information on the discovery will discuss the location and nature of the discovery with the archaeologist. Visible barriers will be installed around the discovery area to protect it from disturbance until a decision is made.

If an archaeologist is not immediately available, and further work in the discovery is not imminent, then photographs or drawings of the discovery may be mailed, delivered or transmitted by facsimile to the archaeologist for review. Based on the information provided, the archaeologist will determine if a visit to the area is required. If a visit is required, the archaeologist will be expected to be there within 24 hours after notification.

If on-site archaeological investigations are required, Con Edison will notify the construction contractor's Construction Manager. No work that could affect the discovery will be performed until the archaeologist reviews the discovery.

The archaeologist will determine, based on the artifacts or historic property remains discovered, and based on the cultural sensitivity of the area in general, whether the discovery is potentially significant, and whether it requires immediate notification to the OPRHP, and other agencies or parties by telephone. If immediate notification is not required, or if other written information is required, data regarding the discovery will be transmitted by facsimile or sent by express mail, or similar expedited delivery, to these parties.

The archaeologist will consult and coordinate with the OPRHP, and other parties to propose procedures for treating and handling the discovery, and to clear the discovery area while minimizing impacts to the construction schedule, to the extent possible.

Suspended construction activities in the discovery area may not proceed until approval has been obtained from the OPRHP, and other involved agencies and parties as appropriate, following completion of the agreed discovery-specific procedures. The concurrence of Con Edison and the notification of the construction contractor's Construction Manager, in writing, is required to re-start suspended construction activities.

3.2 Human Remains

If any historic or prehistoric human remains are discovered, they will probably be discovered in excavations, below areas reached by any pre-construction archaeological investigations.

3.2.1 Guidance and Consultations

Treatment of historic or prehistoric human remains encountered during construction will be guided by:

- The policy statement adopted by the Advisory Council on Historic Preservation (Advisory Council);
- The Native American Graves Protection and Repatriation Act (NAGPRA); and

- Appendix B (1972 New York Archaeological Council Burial Resolution) of the *Standard for the Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*.

Consultations should be undertaken with:

- The OPRHP;
- The New York State Police;
- Local police and officials; and
- Interested parties, including Native American groups identified by the OPRHP.

The Advisory Council policy recommends that, to the extent allowed by law, treatment of human remains should adhere to the following principles:

- Human remains and grave goods (i.e., material intentionally interred with a human burial) should not be disinterred unless required in advance of some kind of disturbance, such as construction;
- Disinterment, when necessary, should be done carefully, respectfully, completely, by archaeologists, in accordance with proper archaeological methods;
- In general, human remains and grave goods should be reburied in consultation with the descendants of the dead;
- Prior to reburial, minimal, non-destructive studies of the human remains and grave goods should be performed, and pre-approved by the descendants; and
- Studies and reburial should occur according to a definite, agreed-upon schedule.

3.2.2 Discovery, Suspension of Work, Notifications, and Procedures

If human remains are discovered by any personnel on the Cedar Street Project construction site, all construction work in the immediate vicinity that could affect the integrity of the discovery will be suspended. The Construction Manager will be informed immediately, and notified of the exact location of the remains, as well as the time of discovery. The Construction Manager will notify Con Edison, who will be held responsible for retaining the services of a qualified and certified archaeologist. Con

Edison or the site EH&S Inspector will be responsible for notifying the appropriate government agency officials and other parties listed in this Plan, within 24 hours of the discovery.

Human remains may be excavated, if approved, in consultation with the OPRHP, the New York State Police, local police, Native Americans and other involved agencies and parties as appropriate. Excavation of the human remains will be pursuant to any agreement between Con Edison and the involved parties that specifies the excavation methods to be used and the data to be recovered.

Any discoveries made on weekends will be protected until all of the appropriate parties have been contacted.

As directed by the New York State Police, Con Edison will have the primary responsibility for contacting the appropriate medical officials and next-of-kin for recent human remain discoveries. Care will be exercised to excavate, transport, and store any human remains in a manner that respects and protects the sacred significance of the remains.

Suspended construction activities in the discovery area may not proceed until approval has been obtained from the OPRHP and other involved agencies and parties as appropriate, following completion of the agreed discovery-specific procedures. The concurrence of Con Edison's EH&S Inspector and his notification of the construction contractor's Construction Manager, in writing, is required to re-start suspended construction activities.

3.2.3 Agency Notification Telephone Numbers and Addresses

If human remains are discovered, the OPRHP and the appropriate Town Police Department (Mount Vernon, Pelham or New Rochelle) will be notified within 24 hours.