Appendix A

Plan and Profile Drawings

Appendix B

Road Crossings

Appendix C

Permits and Approvals

Appendix C: Permits and Approvals Received to Date:

Water Quality Certificate
Article VII Certificate
U.S. Army Corps of Engineers
CSX Agreement Letters

Note: Additional permits to be inserted into attached sleeve as they are received.

Water Quality Certificate

STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE

THREE EMPIRE STATE PLAZA, ALBANY, NY 12223-1350
Internet Address: http://www.dps.state.ny.us

March 18, 2005

Paige Graening, Esq.
National Grid USA
25 Research Drive
Westborough, MA 01582

Dear Ms. Graening:

Enclosed is the Water Quality Certification for the Niagara Mohawk Power Corporation proposed 345 kV electric transmission facility recently certificated by the Public Service Commission in Case 03-T-0644. This certification is issued pursuant to the Article VII certificate, and indicates the certification by the State of New York that the proposed construction activities will meet the water quality standards of the State of New York.

Sincerely,

James T. Gallagher, Director
Electricity and Environment

Enclosure

NEW YORK STATE PUBLIC SERVICE COMMISSION
WATER QUALITY CERTIFICATION

Pursuant to: Section 401 of the Federal Clean Water Act, 33 U.S.C. Section 1341(a)(1); Article VII of the New York State Public Service Law; 16 NYCRR Subpart 85-2; and 6 NYCRR Subpart 608.9

Certification Issued to: Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Facility Description

Niagara Mohawk Power Corporation ("NMPC") proposes to construct, operate and maintain a 345 kV overhead transmission line, right-of-way, substation upgrades, and related equipment (the "Transmission Facility") from the site of the Besicorp-Empire Development Company's proposed electric generation facility in the City of Rensselaer through the Town of East Greenbush and terminating at an existing substation on Reynolds Road in the Town of North Greenbush. The Besicorp-Empire generating facility would be a 505-megawatt cogeneration power plant. The proposed Transmission Facility would carry the output of the cogeneration facility to Niagara Mohawk's substation for its transmission and distribution on the electric grid serving New York State and New England. The details and justification for the Transmission Facility are contained in the administrative record before the Public Service Commission in Case 03-T-0644.

Location of Facility

The Transmission Facility will consist of: (1) a single circuit, 345 kV overhead transmission line located in existing Niagara Mohawk electric transmission rights-of-way of approximate length of 8.1 miles; and (2) incidental associated changes to existing 115 kV Circuits #4, #16, and #17. Two (2) 1192.5 kcmil Aluminum Conductor Steel Reinforced (ACSR) power conductors with 45 aluminum strands and 7 steel strands (45/7 strands) will be used for each of the 345 kV phases (Segment 1 will be a double circuit 345/115 kV; segments 2 and 3 will be a single circuit 345 kV). The same conductor type will be used on the 115 kV double circuit on the Segment 2A Connector. On Segment 2A, one (1) 1192.5 kcmil ACSR power conductor with 45/7 strands will be used to take the existing Feura-Bush #17 Circuit to the Greenbush Substation and the other conductor will be a 795 kcmil ACSR power conductor with 26/7 strands to take the existing Riverside-Reynolds Road #4 115 kV Circuit to the Greenbush Substation on the same monopole structure. Average spans between structures range from 560 to 700 feet. Tower structures will generally be of three types: steel pole H-frame structures, three-pole steel structures, and steel monopole structures. The proposed Transmission Facility route crosses agricultural land, successive old-field and shrub land, and forested areas. Portions of the route are within the Hudson River Floodplain. Structures will be placed to cause minimal impact to streams, wetlands, floodplains and other natural and cultural resources. The Transmission Facility will be maintained in a right-of-way that will range in width from 100 to 355 feet. The right-of-way will be maintained in accordance with NMPC's existing Commission-approved Vegetative Management Plan, the Environmental Management and Construction Plan ("EM&CP") for the proposed line, and the Certificate of Environmental Compatibility and Public Need (the "Certificate").

SEGMENT 1 of the Transmission Facility begins at the take-off structure at the switch yard on the site of the major electric generating facility proposed by Besicorp - Empire Development Company, LLC (BEDCO) in the City of Rensselaer and travels south generally along an existing 100-foot wide Niagara Mohawk Power Corporation (Niagara Mohawk) right-of-way into the Town of East Greenbush to an intersection with another Niagara Mohawk right-of-way, a distance of approximately 1.9 miles. A new 115 kV tangent structure (Structure 1-2) will be installed on the property of the Albany-Rensselaer Port District Commission and the existing Greenbush #16 Circuit (115 kV) will be routed onto Structure 1-1 on the BEDCO site. All existing structures and conductors made redundant by the relocation of the existing Greenbush Circuit #16 will be removed. The last approximately 650 feet of Segment 1 includes a crossing over railroad tracks and the need to expand the existing right-of-way width by approximately 60 feet, encompassing an area of approximately 10,000 square feet. In Segment 1, the Transmission Facility will be placed on double-circuit steel monopole structures, approximately 150 feet in height, on the eastern side of the right-of-way. The Transmission Facility (345 kV) will be attached to the western arms of the structures. The existing Greenbush #16 Circuit (115 kV) will be attached to the eastern arms of the structures.

SEGMENT 2 of the Transmission Facility thence travels easterly along the existing 250-foot wide Niagara Mohawk right-of-way in the Town of East Greenbush to an intersection with an additional Niagara Mohawk right-of-way, a distance of approximately 2.1 miles. In Segment 2, the Transmission Facility will be placed on single-circuit steel H-frame structures, on average approximately 100 feet in height, on the northerly side of the right-of-way. The alignment of the last quarter-mile of the Transmission Facility in Segment 2 would shift slightly within the right-of-way to reuse a portion of the right-of-way currently occupied by the existing Feura Bush – Reynolds Road #17 Circuit (115 kV). The existing Feura Bush – Reynolds Road #17 Circuit 230 kV wood pole H-frame structures within this last quarter-mile will be removed.

SEGMENT 2A CONNECTOR of the Transmission Facility involves the relocation of the existing Feura Bush – Reynolds Road #17 Circuit (115 kV) and the relocation of the existing Greenbush #16 Circuit (115 kV). The Segment 2A Connector begins approximately a quarter-mile southwest of the northerly terminus of Segment 2 and travels southeast along an existing 100-foot wide Niagara Mohawk right-of-way in the Town of East Greenbush to an intersection with an additional Niagara Mohawk right-of-way, a distance of approximately 0.25 miles. For the Segment 2A Connector, the relocated circuit will be placed on three double-circuit steel monopole structures, approximately 80 feet in height, in the center of the right-of-way. The Feura Bush – Reynolds Road #17 Circuit (115 kV) will be attached to the northern arms of the structures. The Greenbush #16 Circuit (115 kV) will be attached to the southern arms of the structures. The existing Greenbush #16 Circuit (115 kV) wood monopole structures will be removed.

SEGMENT 2A of the Transmission Facility also involves the relocation of the existing Feura Bush – Reynolds Road #17 Circuit (115 kV). Segment 2A begins at the eastern terminus of the Segment 2A Connector and travels south along an existing 226.5-foot wide Niagara Mohawk right-of-way in the Town of East Greenbush to the Niagara Mohawk Greenbush Substation, a distance of approximately 0.41 miles. For Segment 2A, the relocated circuit will be placed on double-circuit steel monopole structures, between 85 and 90 feet in height, at a location approximately 40 feet east of the center of the right-of-way. The Feura Bush – Reynolds Road #17 Circuit (115 kV) will be attached to the western arms of the structures. The Riverside – Reynolds Road #4 Circuit (115 kV) will be attached to the eastern arms of the structures. The existing Riverside – Reynolds Road #4 Circuit (115 kV) lattice structures will be removed (from this segment only).

SEGMENT 3 of the Transmission Facility begins at the easterly terminus of Segment 2 in the Town of East Greenbush and travels north along an existing 355-foot wide Niagara Mohawk right-of-way into the Town of North Greenbush to the Niagara Mohawk Reynolds Road Substation, a distance of approximately 4.1 miles. In Segment 3, the Transmission Facility (345 kV) will be placed on steel H-frame structures, on average approximately 100 feet in height, along the same (or very close to the same) centerline alignment of the existing Feura Bush – Reynolds Road #17 Circuit (115 kV). The existing Feura Bush – Reynolds Road #17 Circuit 230 kV wood pole H-frame structures will be removed. (After relocation, the Feura Bush - Reynolds Road #17 Circuit (115 kV) will be renamed the Feura Bush - Greenbush #17 Circuit).

Certification

The New York State Public Service Commission certifies pursuant to Section 401 of the Federal Clean Water Act, 33 U.S.C. Section 1341(a)(1); Article VII of the New York State Public Service Law; 16 NYCRR Subpart 85-2; and 6 NYCRR Subpart 609.0, that if the NMPC submits an acceptable EM&CP, and complies with the conditions stated below, construction of the Transmission Facility will comply with applicable requirements of Sections 301, 302, 303, 306 and 307 of the Federal Clean Water Act, as amended, and will not violate New York State water quality standards and requirements. This certification is issued in conjunction with the Certificate issued to NMPC in Case 03-T-0644, and any EM&CP as approved.

Conditions

1. Construction and operation of the Transmission Facility shall at all times be in conformance with the application in Case 03-T-0644, to the degree not superseded by the Certificate, and all conditions of approval contained in the Certificate.

2. Construction and operation of the Transmission Facility shall at all times be in conformance with the terms and conditions of the Joint Proposal dated December 21, 2004, and filed in Case 03-T-0644, to the degree not superseded by the Certificate.

3. Construction and operation of the Transmission Facility shall at all times be in conformance with the EM&CP, and all conditions incorporated in any order approving the EM&CP, in Case 03-T-0644.

4. NMPC shall provide a copy of this certification to the U.S. Army Corps of Engineers along with a copy of the application, Joint Proposal, Certificate, EM&CP, and order approving the EM&CP (and all subsequent EM&CPs and approval orders) in Case 03-T-0644 so that the U.S. Army Corps of Engineers will have a complete record of the conditions that apply hereto.

5. NMPC shall provide to all construction contractors complete copies of the Article VII Certificate, the approved EM&CP, and this certification.

6. All limits of wetland disturbance shall be demarcated by the construction of a silt fence. The silt fence must be constructed in accordance with specifications provided in the EM&CP. The purpose of the silt fence is to limit disturbance within the wetlands to the areas shown in the above referenced plans, and to avoid the discharge of either fill or turbid water to the wetland areas.

7. Wet or fresh concrete or leachate shall not be allowed to enter any wetland or surface water. Washings from concrete trucks, mixers or other devices can not be allowed to enter any wetland or surface water.

8. Any excavated soil must be suitably retained and managed so that there is no turbid runoff discharged either directly or indirectly into any of the wetlands.

9. To avoid the spread of invasive species, such as purple loosestrife or *phragmites*, all construction equipment must be adequately washed prior to entering each work area associated with a wetland. The equipment shall be washed in a manner to avoid the spread of the invasive species.

Certified by:

3/22/05
Date

James Gallagher, Director
Office of Electricity and Environment
New York State Department of Public Service
Three Empire State Plaza
Albany, New York 12223

Article VII Certificate with Joint Proposal, Certificate Conditions and General Guidelines for Environmental Management and Construction Plans

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of New York on March 16, 2005

COMMISSIONERS PRESENT:

William M. Flynn, Chairman
Thomas J. Dunleavy
Leonard A. Weiss
Neal N. Galvin

CASE 03-T-0644 - Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of a 345 kV Electric Transmission Line, Approximately 8.1 Miles Long, in the City of Rensselaer and the Towns of East and North Greenbush, Rensselaer County.

ORDER ADOPTING THE TERMS OF A JOINT PROPOSAL AND GRANTING CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

(Issued and Effective March 16, 2005)

BY THE COMMISSION:

INTRODUCTION

Procedural History

On April 28, 2003, Niagara Mohawk Power Corporation (Niagara Mohawk) applied, pursuant to Public Service Law Article VII, for a certificate of environmental compatibility and public need for a major electric transmission facility. The company proposed to construct and operate a 345 kV transmission facility to connect the Empire State Newsprint Project, proposed to be constructed in the City of Rensselaer, to the electric grid at the Reynolds Road Substation in North Greenbush.

On July 14, 2003, the presiding officer assigned to this case conducted a public statement hearing in Rensselaer at which four persons commented on the proposal. On July 15, 2003, he conducted a preliminary conference which set the case schedule and identified the active parties. Evidentiary

hearings were held on October 29, 30 and 31, 2003 and on November 13, 2003. The proposed route for the transmission line was inspected on December 9, 2003.

Following the hearings, Niagara Mohawk provided notice, pursuant 16 NYCRR §3.9, of the parties' initial settlement discussions and negotiations. On December 15, 2003, Department of Public Service Staff informed the presiding officer that the parties had arrived at an agreement in principal on a transmission line route and configuration.

On April 30, 2004, Niagara Mohawk submitted a supplemental analysis supporting its modifications to the original application. A public statement hearing was held on June 29, 2004 in East Greenbush to receive comments on the changes. Eight persons spoke. Among other things, they addressed public health and safety matters related to the placement of a 345 kV transmission line in residential areas, the visual and aesthetic impacts of the transmission line, and property values. Some suggested that the facility should be placed underground.

On December 23, 2004, seven parties submitted a Joint Proposal for the Commission to consider. The proposal is supported by Niagara Mohawk, Besicorp-Empire Development Company, the City of Rensselaer, the Rensselaer County Environmental Management Council, and the respective staffs of the Department of Public Service, the Department of Environmental Conservation, and the Department of Agriculture & Markets. The parties provided statements in support of the Joint Proposal. Opposing views and public comments were filed by January 28, 2005.

Description of the Proposed Facility

Niagara Mohawk initially proposed to build the 345 kV transmission line on double-circuit steel monopole structures approximately 150 feet in height. It planned to clear additional right-of-way and to install the poles next to other existing transmission structures for most of the 8.1 mile route. The Joint Proposal, however, requires the use of significantly lower, steel H-frame structures for substantial portions of the

route. Also, an existing circuit will be removed and re-routed to the Greenbush Substation. The new transmission line will be located on the cleared portions of the vacated right-of-way. It consists of four segments.

Segment 1 begins at the switch yard of the major electric generating facility being constructed by the Besicorp-Empire Development Company in the City of Rensselaer. The transmission line will travel south along an existing, 100-foot wide Niagara Mohawk right-of-way into the Town of East Greenbush, a distance of about 1.9 miles. On this segment, the facility will be placed on steel monopole structures approximately 150 feet in height, in a double-circuit configuration with a relocated existing 115 kV circuit (Circuit # 16).

Segment 2 travels easterly along an existing 250-foot wide Niagara Mohawk right-of-way in the Town of East Greenbush, a distance of approximately 2.1 miles. The Segment 2 facility will be placed on single-circuit, steel H-frame structures, on average about 100 feet tall.

Construction activity on Segment 2A includes the relocation of two existing 115 kV circuits (Circuits # 16 and 17) a distance of about 0.67 miles to terminate them at the Niagara Mohawk Greenbush Substation. The relocated circuitry on this segment will be placed on double-circuit, steel monopole structures between 80 and 90 feet in height.

Segment 3 begins in the Town of East Greenbush and travels north along an existing 355-foot wide right-of-way into the Town of North Greenbush to the Reynolds Road Substation, a distance of about 4.1 miles. On this segment, the facility will be placed on steel H-frame structures on average 100 feet in height. They will replace existing wood pole H-frame structures.

Other Permits

Niagara Mohawk has applied to the Untied States Army Corps of Engineers for a permit pursuant to Section 404 of the Clean Water Act. The State Office of Parks, Recreation and Historic Preservation has reviewed the project pursuant to Section 106 of the National Historic Preservation Act.

THE JOINT PROPOSAL

The Joint Proposal evaluates all the factors relevant to the transmission line proposal, including the need for the facility and its compatibility with the environment.

Need for the Transmission Facility

The proposed transmission line will connect a 505 MW cogeneration power plant to the bulk power system. Last year, the Besicorp-Empire Development Company received its certificate for the generating facility from the State Board on Electric Generation Siting and the Environment.[1] The interconnection of the generation facility to the electric network will increase the supply of electricity for local customers and the total amount of electric capacity in the state. By increasing opportunities in the wholesale market for buyer and seller transactions, the transmission facility will enhance electric industry competition in New York. The cost of the proposed transmission facility is currently estimated to be $11.2 million, an amount less than the other alternatives considered.

Probable Environmental Impacts

The proposed transmission facility will impose temporary construction disturbances and introduce new structures into a visual landscape where other transmission lines and substations exist. It will be close to some agricultural land and it will run through residential, commercial and industrial areas. It will not have direct impacts on any recreational resources or parks.

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[1] Case 00-F-2057, Besicorp-Empire Development Company, LLC, Opinion and Order Granting Certificate of Environmental Compatibility and Public Need (issued September 24, 2004).

The potential impact on agricultural land is limited. The proposed route passes only one area in East Greenbush where agricultural land is in active use. At this location, the route is aligned to the edge of the field and an existing access road on the right-of-way will be used during construction. Construction activity will be scheduled to mitigate disruptions to agricultural cultivation. If disruptions cannot be avoided compensation will be provided.

Where the facility passes through residential areas, much of the land adjacent to the right-of-way is undeveloped or rural in character. By following existing rights-of-way, the facility will have minimal impacts on the residential areas.

Suburban residential areas exist along the transmission line route in the Town of East Greenbush in the area of Stock Lane, Route 151, and Old Red Mill Road. The facility will introduce taller structures in these areas; however, some of the existing structures will be removed and the essential character of the land use on the right-of-way will remain unchanged. Niagara Mohawk will identify, in its environmental management and construction plan (EM&CP), the specific mitigation measures it will use to minimize disruptions in the residential areas.

The facility also passes by commercial establishments and industry at three locations. Mitigation measures will be used to minimize the disturbances due to construction. Access to the local businesses will be preserved at all times.

The view of the facility was analyzed using visual simulations and representative locations. Potential adverse impacts, and the probable nature of the visual impact of the proposed facility, were assessed. Sensitive visual locations were identified. Along the proposed route, there are five structures that are listed on the state and national register of historical places, two state bicycle routes, and a designated coastal zone on the Hudson River. Nine other visually sensitive locations are within a mile of the proposed transmission line; however, the facility will not be perceptible from most of them.

The Joint Proposal reports that the route selected, and the proposed configuration, will minimize the visual impacts of the overhead transmission line. The proposed H-frame structures are significantly less prominent than the monopoles Niagara Mohawk first proposed. On Segment 2, the average height of the structures has been reduced from about 130 feet to 100 feet. Moreover, the new facilities will be similar to the existing H-frame structures in the right-of-way. This will reduce their incremental visibility, particularly in the East Greenbush residential areas on Robert Lane and Stock Lane. The H-frame structures also mitigate adverse visual impacts from nearby parks, road crossings, and the designated bikeways.

Other measures will also mitigate the facility's visual impacts. The color and finish on the Segment 2A pole structures will blend with the surroundings, and specified changes will be made on Segment 3. Niagara Mohawk will develop a landscaping and lighting plan for improvements to the Reynolds Road substation.

An investigation of cultural resources was also conducted in this case. A survey was performed along the rights-of-way and closer investigation was conducted where it was necessary to determine the archaeological significance of a site. Three archaeological deposits were discovered and the route was kept away from two of them. An examination of the third revealed that it was not an important site. In another instance, a pole was relocated to avoid a wetland and a potential archaeological resource.

The State Office of Parks, Recreation and Historic Preservation has determined that there are no further archeological concerns regarding the facility, no additional surveys warranted, and no properties on the state or national registers that would be adversely affected by the construction and operation of the transmission line. As noted above, the use of H-frame structures, and the replacement of existing facilities, significantly mitigates the potential visual impacts.

Segment 1 is within the Hudson River Coastal Zone. The facility runs close to the Papscanee Marsh in East Greenbush but avoids it. The facility will cross the Papscanee Creek. Construction activity will be performed on the existing right-of-way, using an available access road, to avoid impacts to the riparian ecosystem and to minimize the amount of clearing.

The New York Department of State has reviewed the proposed facility for its consistency with coastal zone policies and has determined that it is in harmony with the State's Coastal Management Program.

Segment 1, and a small portion of Segment 2, is in the Hudson River floodplain. Segment 3 crosses a floodplain associated with Mill Creek. The facility will not alter the prevailing flood storage conditions in these areas.

The facility will also cross several streams but none of them are protected resources. Construction will affect a small amount of wetlands. Niagara Mohawk has applied to the U.S. Army Corps of Engineers for a permit to conduct construction activity in the wetland areas. Access to the wetlands will be limited and activity will be restricted to protect this resource.

Three types of vegetative communities exist in the rights-of-way: successional old field, successional shrubland, and forested areas. The areas that are disturbed during construction will be restored. Following construction, vegetation maintenance practices will be used to return the old field, shrubland and forest areas to their current state. Within the right-of-way security zone, some forested areas will be permanently cleared, but only to the extent necessary. No long-term impacts to wildlife are anticipated. No threatened or endangered species were observed in the vicinity of the proposed facility.

The soil and geological conditions on the rights-of-way do not present any conditions calling for unconventional construction methods. Niagara Mohawk's EM&CP will contain the prevention and mitigation measures needed to minimize impacts to soils and geology. Original contours will be re-established in

most areas; potential erosion and sedimentation impacts will be minimized. Any blasting of bedrock will be conducted in accordance with applicable local, state and federal regulations.

The facility will cross 17 roadways, including Interstate 90 and its ramps at Exit 8. Plans for the road crossings, designed to minimize traffic flow impacts during construction, will be reviewed with local and state transportation officials. The plans will include construction schedules, and a traffic control and safety plan.

Construction noise will be mitigated by the mufflers on the equipment used; nevertheless, noise disturbances are expected during construction. They will be temporary and intermittent, and experienced mostly at buildings close to the facility. Construction activity will be limited to daylight hours and the company will devise a plan to minimize noise and vibrations due to the removal of bedrock. Niagara Mohawk is required to comply with the City of Rensselaer's noise restrictions and the Town of East Greenbush's prohibitions on objectionable noise.

The construction and operation of the transmission line can have an impact on communications equipment. The proposed facility is not expected to interfere with the fiber optic telecommunications line it will cross and parallel. However, it could impact an AT&T cable. Niagara Mohawk is required to consult with the telephone company on this matter and report the results.

The transmission line could also interfere with AM radio broadcasts and amateur radio. The company is under a continuing responsibility to respond to any such interference complaints and to mitigate any such adverse impacts. To avoid impacts to a microwave tower adjacent to the right-of-way, the transmission line structures will not be permitted to block the line of sight to the cell tower antennae.

As to the electric fields emanating from the transmission line, the Joint Proposal addresses the expected levels at the edge of the right-of-way, at the occupied structures next to the transmission line, and in the vicinity of

the substations. The maximum electric field strength at these locations is within the rating standards the Commission established in 1978.[2] The electric field levels at the substations are expected to be similar to those currently present at the substations.

The magnetic fields from the transmission line and the substations are expected to be within the rating standard the Commission set in 1990.[3] By placing the transmission line close to the center of the right-of-way in Segment 2, the distance is increased between the line and the nearest residences adjacent to the right-of-way. This will reduce the magnetic field level at the nearest residential structures.

Alternatives

The Joint Proposal states why the facility is preferable to various alternatives. In general, it uses existing rights-of-way, and avoids or minimizes the land use impacts and disturbances to the natural habitat that other routes and configurations would have. A 345 kV transmission line is preferable to a 230 kV line, or multiple 115 kV lines, given the limited availability of rights-of-way and the efficiency reductions that would occur from using lower voltage lines. A "no build" alternative was also considered and rejected because the transmission line is needed to connect a new generation facility to the bulk power grid.

Underground cable configurations were also considered and rejected due to their substantial cost, estimated between $22.9 and $26.1 million. Given the overhead line's limited incremental impacts, the parties to the Joint Proposal concur that a costly underground line cable is not warranted.

The Joint Proposal supports the route to the Reynolds Road Substation in North Greenbush rather than an alternate route to the New Scotland Substation in Albany County. The route to North Greenbush avoids a Hudson River crossing; it also runs a shorter distance and is less costly.

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[2] Joint Proposal, ¶24.

[3] Joint Proposal, ¶26.

The parties considered alternatives that would locate the transmission line farther away from the residences on Stock Lane in East Greenbush. They also considered an underground cable at this location. However, underground construction was considered too costly and the existing view from Stock Lane contains several prominent overhead transmission lines. As to the residents' concerns about the level of the electromagnetic fields near their homes, as noted above, the 345 kV transmission line will be placed close to the center of the right-of-way to increase the distance between the line and the homes to reduce the magnetic field at the closest residences.

State and Local Laws and Regulations

The facility is consistent with the most recent State Energy Plan and it does not violate any long-range objectives. To the extent the New York State Uniform Fire Prevention and Building Code applies to the facility, the City of Rensselaer and the Towns of East and North Greenbush will inspect, permit and certify the segments in their respective locations.

In the City of Rensselaer, the transmission facility will pass through an area zoned for heavy industrial activity that does not allow structures over 70 feet in height. The transmission towers at this location will be between 140 to 160 feet because of the narrow right-of-way that cannot be enlarged due to the surrounding land use. The tower height is necessary to satisfy National Electric Safety Code minimum clearance requirements and to satisfy the applicable criteria for electric and magnetic fields. For these and other reasons, the Joint Proposal recommends that the Commission refuse to apply City Zoning Regulation §179-15 finding it unreasonably restrictive due to the existing technology.

In the same industrial district, screening and landscaping is required by regulation to conceal structures and soften the public view. However, access to the right-of-way must be maintained and it is not possible to completely screen the transmission facility. Therefore, the Joint Proposal recommends that the Commission refuse to apply Zoning Regulation §179-33 as being unreasonably restrictive due to the existing

technology. Nonetheless, to mitigate the adverse visual impacts, Niagara Mohawk will evaluate the use of some screening at public crossings that does not conflict with the management of the right-of-way. The company's EM&CP will address this matter and the Commission will determine whether any such screening measures should be implemented.

Waiver of Commission Regulations

On April 28, 2003, Niagara Mohawk requested a waiver of certain regulations requiring that information be provided with the company's application. The Joint Proposal reports that Niagara Mohawk has withdrawn all but one such request.

With respect to the archaeological information required by 16 NYCRR §86.3(a)(1)(iii), the company will provide it to the State Office of Parks, Recreation and Historic Preservation but will not release the information to the public in order to protect the archaeological resources.

Right-of-Way Acquisitions

To construct and operate the facility, Niagara Mohawk must acquire permanent rights-of-way and some temporary rights-of-way on parcels adjoining the existing rights-of-way.

Permanent acquisitions are required at the intersection of Segments 1 and 2 (consisting of 27,000 square feet), and at a point near the beginning of Segment 1 where a 100-foot wide easement is needed to cross Riverside Avenue and the Albany Port District's property. Niagara Mohawk must also amend its agreements for a 345 kV transmission line to cross the CSX Transportation, Inc. railroad track in Segment 1 and the Amtrak railroad tracks in Segment 2.

Niagara Mohawk also requires temporary rights-of-way for Segment 1 construction activity in an area along Teller Road and at the intersection of Riverside Avenue and the Port Access Highway. It will temporarily relocate an electric circuit (Circuit #16) while constructing the new facility. Three off-right-of-way access easements are also needed for Segments 2 and 3.

THE PARTIES' SUPPORTING STATEMENTS

Niagara Mohawk and Besicorp

In support of the Joint Proposal, Niagara Mohawk states that it changed the original proposal filed in April 2003 to address the issues identified by the government agencies. The changes reflected in the Joint Proposal are designed to ensure that the potential environmental impacts are minimized. In particular, the company notes that the transmission structures on Segments 2 and 3 will be, on average, about 35 feet shorter than the steel monopoles first proposed, and for all of Segment 3 they will replace existing H-frame structures. On the basis of the supplemental analysis it performed, Niagara Mohawk joins with the other project supporters in stating that the transmission facility is preferable as located and configured by the Joint Proposal.

Similarly, as a result of the parties' joint investigation and discussions, the Besicorp-Empire Development Company considers the parties' proposal to be a reasonable resolution of their respective positions that gives due consideration to the public interest and the interests of the owners of the transmission facility. The company urges the Commission to adopt the terms of this proposal and the certificate conditions the parties have provided.

State Agencies

In its statement, Department of Public Service Staff highlights the Joint Proposal's safeguards to minimize potential harm to the environment. DPS Staff points to the use of best construction practices and the conservation measures that will be used to maintain natural resources. It points, as well, to the procedures that will be used to monitor construction activity and handle potential complaints.

Department of Environmental Conservation Staff and Department of Agriculture and Markets Staff are also satisfied with the terms of the Joint Proposal and the certificate conditions to which the parties have agreed.

Rensselaer County

The Rensselaer County Environmental Management Council has entered into the Joint Proposal and considers it to be acceptable. The County agency would have preferred that the portion of the transmission line close to residential areas be placed underground. However, it believes that the terms of the Joint Proposal will ensure that the project does not adversely impact either local residents or the environment.

DISCUSSION AND STATUTORY DETERMINATIONS

The Joint Proposal submitted to us on December 23, 2004 has been endorsed by many of the formal parties that represent state interests and local government interests in this proceeding. None of them oppose the proposed terms and provisions that contain significant environmental protections and substantially reduce the environmental impacts associated with Niagara Mohawk's original proposal in this case. During the evidentiary hearings held in October and November 2003, the original proposal was seriously challenged by the Department of Public Service Staff. Staff's evaluation of the first proposal identified the visual, community and aesthetic impacts of large concern here.

Given the evidentiary hearing results, the parties entered into good faith settlement discussions to consider ways to further reduce and mitigate the proposal's potential impacts. The successful results of the settlement negotiations were presented to the public in April 2004 and a public statement hearing was held in June 2004. Recently, we have received additional written comments that are entirely consistent with those obtained at the June 2004 hearing.

The public comments continue to show that the placement of a new 345 kV transmission facility between the City of Rensselaer and the Town of North Greenbush will impose local impacts. For that reason, we must determine in this case, among other things, whether the facility, as currently proposed, represents the minimum adverse environmental impacts considering all relevant factors, including the state of technology and the nature and economics of the available alternatives. As

discussed below, we find that the proposed facility is in the public interest and that the applicant should receive a certificate with conditions.

To begin, none of the active parties, or anyone filing public comments, challenges or disputes the demonstrated need for this facility. It is clear that this transmission facility is necessary in time to connect the new generation in the City of Rensselaer to the bulk power system. The record also establishes that the State's bulk power system will operate more competitively with the electricity available from this facility. Also considering the "no build" alternative, and the other alternatives evaluated in this case, we find that the record evidence demonstrates that the proposed facility is needed and that it is consistent with the State's energy plan and policies.

The thrust of the local objections to the proposed facility surfaced at the June 2004 hearing. A Rensselaer County legislator spoke for himself and others who shared his view. Three county legislators have opposed the proposed facility; they have supported the installation of an underground cable in comments filed on January 4, 2005. They believe an underground facility would eliminate all potential visual, community and aesthetic concerns that have been raised. While they recognize that an underground alternative is more costly, they favor the investment to preserve the character of the neighborhoods and communities in North and East Greenbush.

In addition to the views expressed by the County legislators, we have also received comments and letters from concerned citizens whose homes are near the proposed transmission facility. They too have expressed concerns about the health effects of high voltage electric transmission lines, the visual impacts of such lines, and their property values. They also prefer an underground cable.

With respect to public health and safety, we find that the proposed facility will comply with the electromagnetic standards the Commission has adopted and applied to all such facilities. Significant modifications have been made to Niagara Mohawk's original proposal to ensure that the electromagnetic

fields at the edge of the rights-of-way, at occupied structures and at the substations are minimized.[4]

Turning to the visual, community and aesthetic impacts of concern to the local residents and their representatives, we find that Niagara Mohawk has addressed and minimized the adverse impacts associated with its original proposal.

In their settlement negotiations, the parties thoroughly considered each transmission facility segment and they devised an approach for Segments 2 and 3 to minimize the impacts from placing a 345 kV transmission facility in the established rights-of-way. On these segments, the use of steel monopole structures (in the range of 130 feet tall) has been largely avoided. Such structures will only be used where they are necessary in Segments 1 and 2A. Existing, wooden H-frame structures will be removed from a portion of Segment 2 and all of Segment 3 to make room for the steel, H-frame structures that better match the height of the existing transmission facilities in the rights-of-way. This approach, as reflected in the Joint Proposal, retains the character of the existing rights-of-way, as much as possible, in their current condition. It avoids further congestion on the rights-of-way and it reduces the height of the new transmission facility by about 35 feet. These results minimize the local impacts and we find that they are entirely reasonable and appropriate.

Addressing the public comments favoring the installation of an underground facility, this alternative was duly considered on the record made in this case. Niagara Mohawk's April 2003 application addressed it; undergrounding was also evaluated by DPS Staff.[5] We find that the route and configuration modifications that were made to Niagara Mohawk's original proposal (as reflected in the Joint Proposal) represent the minimum adverse environmental impacts, considering the available technology and the economics of the other alternatives. Consequently, the record in this instance does

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[4] See, DPS Staff's Statement in Support, pp. 13-19,

[5] Id., pp. 41-44.

not support the costs of constructing an underground cable facility, either in the vicinity of the residential communities or over the entire route.

We also find that local concerns about property values do not provide a sufficient basis for us either to deny the applicant's request for a certificate or to require that the applicant incur the substantially higher project costs to install an underground cable. We note that the proposed facility will be constructed on existing rights-of-way that already contain several overhead transmission lines. The jointly proposed route and configuration have substantially altered Niagara Mohawk's original proposal to retain, as much as possible, the existing character of the rights-of-way. Thus, we find that the local residents' property value concerns have been adequately considered and addressed.

Finally, on January 13, 2005, Norwest Corporation, a party to the proceeding, filed limited opposition to the Joint Proposal. Norwest is concerned about its real property rights along Segment 1. As an adjoining property owner, it is examining the easements Niagara Mohawk currently has to see if they suffice for the transmission facility the utility company plans to construct and operate.

According to Norwest, the Joint Proposal does not show whether or not real property rights must be acquired from it for the project. For that reason, Norwest proposes that we incorporate the following provision in our order in this case:

> Nothing herein shall be construed as a determination of the demonstration of the need to acquire any real property interest of Norwest Corporation with respect to Segment 1, and in the event that the same be required it will be the sole and independent obligation of Besicorp-Empire Development, LLC to obtain such rights from Norwest Corporation.

We reject Norwest's proposal. The record made in this case provides no basis for us to restrict Niagara Mohawk's authority and ability, as a public utility, to exercise eminent domain in instances where it is necessary for the proper

construction and operation of the State's bulk power network in the service territory for which the company is responsible.

Accordingly, we find and determine that:

1. The facility is necessary as an interconnection to deliver the energy output of the authorized 505 MW Besicorp-Empire Development Company, LLC, cogeneration power plant in the City of Rensselaer to the Niagara Mohawk Power Corporation bulk electric system.

2. The nature of the probable environmental impacts include: (a) minimal and temporary construction impacts on one field currently in active agricultural use; (b) incremental visual impacts on adjacent residential and commercial areas from somewhat larger structures; (c) visual impacts on adjacent industrial areas from the introduction of new, tall monopole structures; (d) construction impacts on a minor amount of wetlands; (e) forest clearing on some segments of the right-of-way; (f) some momentary traffic delays due to the delivery of materials and during the installation of conductors at road crossings; (g) occasional higher levels of noise due to construction activities; (h) electromagnetic fields within the standards prescribed by the Commission; and, (i) ordinary construction impacts on the right-of-way associated primarily with the construction activities necessary to install foundations, string the transmission line, and upgrade the substations.

3. The facility, as proposed by the parties, represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives examined, and other pertinent considerations such as the effects on agricultural lands, wetlands, visual impacts, and river corridors.

4. No part of the facility shall be located underground. There has been a considerable investigation of the potential for undergrounding alternatives. Undergrounding of the entire facility, and undergrounding of a partial segment of the facility, is uneconomic given the limited, incremental nature of the probable environmental impacts of the facility.

5. Construction of the facility is consistent with the most recent New York State Energy Plan which sets forth the State's energy policies and long-range planning objectives and strategies.

6. The location of the facility, as proposed by the parties, conforms to applicable State and local laws and regulations, except that as to the City of Rensselaer Zoning Regulations, §179-15 - Height Regulations and §179-33 - Required Screening, the Commission refuses to apply such provisions to the facility, finding that they are unreasonably restrictive in view of the existing technology.

7. The facility will serve the public interest, convenience and necessity.

The Commission orders:

1. The terms and provisions of the Joint Proposal, filed on December 23, 2004, by Niagara Mohawk Power Corporation (Niagara Mohawk), Besicorp-Empire Development Company LLC (Besicorp), City of Rensselaer, Rensselaer County Environmental Management Council, Department of Public Service Staff, Department of Environmental Conservation Staff, and Department of Agriculture & Markets Staff, and attached to this order, are adopted and made a part of this order.

2. Subject to the conditions set forth in the December 23, 2004 Joint Proposal, Niagara Mohawk is granted a Certificate of Environmental Compatibility and Public Need authorizing it to construct and operate an approximately 8.1 mile long 345 kV electric transmission line including associated equipment (the Transmission Facility) extending from a take-off structure at a switch yard on the site of Besicorp's major electric generating facility located at Riverside Avenue, City of Rensselaer, Rensselaer County to the Niagara Mohawk Reynolds Road Substation located in the Town of North Greenbush, Rensselaer County.

3. Niagara Mohawk's motion for a waiver of the application requirements of 16 NYCRR Section 86.3(a)(1)(iii) is granted.

4. This proceeding is continued.

By the Commission,

(SIGNED) JACLYN A. BRILLING
Secretary

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 03-T-0644 – Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of a 345 kV Electric Transmission Line, Approximately 8.1 Miles Long, in the City of Rensselaer and the Town of North Greenbush, Rensselaer County.

JOINT PROPOSAL

By:

Niagara Mohawk Power Corporation
Besicorp-Empire Development Company, LLC
Staff of the Department of Public Service
New York State Department of Environmental Conservation
New York State Department of Agriculture & Markets
Rensselaer County Environmental Management Council
City of Rensselaer

Dated: Albany, New York
December 21, 2004

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 03-T-0644 – Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of a 345 kV Electric Transmission Line, Approximately 8.1 Miles Long, in the City of Rensselaer and the Town of North Greenbush, Rensselaer County.

JOINT PROPOSAL

THIS JOINT PROPOSAL is made on the 21st day of December, 2004 by and among Niagara Mohawk Power Corporation (Niagara Mohawk), Besicorp-Empire Development Company, LLC (BEDCO), Staff of the Department of Public Service (Staff), New York State Department of Environmental Conservation (DEC), New York State Department of Agriculture & Markets (Ag&Mkts), Rensselaer County Environmental Management Council, and the City of Rensselaer (collectively referred to as the "Signatory Parties").

Introduction

On April 28, 2003, Niagara Mohawk filed an application with the New York State Public Service Commission (Commission) seeking a certificate of environmental compatibility and public need pursuant to Article VII of the Public Service Law for the construction and operation of a 345 kV electric transmission line from the site of BEDCO's proposed major electric generating facility ("power plant") in the City of Rensselaer, running overhead a distance of approximately 8.1 miles through the City of Rensselaer, Town of East Greenbush and Town of North Greenbush, to Niagara Mohawk's Reynolds Road Substation in the Town of North Greenbush, all in Rensselaer County, New York (the "Facility").

Public statement hearings were held before Administrative Law Judge William Bouteiller in the City of Rensselaer, New York, on July 14, 2003. A preliminary conference was held on July 15, 2003 before Administrative Law Judge Bouteiller in Albany which was attended by the Signatory Parties. Evidentiary hearings were held on October 29, 30, 31 and November 13, 2003. A site viewing of the proposed routes was held on December 9, 2003. An additional public statement hearing was held before Administrative Law Judge Bouteiller in the Town of East Greenbush, New York, on June 24, 2004. In addition to the ordinary published notice, DPS Staff provided direct mail notification of the additional

public statement hearing to approximately 30 owners of real property in the vicinity of the location where the Facility would cross Stock Lane in the Town of East Greenbush.

After exploratory discussions among the parties, a Notice of Impending Negotiations was sent to all interested persons on December 3, 2003 and was duly filed with the Secretary of the Commission on December 4, 2003. Settlement conferences were noticed and held in Albany on December 5, 2003 and December 10, 2003. By letter dated December 15, 2003, Staff notified Administrative Law Judge Bouteiller that Niagara Mohawk, BEDCO and Staff had reached an agreement in principle on a route and configuration for the Article VII Facility. On April 23, 2004, a technical conference was held to refine one segment of the agreed-upon route and configuration to accommodate property owner concerns. On April 30, 2004, Niagara Mohawk filed a Joint Settlement Supplemental Analysis with the Secretary.

Settlement is now feasible because, after thorough investigation and discussion, the Signatory Parties hereto more fully understand their respective positions and recognize that reasonable settlement of those positions is possible. The Signatory Parties hereto also believe that this Joint Proposal will further the objective of giving fair consideration to the interests of customers and transmission owners alike in assuring the provision of safe and adequate service at just and reasonable rates.

Terms of Joint Proposal

I. General Provisions

It is understood that each provision of this Joint Proposal is in consideration and support of all of the other provisions of this Joint Proposal and is expressly conditioned upon approval of the terms of this Joint Proposal in full by the Commission. If the Commission fails to adopt the terms of this Joint Proposal, the parties to the Joint Proposal shall be free to pursue their respective positions in this proceeding without prejudice.

The terms and provisions of this Joint Proposal apply solely to, and are binding only in, the context of the purposes of this Joint Proposal. None of the terms or provisions of this Joint Proposal

and none of the positions taken herein by any party may be referred to, cited or relied upon in any fashion as precedent or otherwise in any other proceeding before this Commission or any other regulatory agency or before any court of law for any purpose, except in furtherance of ensuring the effectuation of the purposes and results of this Joint Proposal.

The Signatory Parties agree to submit this Joint Proposal to the Commission along with a request that the Commission expeditiously adopt the terms and provisions of this Joint Proposal as set forth herein.

The Signatory Parties recognize that certain provisions of this Joint Proposal contemplate actions to be taken in the future to effectuate fully this Joint Proposal. Accordingly, the Signatory Parties agree to cooperate with each other in good faith in taking such actions.

In the event of any disagreement over the interpretation of this Joint Proposal or implementation of any of the provisions of this Joint Proposal, which cannot be resolved informally among the Signatory Parties, such disagreement shall be resolved in the following manner: (a) the Signatory Parties shall promptly convene a conference and in good faith attempt to resolve any such disagreement; and (b) if any such disagreement cannot be resolved by the Signatory Parties, any Signatory Party may petition the Commission for resolution of the disputed matter.

This Joint Proposal shall not constitute a waiver by Niagara Mohawk of any rights it may otherwise have to apply for additional or modified permits, approvals or certificates from the Commission, DEC, or any other agency in accordance with relevant provisions of law.

This Joint Proposal is being executed in counterpart originals, and shall be binding on each Signatory Party when the counterparts have been executed.

Niagara Mohawk agrees to provide the necessary testimony and affidavits that will permit the supplemental exhibits agreed upon by the Signatory Parties set forth in Appendix A to be admitted as record evidence in this proceeding.

II. Description of Facility Location

The Signatory Parties agree that the Description of Facility Location set forth in Appendix B attached hereto accurately describes the location and configuration of the proposed Facility as reconfigured herein.

III. Environmental Compatibility and Public Need

The Commission must consider the totality of all of the relevant factors in making its determination of environmental compatibility and public need. The relevant factors include, without limitation, the electric system, cost, environmental impact, the availability and impact of alternatives, undergrounding considerations, conformance to long-range plans, state laws and local laws, and the public interest, convenience and necessity.

A. *The Electric System*

1. Under the process of Article X of the Public Service Law, BEDCO has obtained State approval to construct and operate a 505 megawatt cogeneration power plant in the City of Rensselaer (Case 00-F-2057). Assuming that the BEDCO power plant receives its Federal and local approvals, and proceeds to construction, a new electric transmission line will be required to interconnect the BEDCO power plant to the Niagara Mohawk bulk electric system.

2. The connection of the Facility to the Niagara Mohawk bulk electric system will increase electrical supply available to local power customers and increase the overall capacity for New York.

3. The power plant, via the Facility, would increase the opportunities for transactions among buyers and sellers in the wholesale markets thereby generally enhancing competition in the electric industry in New York State.

B. *Cost*

The following simplified cost comparison is provided for the major configuration alternatives considered by the Signatory Parties:

Configuration	**Cost**
345 kV Overhead Single Circuit to Reynolds Road (mainly H-frame) with re-route of Circuit # 17*	$11.2 million
345 kV Overhead Single Circuit to Reynolds Road	$14.9 million
345 kV Overhead Single Circuit to Reynolds Road (mainly H-frame) with re-route of Circuit # 17 and underground Segment near Stock Lane	$15 - 16 million
345 kV Overhead Double Circuit to Reynolds Road	$17.2 million
345 kV Overhead Single Circuit to New Scotland	$19.1 million
345 kV Underground Broadway/Greenway to Reynolds Road	$34.1 - 37.3 million
345 kV Underground Aiken/Route 43 to Reynolds Road	$34.3 - 37.1 million
230 kV Overhead Single Circuit to Reynolds Road	$40.5 million

* Denotes Joint Proposal Recommendation

C. ***Environmental Impact***

The Application, supplemental application materials, exhibits and supplemental exhibits to be supplied for the record describe the nature of the probable environmental impacts of the Facility and are briefly summarized below. The environmental impacts are expected to include temporary construction disturbance, and the introduction of structures into the visual landscape currently characterized by existing Niagara Mohawk transmission lines and substations.

Land Use

1. Land uses adjacent to or near the Facility consist of agricultural, residential, commercial and industrial uses. The Facility avoids direct impacts to any park or recreational resource.

(a) The Facility has limited potential to impact agricultural land. Only one area along the route is currently in active agricultural use, a field along Segment 1 located in the Town of East Greenbush. Several measures have been identified to limit impacts to this field, including aligning the route at the edge of the field within an existing right-of-way, using the existing access road in the right-of-way, limiting equipment to the use of the access road and at each structure location to minimize potential compaction of soil during construction, removing construction debris generated, such as tree clearing or trimming and removal of existing transmission structures. Construction in this area will be timed to mitigate disruption of agricultural activities. If disruption cannot be avoided, the affected farmer will be compensated for the disruption.

(b) A significant portion of the Facility alignment is zoned for residential use. However, much of the area adjacent to the right-of-way is rural residential and undeveloped forest or old-field. Following the existing rights-of-way will greatly minimize any impacts on residential areas in the City of Rensselaer, Town of East Greenbush, and Town of North Greenbush. The only dense residential areas the Facility will directly traverse are in the Town of East Greenbush in the vicinity of Stock Lane, NYS Route 151 and Old Red Mill Road. Residences are located on both sides of the right-of-way in these areas and a residential street crosses the right-of-way. While new, taller transmission structures will be introduced in these areas to replace existing structures, the essential character of the land use on the existing right-of-

ways will remain essentially unchanged. The project-specific EM&CP Plan that will be prepared for the Facility will identify mitigation measures to minimize disruption to residential areas. Typical measures include:

- careful consideration of Facility visibility, forest edges and landscape;
- marking the edge of workspace to keep construction vehicles on the right-of-way;
- limiting construction to daylight hours;
- stringing of conductors across roadways will be timed to minimize traffic disruption;
- use of mufflers on construction equipment and limited idling of equipment at the construction site;
- wetting exposed areas to limit dust generation;
- Environmental Inspector on hand to address any concerns of residents;
- providing a community liaison to address concerns of residents;
- Traffic Control and Safety Plan; and
- following site-specific blasting procedures.

(c) There are three locations along the right-of-way with existing commercial and industrial uses. The same mitigation measures for residential areas will be implemented for commercial and industrial areas to minimize disruption from construction activities. Access will be maintained at all times to businesses in close proximity to the Facility.

Visual Impact

2. An analysis of the potential visibility and visual impact of the Facility was conducted. The analysis identified the viewshed in which the Facility will be seen and sensitive receptors that may have views of the Facility. Visual simulations were prepared from representative locations to assess the potential adverse visual impact of the Facility. Several visually sensitive receptors were identified near the Facility location. They include five historic structures listed on the State and National Register of Historic Places, designated State Bicycle Routes 5 and 9, and the designated Coastal Zone along the Hudson River. In addition, nine other areas were identified within a one-mile corridor as visually

sensitive due to their local significance or their intensity of land use, although the existing transmission lines along the same right-of-way are not visually perceptible from most of these locations. A viewshed analysis to determine a "worst-case" assessment of existing conditions and potential visibility of the Facility was then performed. This analysis provided a conservative estimate of visibility and did not take into account the screening effect of vegetation or built structures. Visual simulations were prepared to demonstrate the changes in visibility due to the Facility. The viewpoints selected are representative of views of the entire transmission line. Based on consultation with DPS Staff, seven locations were selected. For each location an existing view, simulated monopole view (the original proposal in the Application), and an H-Frame view of the Facility were prepared. The simulations demonstrate the probable nature of visual impact of the Facility.

3. The route and configuration proposed herein minimizes visual impacts for any overhead line configuration. For each representative viewpoint, the H-Frame structures proposed as part of this Joint Proposal (within a right-of-way with existing H-Frame structures) are significantly less prominent than the monopole structures originally proposed in the Application. For Segment 2, the proposed average structure height will be reduced from approximately 131 feet in the original Application to approximately 100 feet. This height and configuration of the proposed structures, which is similar to existing structures in the right-of-way, considerably reduces the incremental visibility of the Facility. This is particularly evident at sensitive viewpoints such as the residential areas of Robert Lane and Stock Lane.

4. The visual impacts of the Facility are further mitigated by the following measures incorporated into this Joint Proposal:

(a) In the Segment 2A connector, the double circuit pole structures that are proposed will be constructed of corten steel (pre-rusted, reddish brown finish) to blend in well with the background.

(b) In Segment 3, the route designated provides visual improvements over that of the original configuration, such as:

- clearing of trees along Segment 3 will be minimized due to a shift of the alignment approximately 75 feet to the east[1];
- reduced visibility through use of shorter steel H-frame structures (average height of 100 feet in the Joint Proposal versus average height of 130 feet in the Application);
- reduced visibility due to replacement of existing Circuit #17 structures, rather than construction of an additional set of structures; and
- maintenance of the same profile of structures (replacing wood H-frame with steel H-frame) on the existing alignment.

(c) A landscaping and lighting plan for the Reynolds Road Substation will be developed that will provide for replacement of overgrown plantings, removal of danger trees, an assessment of views of the Reynolds Road Substation from Route 4 and Blooming Grove Drive, and an identification of appropriate mitigation opportunities for implementation without compromising the security or safety of the station. The plan will take into consideration clearance and access requirements for operation and maintenance of electrical facilities. The plan will be filed with DPS prior to initiation of construction activities at the Reynolds Road Substation. The lighting plan will describe the need for any additional lighting, to be installed at the Substation in the area where expansion activities will occur, and replacement of existing lighting. All lighting will be of the type that will allow visibility inside the station and will be directed to reduce the amount of direct light diffused to the area outside the station.

(d) Concerns about the potential for adverse visual impacts on nearby parks or at the Facility crossings of roads that serve as designated bikeways have been significantly mitigated by the use of lower, H-Frame structures where possible, and replacement of existing transmission facilities as designed.

Cultural Resources

5. A comprehensive cultural resources investigation for the Facility was conducted. This consisted of a Phase I cultural resource survey of rights-of-way followed by the Facility, and where

[1] Niagara Mohawk has recently completed an updated ROW Management Program (Transmission Line Right-of-Way Management Program, revised April 2003). The Facility will not affect any future ROW maintenance carried out on this ROW under the new management program.

warranted, a Phase II investigation to determine the archaeological significance of a potentially sensitive area. For the original Application, preliminary monopole locations were used to assist in the design of the survey but were not deemed critical to completing the survey.

6. Three potentially significant archaeological deposits were discovered during the initial Phase I investigation. Niagara Mohawk modified the Facility design to provide sufficient distance from the first two of these sites to avoid disturbance of these potentially sensitive areas. A Phase II investigation was conducted to determine the archaeological significance of the third potentially sensitive area. The Phase II site investigation concluded that the site does not have the potential to yield important information, and does not satisfy the criteria necessary for eligibility for listing in the State or National Register of Historic Places. A Phase 1B site investigation at one additional pole location was also conducted. Renumbered Structure 26 was relocated to avoid wetlands and potential archaeological resources. Based on this investigation, it was concluded that construction of the pole at this new site would have no effect on significant archaeological resources.

7. An additional Phase 1 cultural resource evaluation was conducted along the additional area included in the route that is subject to this Joint Proposal to identify any potential archaeological resources within any workspace different than that described in the original Application. This analysis concluded that no cultural resources are located within the newly proposed right-of-way alignments.

8. Based on the information above, the New York State Office of Parks, Recreation and Historic Preservation has since concluded that it has no further archeological concerns regarding the Facility and no additional surveys are warranted. No properties listed on the State or National Register of Historic Places will be adversely affected by the construction or operation of the Facility. Concerns about the potential for adverse visual impacts on nearby properties listed on the State or National Register of Historic Places have been significantly mitigated by the use of shorter, H-Frame structures and replacement of existing facilities as designed.

Coastal Resources

9. Segment 1 of the Facility is to be constructed within the designated Coastal Zone of the Hudson River. The southern-most part of the Facility is to be located immediately north of the designated

significant coastal fish and wildlife habitat within Papscanee Marsh and Creek in the Town of East Greenbush. The Facility avoids the placement of any structures within Papscanee Marsh and will use an existing right-of-way and access road to cross the Papscanee Creek. Construction via this road will avoid and/or minimize the amount of clearing required and avoid related impacts to the riparian ecosystem proximate to the road and the right-of-way. The New York State Department of State (NYSDOS) reviewed the Facility for consistency with New York's coastal zone policies. NYSDOS has concurred that the Facility is consistent with the New York State Coastal Management Program.

Floodplains

10. Segment 1 of the Facility and a small portion of Segment 2 are located in the floodplain of the Hudson River. Segment 3 crosses a floodplain associated with Mill Creek. The configuration of the Facility will not result in any alteration of flood storage since no enclosed structures are proposed and foundation construction will occur below the ground surface.

Streams & Wetlands

11. The Facility crosses a limited number of streams, none of which are protected pursuant to DEC jurisdiction. A minor amount of wetlands will be affected by construction. The Applicant has applied to the U.S. Army Corps of Engineers for an individual permit to allow it to construct the Facility in wetlands areas. If available and practical, alternate access from off-right-of-way ingress/egress points will be used and the stream or wetland will be designated as either "No Equipment Access" or "Limited Vehicular Access" in the EM&CP. If an area cannot be avoided then the types of activities allowed adjacent to streams or wetlands will be restricted to minimize rutting or associated impacts. Typical protection measures include:

- confining vehicles (other than clearing and specialized equipment) to improved access roads and structure work pads;
- placing erosion controls such as hay bale/silt fence barriers along the edge of access roads and work areas;
- no deposition of off-site fill or slash within wetland areas, other than "drop and lop" clearing of tall-growing vegetation within wooded wetlands;
- no accumulation of construction debris;

- avoid degrading of stream banks and restore contours of stream beds and banks to pre-existing conditions;
- no equipment washing or refueling or storage of petroleum or chemical materials adjacent to wetlands or streams;
- use of wide-track or low ground pressure vehicles; and
- application of other Niagara Mohawk practices to be prescribed in the EM&CP Plan.

Vegetation & Terrestrial Resources

12. The initial construction of the Facility will affect all three vegetative communities that occur in the right-of-way (Successional Old Field, Successional Shrubland, and Forested Areas). In the long term, the right-of-way vegetation maintenance practices will allow the Successional Old Field, Shrubland and a section of the Forested Area to return to its current state. The only long-term impact will result from permanent clearing of Forested Areas on the right-of-way within the conductor security zone. These areas will be converted to a Successional Shrubland cover type. The clearing of forest will be kept to a minimum by overlap with an existing cleared right-of-way to the extent possible. Access and staging areas will be identified to maximize use of existing clearings. Clearing areas adjacent to the existing clearing within the right-of-way will not add to forest fragmentation. Areas disturbed by construction will be restored once construction is complete. No long-term impacts to wildlife are anticipated from the Facility since the habitat types impacted are common throughout the area of the Proposed Facility. Species that utilize the Successional Shrubland habitat may in fact benefit from the Facility due to an increase in the amount of this habitat.

13. The New York Natural Heritage Program (NYNHP) was contacted with a request for information on potential threatened and endangered species in the vicinity of the Facility. NYNHP mentioned two state-listed threatened or endangered species: the least bittern, a threatened bird species last observed in 1983 in the Papscanee Marsh habitat, and the southern wood violet, an endangered plant last observed historically (ca. 1910) in the area of the Facility. There were no federally listed threatened or endangered species. Fieldwork conducted during July and August of 2002 did not result in any observation of least bitterns or the southern wood violet in the vicinity of the Facility. Any potential impact to these species during construction and maintenance of the Facility will be mitigated with the

development of a project-specific EM&CP Plan which will detail measures that will be implemented during construction to avoid or minimize impacts. Typical measures that could be implemented include:

- minimizing construction disturbance by use of existing right-of-way to the extent possible;
- timing construction to avoid sensitive breeding season for the least bittern;
- restrict construction activities in areas of known occurrence (none are known at this time);
- use of appropriate erosion control and best management practices during construction; and
- stabilize and re-vegetate disturbed areas with a seed mix that includes appropriate species, as practicable.

14. Maintenance practices following restoration on the right-of-way will allow natural re-vegetation of the right-of-way with low-growing shrubs and small trees to stabilize the surface. Unauthorized access by off road vehicles will be deterred with obstructions, such as boulders, shot-rock berms or locked gates at access points.

Geology, Soils & Erosion

15. None of the soil or geologic conditions encountered along the Facility route presents any engineering or construction issues that cannot be addressed through conventional construction methods. The Facility crosses twenty-four soil survey map units and five surficial geology units. The depth to bedrock is variable and depends on topography and overburden sediments. Construction and maintenance activities will disturb soils and bedrock within the right-of-way. Localized erosion, rutting, and compacting of soils will result from the movement of heavy equipment, clearing, and access road construction. The project-specific EM&CP will include prevention and mitigation measures to minimize impacts to soils and geology. In most areas, original surface contours will be re-established. Restoration measures proposed in the project-specific EM&CP will take into consideration the predominance of shallow soils which can hinder rapid re-growth and stabilization of construction areas. A Stormwater Pollution Prevention Plan for construction of the Facility will be developed with the project-specific EM&CP to ensure that potential erosion and sedimentation impacts are minimized.

16. Appropriate control of blasting in areas of bedrock will need to be considered in the foundation design, structure siting, and drainage controls. Appropriate blasting mats will be used to prevent scattering of rock or debris. Blasting will be carried out in accordance with all local, state, and federal regulations that apply to utility installation and pursuant to Niagara Mohawk specifications for the protection of workers and adjacent transmission facilities and infrastructures. Work near the Dominion Transmission Pipeline will be coordinated with Dominion Transmission, Incorporated (DTI) consistent with DTI construction and environmental protection specifications.

Water & Sewer

17. The construction and operation of the transmission lines do not require any water supply or sanitary sewer services. Water supply and sanitary requirements will be minimal during both upgrading and operation of the Substations, and sufficient capacity is available from the existing infrastructure. No new municipal hook-ups are anticipated.

Transportation

18. The Facility crosses seventeen roadways including seven State-numbered roadways, Interstate 90 in the Town of North Greenbush and the ramps for Exit 8 that connects Interstate 90 to Washington Avenue. All plans for road crossings will be reviewed with the appropriate local and State officials to minimize traffic flow impacts during installation of conductors. Installation of the conductors will be scheduled during times of low traffic volume. A traffic control and safety plan will be prepared as part of the consultation process. Work over local roads will be appropriately timed for an early morning or late evening time period to avoid times of heavy traffic flow.

Noise

19. During construction of the Facility, there will be operating equipment that will require worker personal protection equipment pursuant to Occupational Safety and Health Administration regulations. Construction noise will be mitigated by the attenuating effect of distance, the presence of existing vegetation, the intermittent and short lived character of the noise, and the use of functional mufflers on all construction equipment. In addition, construction noises such as those from operating

heavy equipment or blasting will be of a temporary nature. During inclement weather the Facility will emit operational noise that will be noticeable within the right-of-way due to the effects of corona on the conductor and facilities. Buildings in close proximity to the Facility, generally within 300 feet, may experience some temporary disturbance due to audible noise during construction activities. Mitigation measures to minimize disruption to residential areas will be addressed in the EM&CP. Typical measures include:

- marking the edge of workspace to keep construction vehicles on the ROW;
- limiting construction to daylight hours;
- use of mufflers on construction equipment and limited idling of equipment at the construction site;
- having an Environmental Inspector on hand to anticipate any concerns of residents; and
- providing a community liaison to address concerns of residents.

20. Where solid rock is encountered, either ripping or hammering equipment will be used to remove the rock. If required, blasting will be employed to the required depth using the minimum charge required to break up the rock. A project-specific blasting plan will be tailored from existing Niagara Mohawk standards to include powder charges, blasting mats, noise, notifications, and cleanup of rock and debris criteria. The objective will be to minimize noise and vibration disturbances where blasting must be conducted near noise-sensitive sites.

21. Niagara Mohawk will comply with Chapter 131 of the Code of the City of Rensselaer which restricts noise associated with construction activities to between the hours of 6:00 A.M. and 9:00 P.M., except under emergency conditions. Niagara Mohawk will also comply with Subsection 4.207 of the Town of East Greenbush which prohibits excavations that create objectionable noise. Excavations associated with the construction of the Facility structures will be done in compliance with Best Management Practices to avoid objectionable noise.

Communications

22. Exhibit E-5 of the Application evaluates the effect of the Facility on communications equipment. Exhibit E-5 should be supplemented to identify the following communications equipment not noted in the application:

(a) A large microwave cell tower located at the high point of Segment 2 (Teller Hill) directly adjacent to the right-of-way;

(b) Two underground fiber optic telecommunications lines crossed by Segment 2 when it crosses the NYS Route 9J right-of-way;

(c) An array of radio (AM) broadcast towers (Radio Enterprises, Inc.) located approximately ¾ mile south of the Facility near the Segment 2 crossing of NYS Route 9J; and

(d) An underground AT&T Longlines cable (RF or multiple wire) co-located in the right-of-way of Segment 3 of the Facility.

23. Except for the potential of physical disturbance by construction activities, construction and operation of the Facility will not have any interference impact on the underground fiber optic telecommunications lines crossed by Segment 2 of the Facility or paralleled by Segment 3 of the Facility. There is a potential adverse impact to the AT&T Longlines cable co-located in the right-of-way of Segment 3 of the Facility due to a need to properly ground the Facility to prevent bonding. Niagara Mohawk should consult with AT&T Longlines in the final construction design of Segment 3 and report the results of that consultation as part of the EM&CP. There is a potential for the steel monopole structures of Segments 1 and 2 to interfere with the broadcast pattern of the radio (AM) broadcast towers located approximately ¾ mile south of the Facility near the Segment 2 crossing of NYS Route 9J, and with the broadcast pattern of the amateur (ham) radio licensees identified in the application located within approximately 2 miles of the Facility, by re-radiating the broadcasts in other directions. Any such impacts are difficult to estimate or measure prior to construction of the Facility, and may not be immediately apparent upon construction and initial operation of the Facility. Niagara Mohawk will have a continuing obligation during the life of the Facility to respond promptly to complaints of interference and to mitigate any such impacts through on-site design modifications and off-site mitigation techniques. There is a potential adverse impact to the microwave cell tower located at the high point of Segment 2 (Teller Hill)

directly adjacent to the right-of-way if new structures are sited in a manner that blocks the line-of-sight of the antennae on the cell tower. New structures should not be sited in a manner that blocks the line-of-sight of the antennae on the cell tower.

Electric and Magnetic Fields (EMFs)

24. Electric fields will emanate from the transmission line and substation improvements that constitute the proposed Facility. Computer simulations were used to calculate the expected electric field levels at the edge of the right-of-way of the transmission line, at the occupied structures nearest to the transmission line, and in the vicinity of the affected substations. For the transmission line, maximum electric field levels calculated at the right-of-way edge ranged from 0.1 kV/m for the Segment 2A connector, to 1.3 kV/m for Segment 2. Maximum electric field levels calculated at the nearest occupied structure ranged from <0.1 kV/m on the Segment 2A connector, to 1.4 kV/m at a commercial structure on Segment 3. The highest level at a residential structure (residence on Stock Lane) was 0.42 kV/m. For the Reynolds Road Substation, the maximum calculated electric field levels are projected to be about 0.025 to 0.125 kV/m in the areas surrounding the substation after the proposed expansion. The maximum calculated electric field levels are projected to be about 0.010 to 0.050 kV/m in the areas surrounding the Greenbush Substation after the proposed modifications. For both substations, the calculated electric field levels are similar in magnitude to existing electric field levels already present outside of the substations. All of the maximum calculated levels of electric field strength are lower than the 1.6 kV/m winter normal conductor rating standard established by the Commission in 1978 as an interim standard.

25. Magnetic fields will emanate from the transmission line and substation improvements that constitute the proposed Facility. Computer simulations were used to calculate the expected magnetic field levels at the edge of the right-of-way of the transmission line, at the occupied structures nearest to the transmission line, and in the vicinity of the affected substations.

26. Using the Commission's "winter normal conductor rating" methodology for the transmission line, maximum magnetic field levels calculated at the right-of-way edge ranged from 84.4

mG for the Segment 2A connector, to 188.6 mG for Segment 2A. For the Reynolds Road Substation, the maximum calculated magnetic field levels are projected to generally remain about 1 mG to 5 mG in the areas surrounding the substation after the proposed expansion. For the Greenbush Substation, the maximum calculated magnetic field levels are projected to generally remain about 1 mG to 10 mG in the areas surrounding the substation after the proposed modifications. All of the maximum calculated levels of magnetic field strength are lower than the 200 mG winter normal conductor rating standard established by the Commission in 1990 as an interim standard.

27. The Commission's interim policy on magnetic fields uses a worst-case peak calculation of magnetic fields based on the winter normal conductor rating of a transmission line. It was adopted in the absence of a consensus in the scientific community or direct causal evidence as to whether prolonged exposure to low levels of magnetic fields from power lines causes biological effects in humans. Because of the lack of definitive information, however, it is generally considered rational to follow a policy of "prudent avoidance" of magnetic fields where economical. Most studies of the biological effects of magnetic fields from power lines are based on typical actual exposures – generally the annual average exposure -- rather than peak exposures. In order to model the magnetic fields on an average exposure basis, load flows for the average cases were developed based on current average loads plus a factor based on the forecasted growth rate in demand for this portion of Niagara Mohawk's service territory. Using an average load methodology for the transmission line, maximum magnetic field levels calculated at the right-of-way edge ranged from 11.9 mG for the Segment 2A connector to 20.2 mG for Segment 2. Average magnetic field levels calculated at the nearest occupied structure ranged from 0.6 mG on the Segment 2A connector to 16.8 mG at a commercial structure on Segment 3. The placement of the proposed 345 kV transmission line closer to the center of the right-of-way to increase the distance from the nearest residence on Segment 2 as an EMF minimization technique results in a reduction in the highest magnetic field level at the two nearest residential structures (residences on Stock Lane) from 10.7 mG to 6.4 mG and 4.8 mG, respectively.

28. Segment 1 of the Facility utilizes a double circuit vertical 345 kV monopole structure. EMF minimization has been achieved by orienting the 345 kV phases opposite to the existing 115 kV transmission line phases (reverse phase configuration). The 115 kV circuit has been located as close as

possible to the 345 kV (and as far away from the right-of-way boundary as possible) while keeping the aesthetics of the double circuit structures. Segment 2 (as modified by the Joint Proposal) adds a single circuit horizontal 345 kV two-pole H-frame structure to the existing right-of-way. Placing the centerline of the proposed 345 kV transmission line as close to the existing transmission circuits as possible and orienting the phases to provide the lowest magnetic field levels on the eastern right-of-way boundary have achieved EMF minimization. The Segment 2A Connector replaces a single circuit delta 115 kV configuration with a double circuit vertical 115 kV monopole structure. EMF minimization has been achieved by orienting the Feura Bush - Greenbush Circuit #17 phases opposite to the existing Greenbush Circuit #16 115 kV transmission line phases (reverse phase configuration). Segment 2A replaces a double circuit vertical 115 kV lattice tower structure between the Segment 2A Connector and Greenbush substation with a double circuit vertical 115 kV monopole structure. The lattice tower currently supports the Riverside - Reynolds Road Circuit #4 transmission line in a split circuit configuration. The existing circuits are not reverse phase configured. The new 115 kV monopole will support the relocated Feura Bush - Greenbush Circuit #17 on the west circuit position and the Riverside - Reynolds Road Circuit #4 circuit on the east circuit position, thus achieving EMF minimization by orienting the Feura Bush - Greenbush #17 and the Riverside - Reynolds Road Circuit #4 phases opposite (reverse phase configuration) to the existing Reynolds Road - Greenbush Circuit #9 split circuit transmission line on the East boundary of the right-of-way. Segment 3 adds a single circuit horizontal 345 H-frame structure to the existing ROW, replacing existing 230 kV H-frame structures. Placing the centerline of the proposed 345 kV transmission line close to the existing transmission centerline and orienting the phases to provide the lowest magnetic field levels on the eastern right-of-way boundary have achieved EMF minimization.

D. *The Availability and Impact of Alternatives*

The Application, supplemental application materials, exhibits and supplemental exhibits to be supplied for the record describe the availability and impact of alternatives to the Facility and are briefly summarized below. The Signatory Parties agree that the Facility as located and configured for this Joint Proposal is preferable, on balance considering all factors, to any of the alternatives considered, including the undergrounding alternatives. The selected route and configuration is preferred because it makes extensive use of existing rights-of-way, avoids or minimizes land use impacts and the disturbance

of natural habitat and the need for significant clearing of forest cover vegetation, is reasonable in terms of cost, and does not have an adverse effect on system reliability.

The "No-Build" Alternative

1. The Signatory Parties agree that the "no-build" alternative is not a viable option in this proceeding as the decision to site BEDCO's proposed power plant in the City of Rensselaer is beyond the scope of this proceeding and assuming such a power plant is to be sited, a transmission facility to provide a transmission path to transmit the electrical output of BEDCO's proposed power plant in the City of Rensselaer to the New York bulk transmission grid is a necessity. Similarly, a consideration of demand side management (DSM), distributed generation and alternative generation alternatives is beyond the scope of this proceeding given the nature of the application.

Alternative Transmission Voltages

2. The purpose of the Facility is to provide a transmission path to transmit the electrical output of BEDCO's proposed power plant in the City of Rensselaer to the New York bulk transmission grid. Various component's of Niagara Mohawk's bulk transmission grid in the areas surrounding the BEDCO site are designed to operate at transmission voltages of either, 115 kV, 230 kV or 345 kV. The full electrical output of BEDCO's proposed major electric generating facility could be handled by either a single 345 kV or a single 230 kV transmission line, however the 230 kV alternative would result in significantly higher line losses due to higher amperage. Multiple 115 kV lines would be required to handle the full electrical output of BEDCO's proposed major electric generating facility at that lower transmission voltage. Generally, given the limited availability of right-of-ways and the significant efficiency reductions and lost revenues that would occur from lines at lower transmission voltages, the Signatory Parties agree that a single transmission line at a voltage of 345 kV is the most appropriate alternative.

Alternative Substation Interconnection Points

3. The two nearest 345 kV substations to BEDCO's proposed power plant are the Reynolds Road substation in the Town of North Greenbush, Rensselaer County, and the New Scotland station in the Town of New Scotland, Albany County. The Signatory Parties agree that a connection to the Reynolds Road substation is preferred over the New Scotland alternative because the 8.1 mile Reynolds Road alignment is nearly 2 miles shorter, has more favorable environmental characteristics, avoids the need for an aerial crossing of the Hudson River, and costs over $4.2 million less.

Alternative Configurations

4. The Signatory Parties considered and rejected a 345 kV double circuit configuration. The second 345 kV circuit is not needed to accommodate the electrical output of BEDCO's proposed major electric generating facility and is not otherwise needed at this time to reinforce New York's bulk transmission grid. In addition, a 345 kV double circuit configuration would require additional structures including the use of taller and more visually obtrusive monopoles throughout Segments 2 and 3, and would result in significantly more disturbance of natural habitat and the need for significant clearing of forest cover vegetation. In addition, such a configuration would increase the cost of the Facility by $6 million.

5. The Signatory Parties considered and rejected a 345 kV single circuit configuration that did not include the re-routing and replacement of part of Circuit #17. This configuration would also require the use of taller and more visually obtrusive monopoles throughout Segment 3, and would result in significantly more disturbance of natural habitat and the need for significant clearing of forest cover vegetation. In addition, such a configuration would increase the cost of the Facility by $3.7 million.

Undergrounding Considerations

6. The Signatory Parties considered and rejected an underground configuration using the Broadway/Greenway Route (6.7 miles long). Two basic cable types which could be used for a 345 kV alternating current system were evaluated; high pressure fluid filled (HPFF) pipe type cable, and cross linked polyethylene (XLPE), a solid dielectric cable. The parties assumed that a two-cable configuration would be used for either HPFF or XLPE. A single HPFF cable cannot carry the total power plant output. A single XLPE cable might carry the total plant output, however, for reliability purposes a two-cable configuration was assumed. This alternative would increase the cost of the Facility threefold, an increase of between $22.9 - 26.1 million. Construction would require the linear disturbance of public streets and the potential for interference with existing underground utility and drainage structures. Upon devising the collaborative design for the Facility as located and configured for this Joint Proposal, the Signatory Parties agreed that the now limited incremental physical and visual impacts did not warrant further consideration of such a costly undergrounding alternative.

7. The Signatory Parties considered and rejected an underground configuration using the Aiken Ave./Route 43 Route (6.9 miles long). A two-cable configuration was assumed. This alternative would also increase the cost of the Facility threefold, an increase of between $23.1 - 25.9 million. Construction would require the linear disturbance of even more public streets and the potential for interference with existing underground utility and drainage structures. Upon devising the collaborative design for the Facility as located and configured for this Joint Proposal, the Signatory Parties agreed that the now limited incremental physical and visual impacts did not warrant further consideration of such a costly undergrounding alternative.

Additional Alternatives at Stock Lane

8. The Signatory Parties considered and rejected various potential alternative routes and configurations for the re-route of Circuit #17 in an attempt to find a route that would be further from or have the least visual impacts on the Stock Lane area homes. The rejected options included (a) an overhead route along an abandoned railroad right-of-way [lack of space on the right-of-way]; (b) an underground route along the abandoned railroad right-of-way [potential extended repair time, cost, and outages for an underground fault]; (c) new single Circuit #17 adjacent to Circuit #16 within Segment 2A [expanded right-of-way and additional structures near residences]; (d) double-circuit construction of Circuits #16 and #17 from the Segment 2A Connector into Greenbush Substation [exceeds maximum number of double-circuit structures in planning criteria, Circuit #17 would be on the wrong side of the substation]; (e) new alignment through adjacent property [additional right-of-way that would have been necessary was unavailable due to the development plans of the adjacent property owner]; (f) double-circuit construction of Circuits #4 and #17 along all of Segment 2A into Greenbush Substation [high visibility]; and (g) new single Circuit #17 adjacent to Circuit #16 at Segment 2A Connector and double-circuit construction of Circuits #4 and #17 from the Segment 2A Connector into Greenbush Substation [expanded right-of-way acquisition and clearing].

9. The Signatory Parties considered and rejected placing a segment of the 345 kV Facility underground in the area of the residences on Segment 2 that crosses Stock Lane and NYS Route 151. This evaluation considered the same underground electrical cable types considered in the Application. This alternative was rejected because of excessive cost and because the two transition stations that would be necessary would require additional clearing of the right-of-way and would be visible from

residences in the area. Options for landscaping these views would be limited. Placing a small segment of the Facility underground increases the costs and design complexity. The underground construction cost for this 4,600 linear feet of the Facility is estimated at $4.3 to $5.3 million, depending on underground cable type. The displaced 4,600 linear feet of overhead line is estimated to cost approximately $550,000, therefore the net cost of the alternative would be $3.7 to $4.7 million. Finally, there are several existing transmission lines within the area that minimize the visual advantage of placing this segment of the proposed Facility underground, especially at such a high cost.

10. At the public statement hearing, concerns were expressed about the level of magnetic fields at the nearby homes in the Stock Lane area. As a result of a further review of alternatives to reduce magnetic fields to address these concerns, the Signatory Parties have proposed the placement of the proposed 345 kV transmission line closer to the center of the right-of-way to increase the distance from the nearest residence on Segment 2 resulting in a reduction in the highest magnetic field level at the two nearest residential structures (residences on Stock Lane). In addition, the Signatory Parties considered and rejected five other options that were studied. The rejected options included (a) a centerline adjustment [merely moves level of fields from one side of the right-of-way to the other side – where nearby residences are located on both sides]; (b) taller poles/conductor realignments [somewhat lower fields negated by significant adverse visual impacts]; (c) double (split) circuit with reverse phasing [much lower fields negated by very significant adverse visual impacts]; (d) passive cancellation loops [somewhat lower fields negated by significant adverse visual impacts including additional clearing and many additional structures and equipment]; and (e) active shielding [lower fields but difficult to predict, negated by significant adverse visual impacts including additional clearing and many additional structures and equipment].

E. *Conformance to Long-Range Plans*

The Facility does not violate any long-range plans, is consistent with the most recent State Energy Plan ("SEP") (2002), and does not adversely impact the electrical system.

F. *System Reliability Impact Studies*

There are a number of reliability benefits which will result from operation of the Facility. The Facility will enable the BEDCO power plant to interconnect with the Niagara Mohawk bulk electric

system. The connection of the Facility to the Niagara Mohawk bulk electric system will increase electrical supply available to local power customers and increase the overall capacity for New York.

System reliability impact studies (SRIS) to evaluate the impact of the Facility on system reliability to determine what AC reinforcements are necessary for the New York State transmission system are part of the record of this proceeding, designated as Exhibit 20. The studies included thermal, voltage, short circuit, and stability analysis.

The SRIS was conducted under the direction and review of Niagara Mohawk. The NYISO was consulted on the scope of the study and the system representations incorporated in the dynamic analysis portion of the SRIS. The NYISO Transmission Planning Advisory Committee (TPAS) approved a work scope that required a report to be prepared in accordance with NYISO Transmission Planning Guideline No. 1.0. On January 17, 2001, the NYISO Operating Committee met and approved the TPAS report. The Operating Committee of the NYISO approved the results of the SRIS in November 2001. The SRIS confirms that the Facility results in no adverse material impact on the Niagara Mohawk bulk power system reliability.

The route and configuration of the Facility that is the subject of this Joint Proposal (which reflects changes from the route and configuration originally proposed in the Application) was reviewed and presented to TPAS on December 22, 2003. TPAS determined that the proposed change in the Facility had a non-material impact on the SRIS. At the January 22, 2004 NYISO Operating Committee meeting, the Committee accepted the non-material evaluation conclusion. NYISO and other interested parties were provided with the model and assumptions used in the analysis to confirm the results.

A revised Short Circuit Study indicates that five (5) 115 kV circuit breakers will need to be replaced at the Niagara Mohawk Greenbush Substation as a result of the increased fault current caused by the addition of Circuit #17 to the Greenbush Substation. The Short Circuit Study concluded that certain breakers will be underrated because of the new circuit configuration and will need to be replaced. The Short Circuit Study also concluded that no breakers outside of the Greenbush Substation would need to be replaced as a result of this modification to the transmission line system. However, BEDCO is still committed to paying for any required circuit upgrades that result from the original Application or this modification.

G. *State and Local Laws*

New York State Uniform Fire Prevention and Building Code

1. Niagara Mohawk agrees to undergo building plan review and obtain building permits (when required), inspections, and certificates of occupancy upon the inspection and completion of construction from the City of Rensselaer, Town of East Greenbush and Town of North Greenbush, respectively, for the portions of the Facility to be constructed in each respective jurisdiction to the degree that the subject matter of the New York State Uniform Fire Prevention and Building Code applies to the Facility. The Signatory Parties agree that if Niagara Mohawk voluntarily follows such a course of action, not as an impermissible delegation or transfer of authority from the Commission under 19 NYCRR, § 1204.13, but as the exercise of each respective municipality under its own independent authority that it would normally exercise but for Section 172(1) of the Public Service Law, the record in this proceeding supports a finding under 168(2)(d) that the Facility is designed to operate in compliance with applicable state laws, and regulations issued there-under, concerning the New York State Uniform Fire Prevention and Building Code.

City of Rensselaer Zoning Regulations § 179-15 – Height Regulations

2. In the City of Rensselaer, the route of the Facility must necessarily pass through the "I" zoning district to reach the site of the proposed major electric generating facility. The height of structures within the "I" zoning district are generally limited to 70 feet with certain specified exceptions (*e.g.*, radio and television towers). The maximum allowed height under the exceptions would be 87.5 feet. The structures for the Facility in this location need to be 140 to 160 feet high. Given the width of the existing Right-of-way in this location and the proximity of surrounding land uses (*e.g.*, railroad and oil tank farms), the height or location of the structures cannot be modified based on engineering constraints. There is a minimum clearance requirement for the conductors based on the National Electric Safety Code (NESC) and an additional need to provide adequate clearance to assure compliance with the Commission's criteria on electric and magnetic fields (EMFs). Undergrounding of the facility is not a feasible alternative (as discussed elsewhere in this Joint Proposal) and would not generally be warranted as this area is heavily industrial in character. The likely purpose of the height restriction is to preserve visual uniformity

in the area. The 70 foot limit relates somewhat to the general height of trees around the fringes of the area. The exhaust stack of the existing cogeneration facility on Riverside Avenue is higher than 70 feet and establishes a significant precedent varying from the general requirement. The proposed major electric generating facility itself will also introduce new elements into the landscape that will substantially exceed the general height requirement. The 140 to 160 feet structure heights proposed for the Facility are the minimum necessary given the engineering constraints, therefore the Commission should refuse to apply the City of Rensselaer Zoning Regulations § 179-15 – Height Regulations to the Facility as being unreasonably restrictive due to the existing technology. The need and potential for mitigation against the adverse visual impacts of this result is addressed elsewhere in this Joint Proposal regarding screening.

City of Rensselaer Zoning Regulations § 179-33 – Required Screening

3. As noted above, in the City of Rensselaer, the route of the Facility must necessarily pass through the "I" zoning district to reach the site of the proposed major electric generating facility. Within the "I" zoning district, all commercial or industrial uses must be provided with a fence, screen and/or landscaping sufficient to obscure the use from public right-of-ways. The nature of some sections of the Facility right-of-way in this location is that it is to be co-located on a private road or access-way. It will not be possible to provide fencing or landscaping in all locations where the Facility will cross public rights-of-way for to do so would block vehicular access to the private road or access-way. The likely purpose of the screening provision is not to completely hide but to soften the harsh visual effect of industrial structures on passers-by. This is particularly important in the westerly portion of the "I" zoning district near the waterfront to enhance the "greenway" concept; but is less important in the easterly portion of the "I" zoning district near the railroad where the Facility is to be located. In practice, the general precedent in the area has been to install chain-link security fences rather than screens or landscaping. A strict application of the screening requirement is impossible due to the need to maintain access on the Facility right-of-way, therefore the Commission should refuse to apply the City of Rensselaer Zoning Regulations § 179-33 – Required Screening to the Facility as being unreasonably restrictive due to the existing technology. To provide mitigation against the adverse visual impacts of this result, and the increased height of the structures, Niagara Mohawk shall in the EM&CP provide an evaluation of potential screening

at all Facility crossings of public rights-of-way that does not conflict with its right-of-way management standards and shall implement appropriate screening measures as determined by the Commission.

H. *Real Property Considerations*

1. Need has been demonstrated in this proceeding for the acquisition of additional permanent right-of-way, temporary right-of-way or off-right-of-way access easement on lands adjoining the existing right-of-way as set forth below in this section of this Joint Proposal.

Permanent Right-of-Way

2. At the intersection of Segment 1 and Segment 2 there is a need to expand the existing right-of-way to make room for the Facility which out of necessity must cut across the corner of two adjacent parcels. The area to be acquired by Niagara Mohawk consists of approximately 27,000 square feet of land on an existing access lane and a forested area of an adjacent parcel on the easterly side of the railroad tracks.

3. At the Segment 1 crossing of the CSX Transportation, Inc. railroad track and at the Segment 2 crossing of the Amtrack railroad tracks, there is a need to amend the current Niagara Mohawk agreements relative to crossing these tracks. The current agreements authorize crossing with a transmission line with a voltage of 115 kV. Amendments or new agreements are required to authorize crossing with the Facility at a voltage of 345 kV.

4. At a point near the beginning of Segment 1 where it will be necessary to relocate existing Circuit #16, there is a need to obtain 100-foot wide easements to cross the Albany Port District Commission property and to cross Riverside Avenue. The easements (or in the case of the City of Rensselaer, a revocable consent if that is all that can be granted) to be acquired by Niagara Mohawk consist of approximately 3,500 square feet of land on the property of the Albany Port District Commission and 5,000 square feet of land of the City of Rensselaer in the right-of-way of Riverside Avenue.

Temporary Right-of-Way

5. In the area of Segment 1 along Teller Road, constraints due to the location of existing structures and other facilities warrant the temporary re-location of existing Circuit #16 to an alignment off

the existing Niagara Mohawk right-of-way. BEDCO will acquire for Niagara Mohawk Options for temporary 100-foot wide easements for the temporary re-location of the Circuit #16 (115 kV line) which will carry the output of the El Paso generator that will be required should this temporary line be required during construction of the double-circuit 345/115 kV portion of Segment 1. Such easements will specify property and related rights for a limited portion of the temporary 115 kV line to be located and operated off the existing Niagara Mohawk easement. The temporary Circuit #16 line will exit the Niagara Mohawk right-of-way in the vicinity of proposed Structure #8 on the north side of Teller Road, traverse lands of the Town of East Greenbush at the intersection of Teller Road and Riverside Avenue, and then cross the properties of Alpha Venture One and that of Alpha Venture, LLC, re-joining the Niagara Mohawk easement south of Teller Road in the vicinity of proposed Structure #11. The temporary easement to be obtained from the Town of East Greenbush may be in the form of a revocable consent if that is all that can be granted by the Town. Obligations for temporary structure removal and return of the properties to their original state must be included in the easement rights.

6. In the area of Segment 1 at the intersection of Riverside Avenue and the Port Access Highway, constraints due to the location of existing structures and other facilities warrant the temporary re-location of existing Circuit #16 to an alignment off the existing Niagara Mohawk right-of-way. BEDCO will acquire for Niagara Mohawk an Option for a temporary 100-foot wide easement (or a revocable consent if that is all that can be granted by the City of Rensselaer) for the temporary re-location of the Circuit #16 (115 kV) line which will carry the output of the El Paso generator that will be required should this temporary line be required during construction of the double-circuit 345/115 kV portion of Segment 1. Such easement will specify property and related rights for a limited portion of the temporary 115 kV line to be located and operated off the existing Niagara Mohawk easement. The temporary easement will include approximately 0.11 acres of land to the southwest of the right-of-way of the existing Circuit #16. Obligations for temporary structure removal and return of the property to its original state must be included in the easement rights.

Off-Right-of-Way Access Easements

7. Need has been demonstrated in this proceeding for the acquisition of three off-right-of-way access easements to serve the Facility. The proposed Trustco Bank Access Easement is necessary

to provide access to Segment 3 from Temple Lane. The proposed Corellis Access Easement is necessary to provide access to Segment 2 from State Routes 9 & 20. The proposed Worthman Lane Access Easement is necessary to provide access to Segment 2 from Worthman Lane. The record will be supplemented with a new exhibit depicting the proposed access easements.

IV. Proposed Findings

The Signatory Parties agree that the record in this proceeding supports the proposed findings set forth in Appendix C attached hereto.

V. Ordering Clauses/Certificate Conditions

The Signatory Parties agree that the proposed ordering clauses/certificate conditions set forth in Appendix D attached hereto are acceptable and appropriate for inclusion in a certificate authorizing construction and operation of the proposed Facility as reconfigured herein.

VI. EM&CP Guidelines

The Signatory Parties agree that the General Guidelines for Environmental Management and Construction Plan(s) set forth in Appendix E attached hereto are acceptable and appropriate for application to the proposed Facility as reconfigured herein.

VII. Water Quality Certification

The Signatory Parties agree that the record in this proceeding supports the proposed water quality certification set forth in Appendix F attached hereto.

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Niagara Mohawk Power Corporation

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Besicorp-Empire Development Company, LLC

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Staff of the Department of Public Service

PAUL AGRESTA
Assistant Counsel

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

12-21-04

New York State Department of Environmental Conservation

By: Mark D. Sanza, Esq.

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

New York State Department of Agriculture & Markets

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

Dated – December 22, 2004

Rensselaer County Environmental Management Council

Jason Kippen

CITY OF RENSSELAER

Dated: December 21, 2004

BY: _____
Mark Pratt, Mayor
City of Rensselaer

Appendix D to Joint Proposal

PROPOSED ORDERING CLAUSES/CERTIFICATE CONDITIONS

The Commission orders:

1. Subject to the conditions set forth in this Opinion and Order, Niagara Mohawk Power Corporation (Niagara Mohawk) is granted a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of an approximately 8.1 mile long 345 kV transmission line and related facilities (the "Transmission Facility") extending from the take-off structure at the switch yard on the site of the major electric generating facility proposed by Besicorp-Empire Development Company, LLC ("Besicorp") located at Riverside Avenue, City of Rensselaer, Rensselaer County, New York to the Niagara Mohawk Reynolds Road substation (the "Interconnection Facility"), located in the Town of North Greenbush, Rensselaer County, New York.

2. Niagara Mohawk shall, within 30 days after the issuance of the Certificate, submit to the Commission either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate. Failure to comply with this condition shall invalidate the Certificate.

3. If construction of the Transmission Facility hereby certified is not commenced within 18 months, this certificate may be vacated with notice to the Certificate Holder and Besicorp.

Description of Route and Facilities

4. The proposed location of the Transmission Facility is approved as described in Appendix B of the Joint Proposal dated December 21, 2004 (the "Joint Proposal").

Laws and Regulations

5. a) Niagara Mohawk's motion for a waiver of the application requirements of 16 NYCRR Section 86.3(a)(1)(iii) is granted. Niagara Mohawk's motion for waivers of other application requirements is withdrawn as unnecessary given the drawings submitted.

b) Each substantive Federal, State and local law, regulation, code and ordinance applicable to the Transmission Facility authorized by the Certificate shall apply, except any substantive local law or regulation which the Public Service Commission ("Commission") has refused to apply as being unreasonably restrictive as discussed herein.

c) The following provisions of the Code of the City of Rensselaer have been found by the Commission to be unreasonably restrictive and shall be inapplicable to the Transmission Facility:

Zoning Regulations §179-15 - Height Regulation; and

Zoning Regulations §179-33 - Required Screening.

d) No State or local legal provision purporting to require any approval, consent, permit, certificate or other condition for the construction or operation of the Transmission Facility authorized by the Certificate shall apply, except (i) those of the Public Service Law and regulations and orders adopted thereunder, (ii) those provided by otherwise applicable State law for the protection of employees engaged in the construction and operation of the facilities, (iii) those permits issued under a federally delegated environmental permitting program, and (iv) those referenced in Conditions 6, 16 and 56 below.

e) Niagara Mohawk shall construct the Transmission Facility in a manner that conforms to all standards of the American National Standards Institute (ANSI) including, without

limitation, the National Electric Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Standard IEEE C2-2002, and any stricter standards adopted by Niagara Mohawk. In addition, Niagara Mohawk shall construct the Transmission Facility in a manner that conforms to any stricter construction standards adopted by Niagara Mohawk.

f) Niagara Mohawk shall construct the Transmission Facility in a manner that conforms to all applicable requirements of the New York State Fire Prevention and Building Code.

6. Nothing herein shall preclude Niagara Mohawk from voluntarily subjecting itself to any State or local approval, consent, permit, certificate or other condition for the construction or operation of the Transmission Facility.

a) As stated in the Joint proposal, Niagara Mohawk shall coordinate with the New York State Department of Transportation for all work to be performed in the right-of-way of State highways, subject to the Commission's ongoing jurisdiction.

b) As stated in the Joint proposal, Niagara Mohawk shall coordinate all work to be performed in the right-of-way of city, town and county highways with the respective highway departments for such highways, subject to the Commission's ongoing jurisdiction.

c) As stated in the Joint proposal, Niagara Mohawk shall subject itself to building plan review and obtain any required building permits, inspections, and certificates of occupancy upon the inspection and completion of construction from the City of Rensselaer, Town of East Greenbush and Town of North Greenbush, respectively, for the portions of the Facility to be constructed in each respective jurisdiction to the degree that the subject matter of the New York State Uniform Fire Prevention and Building Code applies to the Facility, subject to the Commission's ongoing jurisdiction.

7. A copy of each permit or approval received from the issuing agencies shall be provided to DPS Staff by Niagara Mohawk promptly after receipt by Niagara Mohawk of such permit or approval, before commencement of construction across the affected area.

8. If Niagara Mohawk believes that any action taken, or determination made, by a State or local agency in furtherance of such agency's review of the permits and approvals referenced in clause 6 above, is unreasonable or unreasonably delayed, Niagara Mohawk may petition the Commission, upon reasonable notice to that agency, to seek a resolution of any such unreasonable or unreasonably delayed requirement. The permitting agency may respond to the petition, within three business days, to address the reasonableness of any requirement or delay.

9. Niagara Mohawk shall promptly notify the Commission in writing should it decide not to complete construction of all or any portions of this project and shall serve a copy of such notice upon all parties.

Public Health and Safety

10. Niagara Mohawk shall design, engineer and construct the Transmission Facility such that its operation shall comply with the electromagnetic field ("EMF") standards established by the Commission in *Opinion No. 78-13* (issued on June 19, 1978) and the *Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities* (issued September 11, 1990), respectively.

a) To minimize EMFs for Segment 1, the 115 kV circuit shall be located as close as possible to the 345 kV (and as far away from the right-of-way boundary as possible) and the 345 kV phases shall be oriented opposite to the existing 115 kV transmission line phases (reverse phase configuration).

b) To minimize EMFs for Segment 2, the centerline of the proposed 345 kV transmission line shall be placed as close to the existing transmission circuits as possible and the phases shall be oriented to provide the lowest magnetic field levels on the eastern right-of-way boundary.

c) To minimize EMFs for the Segment 2A Connector, the Feura Bush - Greenbush Circuit #17 phases shall be oriented opposite to the existing Greenbush Circuit #16 115 kV transmission line phases (reverse phase configuration).

d) To minimize EMFs for Segment 2A, the Feura Bush - Greenbush #17 and the Riverside - Reynolds Road Circuit #4 phases shall be oriented opposite to the existing Reynolds Road - Greenbush Circuit #9 split circuit transmission line on the East boundary of the right-of-way (reverse phase configuration).

e) To minimize EMFs for Segment 3, the centerline of the proposed 345 kV transmission line shall be placed close to the existing transmission centerline and the phases shall be oriented to provide the lowest magnetic field levels on the eastern right-of-way boundary.

11. Construction work within 200 feet of occupied structures shall take place between 7:00 a.m. and 6:00 p.m. daily. Nighttime and weekend construction activities may be necessary to coordinate utility outages for the convenience of the residents and businesses. For certain construction phases and activities, additional work hours may be necessary. Nothing herein shall preclude Niagara Mohawk from making the necessary arrangements for the extension of work hours with appropriate local agencies in compliance with local ordinances. Noise mitigation procedures shall follow those set forth in the approved Environmental Management and Construction Plan ("EM&CP"). DPS Staff shall be notified at least 48 hours in advance if planned weekend, evening or holiday construction becomes necessary. This condition is not intended to prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas, or to require the cessation of construction activities, which require a continuous work effort once started.

12. Niagara Mohawk shall keep local fire department and emergency management teams apprised of chemicals and waste on site. All chemicals and waste shall be secured in a locked and controlled area.

13. Niagara Mohawk shall take appropriate measures as outlined in the EM&CP to minimize fugitive dust and airborne debris from construction activity.

14. Facility construction worker parking shall be in designated areas which do not interfere with normal traffic and do not cause any safety hazard or interfere with existing land uses. These parking areas shall be designated in the EM&CP.

15. Niagara Mohawk shall periodically consult with State and local highway transportation agencies about traffic conditions near the project site, and shall make good faith efforts to minimize the impact of the construction of the Transmission Facility on local traffic circulation.

16. To the extent required in connection with the delivery of oversized components, Niagara Mohawk or its suppliers shall obtain any necessary permits from the local or State agencies.

17. (a) Niagara Mohawk shall engineer and construct its facilities to be fully compatible with the operation and maintenance of nearby electric, gas, telecommunication, water, sewer, and related facilities; details of such other facilities and measures to protect the integrity, operation, and maintenance of those facilities shall be presented in the EM&CP. The Transmission Facility shall be designed and constructed to avoid adverse effects on the cathodic protection system and physical conditions of existing structures; and any fuel gas pipelines within the right-of-way of the Transmission Facility. Niagara Mohawk shall provide a plan indicating the details and design of measures to protect nearby facilities and structures. Plans shall detail appropriate measures to mitigate: pipeline induced voltages and currents for both steady state and fault conditions, based on assessments to avoid pipe wall and coating damage, corrosion, and hazards to personnel; induced voltages and personnel protection at tank farm area; and inductive interference to railroad signaling and communications facilities; or other conditions as identified in site-specific analysis of the certificated right-of-way during preparation of the EM&CP. Appropriate mitigation measures including grounding, upgrade of existing protection devices or

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other facilities as appropriate for and identified in cooperation with owners or operators of adjacent or nearby structures, pipelines, tanks, fences, railroad equipment, etc.

(b) Niagara Mohawk shall coordinate its construction schedule so as to minimize outages of the existing Rensselaer LG&E – Greenbush #16 Circuit and outages of the existing generation facility on Riverside Avenue in the City of Rensselaer.

18. Niagara Mohawk shall integrate and coordinate maintenance of the certified Transmission Facility with the existing transmission lines on the right-of-way and those of adjacent utility facilities.

19. Niagara Mohawk shall comply with the requirements for the protection of underground facilities set forth in 16 NYCRR Part 753 "Duties of Excavators".

20. Niagara Mohawk shall coordinate and schedule construction and maintenance activities to minimize or avoid, to the extent practicable, disturbance to use of the designated bikeways on NYS Route 9J and Route 151. Details of the construction schedule shall be presented in the EM&CP.

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Appendix D to Joint Proposal

Environmental Management and Construction Plan

21. Except where this Certificate requires otherwise, the environmental protection measures contained in the Application, Wetland Mitigation Supplement for the BEDCO Cogeneration Power Plant, 345 kV Transmission Line and Natural Gas Pipeline, dated February 27, 2004, Permit Application to the US Army Corps of Engineers for the 345 kV Transmission Line, dated July 2003, Supplemental Analysis, 401 Water Quality Certification, and in the Joint Proposal (to the extent adopted in this Certificate), shall be incorporated into the EM&CP. The EM&CP shall be prepared in accordance with the EM&CP guidelines attached as Appendix E to the Joint Proposal. These measures shall be applied during construction, operation and maintenance of the certified Transmission Facility. Applicable provisions of the Certificate, EM&CP, and orders approving the EM&CP shall be accommodated in any design, construction, ownership or maintenance contracts associated with the Transmission Facility.

22. Niagara Mohawk shall provide, as a part of the EM&CP:

(a) a final design plan that reflects conformance of the Transmission Facility design with the Commission Certificate, applicable Federal, State, and local requirements (including, but not limited to, applicable regulations, including those of the Bureau of Alcohol, Tobacco and Firearms, Occupational Safety and Health Administration, NYS Department of Labor, the Uniform New York State Fire Prevention and Building Code, chemical and waste-storage use and handling regulations);

(b) a discussion of the status of efforts by Niagara Mohawk to obtain permits necessary for project construction from State and local agencies, Federal agencies (USACOE, et.al.); and

(c) the Interconnection Agreement for the generation facility and the certified Transmission Facility.

23. Niagara Mohawk shall not begin site preparation or construction with respect to any portion of the Transmission Facility (except for surveying, soils testing and such other related activities as are necessary to prepare final design plans) and shall not commence any proceedings under the Eminent Domain Procedure Law (EDPL) to acquire permanent right-of-way, temporary right-of-way, or off-right-of-way access before it has submitted to the Commission, and the parties identified in clause 24, below, and the Commission has approved, an EM&CP for the relevant portion of the Project.

24. Niagara Mohawk shall submit four copies of the EM&CP to the Commission, serve two copies on the Staff of the New York State Department of Environmental Conservation ("DEC"), one copy on the Region 4 office of the DEC, one copy on the Commissioner of the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP"), one copy on the Staff of the New York State Department of Agriculture and Markets (NYSA&M), one copy on the Region 1 office of the NYSDOT; one copy on any other New York State agency (and its relevant regional offices) which requests the document; and one copy on active parties on the service list who request the document. Niagara Mohawk shall also place copies for inspection by the public in at least one public library or other convenient location in each municipality in which construction will take place. Contemporaneously with the submission and service of the EM&CP, Niagara Mohawk shall provide notice, in the manner specified below, that the EM&CP has been filed.

25. (a) Niagara Mohawk shall serve written notice(s) of filing the EM&CP on all active parties to this proceeding, on each person on the Commission's service list considered potentially affected by the subject matter in the EM&CP, and on all statutory parties to this proceeding, and shall attach a copy of the notice to each copy of the EM&CP. Further, Niagara Mohawk shall publish the notice(s) in a newspaper or newspapers of general circulation in the vicinity of the Transmission Facility. (b) For all permanent right-of-way, temporary right-of-way, or off-right-of-way access to be acquired for the Transmission Facility, Niagara Mohawk shall cause an examination of title (title search) to be conducted in the same manner as would be

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conducted by a reputable title insurance company to identify all, of record, owners, mortgagees, lienholders, leaseholders or others with an interest in such property rights to be acquired. Niagara Mohawk shall serve written notice(s) of filing the EM&CP on each such person identified, on each person owning the underlying land right to an existing easement being used and on each person currently leasing a portion of any right-of-way to be used for the Transmission Facilities.

26. (a) The written notice(s) and the newspaper notice(s) shall contain, at a minimum, the following:

(1) a statement that the EM&CP has been filed;

(2) a general description of the Transmission Facility, the need for the Transmission Facility, the alternatives considered and the EM&CP;

(3) only for the written notice(s) for identified persons with a record interest in property to be acquired, a specific description of the permanent right-of-way, temporary right-of-way, or off-right-of-way access to be acquired for the Transmission Facility;

(4) a listing of the locations where the EM&CP is available for public inspection;

(5) a statement that any person desiring additional information about a specific geographical location or specific subject may request it from Niagara Mohawk;

(6) the name, address, and telephone numbers of Niagara Mohawk's representative;

(7) the address of the Commission; and

(8) a statement that any person may be heard by the Commission on any matter or objection regarding the EM&CP by filing written comments with the Commission and Niagara Mohawk within 30 days of the filing date with the Commission of the EM&CP (or within 30 days of the date of the newspapers notice, whichever is later).

(b) A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be submitted to the Commission at the time the EM&CP is filed, and shall be a condition precedent to approval of the EM&CP.

27. (a) Niagara Mohawk shall report any proposed changes to the EM&CP to DPS Staff. DPS Staff will refer to the Secretary of the Commission (or a designee) reports of any proposed changes that do not cause substantial change in environmental impact or are not related to contested issues decided during the proceeding. DPS Staff will refer all other proposed changes in the EM&CP to the Commission for approval.

(b) Upon being advised that DPS Staff will refer a proposed change to the Commission, Niagara Mohawk shall notify all active parties that have requested (before the approval of the EM&CP) to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (1) describe the original conditions and the requested change; (2) state that documents supporting the request are available for inspection at specified locations, and (3) state that persons may comment by writing or calling (followed by written confirmation) to the Commission within 15 days of the notification date. Any delay in receipt of written confirmation will not delay Commission action on the proposed change.

(c) Niagara Mohawk shall not execute any proposed change until it receives oral or written approval, except in emergency situations threatening personal injury, property damage or severe adverse environmental impact, or as specified in the EM&CP.

28. Except where the Certificate requires otherwise, the terms of the Joint Proposal and the environmental protection measures contained in the Application and Application Supplement (as modified by the Joint Proposal) shall be applied during preparation of the EM&CP and during construction, operation and maintenance of the certified Transmission Facility.

29. (a) Deviations from the certified centerline, as reasonably necessary, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a provision of the Joint Proposal or the Order would be created. An explanation for the deviation shall be provided with supporting documentation in the EM&CP.

(b) Deviations from the design height and location of structures shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a provision of the Order would be created. An explanation for the proposed deviation shall be provided with supporting documentation in the EM&CP.

30. (a) At least two weeks prior to the start of construction, Niagara Mohawk shall hold a preconstruction meeting. An agenda, location and attendee list shall be agreed upon between DPS Staff and Niagara Mohawk.

(b) Niagara Mohawk shall supply draft minutes from this meeting to all attendees, the attendees may offer corrections or comments and Niagara Mohawk shall issue the finalized meeting minutes to all attendees.

(c) If, for any reason, the construction contractor cannot finish the construction of this project, and a new construction contractor is needed, there will be another preconstruction meeting with the same format as outlined above.

Notices and Public Complaints

31. (a) Niagara Mohawk shall make available to the public a toll free or local phone number of an agent or employee where complaints may be received during the construction of the certified facilities. In addition, the phone number of the Secretary, and the phone number of the Commission's Environmental Compliance Section, shall also be provided.

(b) Niagara Mohawk shall report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so, or within 30 days after receipt of the complaint (whichever comes first).

32. (a) No less than two weeks before commencing site preparation, Niagara Mohawk shall:

(1) provide notice to local officials and emergency personnel;

(2) provide such notice for dissemination to local media and display in public places (such as general stores, post offices, community centers and conspicuous community bulletin boards).

(b) The notice shall contain:

(1) a map and a description of the Transmission Facility in the local area;

(2) the anticipated date for start of construction;

(3) the name, address and local or toll- free telephone number of an employee or agent of Niagara Mohawk;

(4) a statement that the project is under the jurisdiction of the New York State Public Service Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address and telephone number to be provided in the notice;

(5) where possible, the notice will be written in language reasonably understandable to the average person.

(c) Upon distribution, a copy shall be submitted to the Secretary of the Commission, and to DEC Staff.

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33. Niagara Mohawk shall provide construction contractors with complete copies of the Certificate, approved EM&CP, updated construction drawings, any site specific plans, any permit issued pursuant to § 404 of the Federal Clean Water Act, and the § 401 Water Quality Certification. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the contractors prior to execution of such contracts.

34. Niagara Mohawk shall notify all construction contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from Niagara Mohawk, but also from its construction contractors, and that construction contractors may also be liable for other fines, penalties and environmental damage.

35. Niagara Mohawk shall inform the Secretary and the Staff of the DPS and DEC at least five days before commencing construction or clearing on this project.

36. Niagara Mohawk shall provide DPS Staff, and DEC Staff with weekly status reports summarizing construction, and indicating construction activities and locations scheduled for the next two weeks.

37. Within ten days after the Transmission Facility is in service, Niagara Mohawk shall notify the Commission of that fact.

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Appendix D to Joint Proposal

Right-of-Way, Construction, Maintenance and Restoration

38. Niagara Mohawk shall confine construction and subsequent maintenance to the certified right-of-way, and approved additional work areas, as detailed in the EM&CP. Construction shall not commence on any segment of the Transmission Facility until Niagara Mohawk has obtained such permanent right-of-way, temporary right-of-way, or off-right-of-way access (whether obtained through a conveyance or by the filing of a condemnation order and acquisition map) as are necessary for such construction for such segment. Prior to the commencement of the re-location of existing Circuit #16 onto a temporary right-of-way, should such temporary re-location be necessary, copies of the easements for the temporary re-location of existing Circuit #16 shall be provided to the Commission. The easements shall depict property rights, clearing rights, access rights, and such other matters as appropriate to address the site and environmental conditions and property interests of affected landowners and relevant conditions and requirements of the EM&CP. The duration of temporary occupancy of the easement locations shall be specified. Specifications for removal of all temporary transmission facilities including wires poles and structures shall also be indicated.

39. Before electric line construction begins, both edges of the electric right-of-way and the outside edges of the danger tree zones shall be delineated and marked. Also, Niagara Mohawk shall stake and flag all off-right-of-way access road easements and extra workroom areas.

40. Neither Niagara Mohawk nor any contractors in its employ shall clear or alter any areas outside the boundaries of the certified Transmission Facility, except as necessary, upon prior notice to affected landowners, to remove designated danger trees as defined and delineated in the EM&CP.

41. (a) All merchantable logs resulting from clearing the right-of-way for this Transmission Facility shall be removed from the right-of-way, unless otherwise noted on the construction drawings and approved by DPS Staff;

(b) All non-merchantable woody debris resulting from clearing the right-of-way for this Transmission Facility shall be chipped, unless noted on the EM&CP and approved by DPS Staff, or removed from the right-of-way. No chips shall be stored in wetlands, active agricultural fields, or within 50 feet of streams or drainages.

(c) Niagara Mohawk shall prepare a plan for removal, reuse, recycling and disposal of equipment; existing transmission facility components replaced as part of construction of this Transmission Facility shall be removed from the Niagara Mohawk right-of-way to appropriate destinations and handled appropriately for re-use as available based on conditions (wood poles, conductors, etc.).

(d) Niagara Mohawk will seek, if necessary, a beneficial use determination from the New York State Department of Environmental Conservation ("DEC") for proposed re-use of any treated wood poles for uses other than as structures for support of conductors for the transmission or distribution of utility service.

42. All trees over two inches diameter breast height (DBH) or shrubs over four feet in height damaged or destroyed by activities during construction, operation, or maintenance, regardless of where located, shall be replaced within the following year by Niagara Mohawk with the equivalent type trees or shrubs, except if:

(a) permitted by the approved EM&CP;

(b) equivalent-type replacement trees or shrubs would interfere with the proper clearing, construction, operations, or maintenance of the certified Transmission 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 Transmission Facility or adjoining transmission facilities; or

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(d) the owner of land where the damaged or destroyed trees or shrubs were located declines replacement (or other recorded easement or license holder with the right to control replacement declines replacement).

43. (a) Subject to the provisions of the Joint Proposal, neither Niagara Mohawk nor any contractors in its employ shall construct any new, or improve any existing, access roads not located on the rights-of-way authorized as part of this Transmission Facility or on other utility rights-of-way authorized as part of this Transmission Facility or on other utility rights-of way to be utilized in the construction or operation and maintenance of the certified facilities or not described in the EM&CP. Should the need arise for additional off right-of-way access, Niagara Mohawk shall submit a request to DPS Staff; the request will be considered consistent with the provisions of clause 27 above; and if the change may involve a site listed or eligible for listing on the State or National Register of Historic Places, Staff will consult with OPRHP Field Service Bureau, and forward a recommendation to the Secretary.

(b) Off-right-of-way access easements to the Transmission Facility using the roads indicated in the Applicant's Proposed Access Easement Map is authorized subject to applicable provisions of this Order and EM&CP provisions for environmental management.

44. (a) Niagara Mohawk shall prepare detailed soil handling and erosion control plans to be included in the EM&CP.

(b) Niagara Mohawk shall install temporary erosion control devices as soon as practicable and appropriate as indicated in the EM&CP or in any stormwater and erosion control plans, but in any event no later than the end of the work day in which site disturbance occurs.

45. Niagara Mohawk shall provide details in the EM&CP of street work, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and rights-of-way.

46. Niagara Mohawk shall delineate on the EM&CP drawings, the locations of proposed temporary roads, proposed permanent roads, and existing access roads. Proposed access road improvements shall be indicated, including measures for environmental impact minimization and access control.

47. Niagara Mohawk shall, on completion of the Transmission Facility:

(a) provide an assessment of the need for landscape improvements, including vegetation planting earthwork or installed features to screen or landscape the Transmission Facility with respect to road crossings, residential areas, and substations;

(b) prepare plans for any visual mitigation found necessary; removal, rearrangement and supplementation of existing landscape improvements or plantings should be considered, as appropriate;

(c) consult with DPS Staff on the content and execution of its assessment, resultant landscaping plan specifications and materials list; details shall include measures for controlling maintenance , third party or wildlife damage to any landscape and vegetation plantings; and

(d) assessments and plans shall be presented for DPS Staff review within one year of the date the Transmission Facility is placed in service.

48. Niagara Mohawk shall provide details in the EM&CP in the form of drawings detailing a grading plan, lighting plans, conceptual planting plan and proposed grade improvements, if any, for the construction of the substations.

49. Disturbed areas, ruts, and rills will be restored to original grades and conditions with permanent re-vegetation and erosion controls appropriate for those locations. Disturbed pavement, curbs and sidewalks shall be restored to their original preconstruction condition or improved.

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50. Niagara Mohawk shall submit to the Commission for approval, and provide a copy to any party so requesting, a long-term right-of-way management plan for the Transmission Facility. The plan shall:

(a) contain a list of residential areas and environmentally significant features (including as a minimum any stream-crossings, wetlands, vegetation planting areas, important wildlife habitats, parks, officially-designated trails and visual screens) and provisions to minimize maintenance impacts on those areas and features;

(b) contain a vegetation and land-use inventory for the first and each subsequent treatment (the vegetation inventory shall include the right-of- way location, vegetation type, height, density and treatment technique);

(c) contain a list of potential undesirable right-of-way uses (e.g., trash dumping, trespass or encroachment) and policy to remedy or control such uses;

(d) describe the treatment techniques and chemicals proposed for use, and limit chemical use to approved usages and dosages; and

(e) describe a Niagara Mohawk policy on surveillance, posting and installation of deterrents to adverse access;

(f) describe Transmission Facility management including Transmission Facility monitoring, patrols, marking and maintenance of facilities, coordination of activities with underlying landowners or land managers, and maintenance of erosion control features, access roads, landscape plantings and vegetation; and

(g) describe how the Transmission Facility maintenance and management is integrated into applicable Niagara Mohawk system-wide management plans.

51. Within ten days of the completion of final restoration, Niagara Mohawk shall notify the Commission that all restoration has been completed in compliance with this Certificate and the EM&CP.

Environmental Supervision

52. Niagara Mohawk shall designate a full-time supervisor, inspector and environmental monitor with stop work authority over all aspects of this project; the supervisor shall be on site during all phases of construction and restoration. The environmental monitor(s) and construction inspector(s) shall be equipped with sufficient documentation, transportation and communication equipment to effectively monitor contractor compliance with the provisions of this Order, applicable sections of the Public Service Law, § 401 Water Quality Certification, and the EM&CP. The name and qualifications of the supervisor, inspectors and environmental monitor(s) shall be submitted to DPS Staff at least two weeks prior to the start of construction.

53. The authority granted in the Certificate and any subsequent order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such order(s):

(a) Niagara Mohawk shall regard DPS Staff representatives (certified pursuant to Public Service Law 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 DPS Staff representatives may issue a stop-work order for that location or activity;

(b) A stop-work order shall expire in 24 hours unless confirmed by a single Commissioner; If a stop-work order is confirmed, Niagara Mohawk may seek reconsideration from the confirming Commissioner or the whole Commission; If the emergency prompting the issuance of a stop-work order is resolved to the satisfaction of the Commissioner or the

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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, DPS Staff representatives shall consult (wherever practicable) with Niagara Mohawk representatives possessing comparable authority; Within reasonable time constraints, all attempts shall be made to address any issue and resolve any dispute in the field; In the event the dispute cannot be resolved, the matter shall be immediately brought to the attention of Niagara Mohawk, Project Manager and the Department of Public Service Chief, Energy Resources and the Environment; In the event that a DPS Staff representative issues a stop work order, neither Niagara Mohawk nor the contractor will be prevented from undertaking any such safety-related activities as they deem necessary and appropriate under the circumstances; stop work or implementation of measures, as described below, may be directed at the sole discretion of the DPS Staff representative during these discussions;

(d) If a DPS Staff representative discovers a specific activity that is a significant environmental threat that is or may immediately become a violation of the Certificate or any other Order in this proceeding, the Staff representative may - - in the absence of responsible Niagara Mohawk supervisory personnel or the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action - - direct the field crews to stop the specific environmentally harmful activity immediately; If responsible Niagara Mohawk personnel are not on site the Staff representative shall immediately thereafter inform the Construction Supervisor and/or Environmental Coordinator of the action taken; The stop-work directive may be lifted by the Staff Representative if the situation prompting its issuance is resolved;

(e) If the DPS Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the Staff representative may, in the absence of responsible Niagara Mohawk supervisory personnel, or in the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action, direct Niagara Mohawk or its contractors to implement the corrective measures identified in the EM&CP; The field crews shall comply with the DPS Staff representative directive immediately. The DPS Staff representative shall immediately thereafter inform Niagara Mohawk's construction supervisor and/or environmental monitor of the action taken.

54. Niagara Mohawk shall organize and conduct site compliance audit inspections for DPS Staff as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases of the Project, and at least annually for two years after the Transmission Facility is operational.

(a) The monthly inspection shall include a review of the status of compliance with all certification conditions, requirements, and commitments, as well as a field review of the Transmission Facility site, if necessary. The inspection may also include:

(1) review of all complaints received, and their proposed or actual resolutions;

(2) review of any significant comments, concerns or suggestions made by the public, local governments, or other agencies;

(3) review of the status of the project in relation to the overall schedule established prior to the commencement of construction; and

(4) other items Niagara Mohawk or DPS Staff consider appropriate;

(b) Niagara Mohawk shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit.

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Roads and Highways

55. In preparing the EM&CP, Niagara Mohawk shall consult with each transportation department or agency normally having jurisdiction over any roads in the project vicinity that will be crossed by the certified facilities, or used for direct access to the Transmission Facility right-of- way. If the access road takes direct access from, or lies within the limits of such roads, Niagara Mohawk shall notify each such transportation department or agency of the approximate date work will begin.

56. (a) All work within State Highway rights-of-way shall be performed according to the traffic and safety standard and other requirements contained in 17 NYCRR Part 131, entitled *Accommodation of Utilities Within State Highway Right-of-Way*.

(b) The detailed manner of State highway crossings shall be coordinated with the appropriate Regional DOT authority, and the information responding to the requirements of 17 NYCRR Part 131 shall be included in the EM&CP. If Niagara Mohawk and the Regional DOT officials cannot agree on the details of work within a State Highway right-of-way, or if those officials fail to respond in a timely fashion, Niagara Mohawk shall notify the Commission in its EM&CP filing and describe fully the disagreements. Nothing in this paragraph alters the Commission jurisdiction pursuant to PSL Article VII.

Waterbodies and Wetlands

57. Niagara Mohawk shall minimize disruption to wetlands during Transmission Facility construction, operation and maintenance.

(a) Wetland locations shall be delineated in the field and indicated on the EM&CP drawings for the certified Transmission Facility, the right-of-way, and any off-right-of-way access roads or staging areas.

(b) Any activities which may affect wetlands shall be designed and controlled to minimize adverse impacts, giving due consideration to the environmental features and functions of the wetlands and the one hundred (100) foot adjacent area associated with any State regulated wetlands ("adjacent area").

(c) Niagara Mohawk shall, to the extent feasible, avoid direct impacts on wetlands and construct any new access roads outside any wetland, and outside the adjacent area associated with DEC regulated wetlands.

(d) Construction of any access roads through wetlands or adjacent areas shall be carried out using methods of construction set forth in the EM&CP for wetland impact minimization, including measures to assure that:

(1) any temporary gravel road or timber mat installations and associated work pad material shall be removed following construction;

(2) pre-disturbance flow regimes shall be maintained;

(3) the vegetative mat and wetland soil horizons shall be separated during excavation and replaced to as near the original position as possible during backfilling and restoration.

58. Niagara Mohawk shall minimize disruption to streams and rivers during Transmission Facility construction, operation and maintenance.

(a) For streams classified C(t) or higher, Niagara Mohawk shall conduct any in-stream construction only between May 15 and September 30. For all other streams that have warm water fisheries, construction shall be conducted only between July 15 and March 15.

(b) For all other streams, construction may be conducted at any time.

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(c) For all classified streams crossed, there shall be no increase in turbidity 400 feet downstream of the construction site that will cause a substantial visible contrast to natural conditions.

(d) For all protected streams crossed, there shall be no settleable solids 100 feet downstream of the construction site that will cause deposition or impair the waters for their best usages.

(e) Any gravel road and associated work pad material shall be removed following construction, and during the window of construction for the affected stream, except as provided in the EM&CP following consultation with DEC Staff. In all cases, the pre-disturbance flow regime shall be maintained. Niagara Mohawk shall exercise all necessary and reasonable precautions to minimize stream sedimentation and soil erosion in work areas and on the right-of-way. Further, Niagara Mohawk shall take prompt and effective action to control excessive sedimentation and erosion, in the event it does occur.

59. Niagara Mohawk shall comply with any conditions contained in any permit issued pursuant to § 404 of the Federal Clean Water Act, § 10 of the Rivers and Harbors Act, and the § 401 Water Quality Certification.

60. For construction activities at streams, wetlands or adjacent areas, DEC Staff field representatives shall be permitted on the Transmission Facility site. DEC Staff field representatives will notify the DPS Staff representative and Niagara Mohawk representative of any activities that violate or may violate either the terms of the Certificate or the Environmental Conservation Law. The DPS and DEC Staff field representatives will cooperate in assessing site conditions and determining whether stop work authority should be exercised, or whether directing Niagara Mohawk action to further minimize impacts to streams and wetlands is appropriate.

61. The EM&CP shall include:

(a) maps, plan drawings of streams, wetlands, and significant habitat crossing locations;

(b) site-specific stream crossing techniques for construction of the Transmission Facility and any access roads to be used for Transmission Facility construction.

(c) clearing and vegetation treatment plans, including a plan for initial vegetative clearing in areas near streams or wetlands; the plans shall minimize the clearing of vegetation and the use of herbicides within 100 feet of regulated wetlands and 50 feet of other water bodies, as necessary to allow construction and operation of the Transmission Facility, unless otherwise permitted by DEC.

(d) Niagara Mohawk's certification that the EM&CP design incorporates commitments and prior agreements and impact minimization measures for wetlands, streams and other environmental resources including Wetland EG-1, and any significant habitats, etc.

62. Niagara Mohawk shall not wash equipment or machinery in any watercourse or wetland and shall not permit run-off resulting from washing operations to directly enter any watercourses or wetland.

63. Niagara Mohawk shall not store, mix, handle open containers or load pesticides, chemicals labeled toxic, or petroleum products or refuel equipment within 100 feet of a watercourse.

Agricultural Resources

64. Ten days prior to access through or construction in the active agricultural field on the project, as designated in the EM&CP, representatives from NYSA&M, DPS Staff, Niagara Mohawk and Niagara Mohawk's contractor shall field review the project to discuss construction, restoration and mitigation that will be used in active agricultural fields. Agricultural

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mitigation, restoration and clean up may include, but is not limited to, the following: full width topsoil stripping, removal of rock 4-inches or larger, importing of topsoil, surface and subsurface shattering, deep tillage, repair of functioning stone drainage systems, broken tile or tiling systems, installation of new intercept drains, and compensation for crop loss.

65. The EM&CP shall identify locations where Black Cherry trees are located on the right-of- way near active livestock use areas. During right-of-way clearing, black cherry vegetation shall be disposed of in a manner which prevents access by livestock.

66. Construction and restoration in active agricultural fields shall only be done when soil moisture conditions are suitable for construction equipment, as determined by the DPS Staff in consultation with NYSA&M staff and Niagara Mohawk.

67. The EM&CP shall provide details of agricultural lands including:

(a) identification of the location of all commercial sugar bushes maintained for maple syrup production within the right-of-way;

(b) demonstration that the centerline location avoids or minimizes impacts to commercial sugar bush operations;

(c) demonstration that the Transmission Facility minimizes or avoids active agricultural lands and minimizes impacts on normal agricultural operations or activities;

(d) specifications and drawings showing procedures and techniques to be implemented for agricultural drain line repairs;

(e) specifications for access from public roads to agricultural fields, including an under-layment of durable, geo-textile matting placed over the exposed subsoil surface prior to application of temporary gravel access fill material; specifications shall indicate complete removal of the ramp upon completion of the project and restoration of the impacted site prior to topsoil replacement.

68. Segments of fences and gates affected by construction shall be rebuilt to like-new condition upon completion of construction. The base of all new posts shall be secured to a reasonable depth below the surface to prevent frost heave.

69. Where repeated temporary access is necessary across agricultural portions of the right-of-way such that soil compaction or mixing may result, topsoil shall be removed including all of the "A" soil horizon down to the beginning of the subsoil "B" horizon, generally not to exceed a maximum of 12 inches. Topsoil removal up to a depth of 16 inches may be required in specially designated soils encountered along the route and identified in the EM&CP. All topsoil shall be stockpiled and separated from other excavated materials. The Agricultural or Environmental Specialist shall determine depth of topsoil stripping per affected farm during EM&CP development by means of the County Soil Survey and on- site soil auger sampling, if necessary. All topsoil material shall be stripped, stockpiled, and uniformly returned to restore the original soil profile. During the clearing/construction phase, site specific depths of topsoil stripping shall be monitored by the Agricultural or Environmental Specialist.

70. In agricultural areas of soil over bedrock, which requires blasting, Niagara Mohawk shall use matting or controlled blasting to limit the dispersion of blast rock fragments. All blasted rock not used as backfill shall be removed from croplands, hay lands and improved pastures. Subsoil and topsoil shall be returned in natural sequence to restore the soil profile. Farm owners/operators shall be given timely notice prior to blasting on farm property.

71. In all agricultural sections of the right-of-way where topsoil is stripped, Niagara Mohawk shall break up the exposed construction surface subsoil with deep tillage by such devices as a deep-ripper or heavy duty chisel plow. Following the deep ripping and chiseling, all stone and rock material four inches and larger in size which has been lifted to the surface shall be collected and taken off site for disposal. The topsoil that has been temporarily removed for the period of construction shall then be replaced. Finally, deep subsoil shattering

shall be performed with a sub-soiler tool having angled legs. Stone removal shall be completed, as necessary, to eliminate any additional rocks and stones brought to the surface as a result of the final subsoil shattering process.

72. At the end of all construction, the right-of-way and respective work areas, including guying wire assembly and disassembly sites, shall be thoroughly cleared of debris such as nuts, bolts, spikes, wire, pieces of steel, and other assorted items.

73. After the moisture of the soil profile on the affected right-of-way has returned to equilibrium with the adjacent off-right of-way land, subsoil compaction shall be tested using an appropriate soil penetrometer or other soil compaction measuring device. Compaction tests shall be made for each soil type identified on the affected agricultural fields. The subsoil compaction test results within the right- of-way shall be compared with those of the adjacent off-right-of-way portion of the affected farm field/soil unit. Where representative subsoil density on the right-of-way exceeds the representative subsoil density outside the right-of-way, additional shattering of the soil profile shall be performed using a deep, angled- leg sub-soiler tool. Deep shattering shall be applied during periods of relatively low soil moisture to ensure the desired mitigation and to prevent additional subsoil compaction. Oversized stone/rock material which is uplifted to the surface as a result of the deep shattering shall be removed. In the event that subsequent construction or clean-up activities result in new compaction, additional deep tillage shall be performed to alleviate such compaction.

74. Niagara Mohawk shall provide a monitoring and remediation period of no less than two years immediately following the full-length activation of the transmission line or the completion of initial right-of-way restoration, whichever occurs last. Niagara Mohawk shall maintain a project work spread Agricultural or Environmental Specialist on at least a part-time basis through this period. The monitoring and remediation phase shall be used to identify any remaining agricultural impacts associated with right-of-way construction that are in need of mitigation and to implement the follow-up restoration.

75. During the monitoring and remediation period, on-site monitoring shall be conducted at least three times during each growing season and shall include a comparison of growth and yield for crops on and off the right-of-way. When the subsequent crop productivity within the affected right-of-way is less than that of the adjacent unaffected agricultural land, the Agricultural or Environmental Specialist, in conjunction with Niagara Mohawk and other appropriate organizations, shall help to determine the appropriate rehabilitation measures for Niagara Mohawk to implement. During the various stages of the project, all affected farm operators shall be periodically apprised of the duration of remediation by their respective work spread Agricultural or Environmental Specialist. Because conditions which require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period shall not obviate Niagara Mohawk of its responsibility to fully redress all project impacts. After completion of the specific remediation period, Niagara Mohawk shall continue to respond to the reasonable requests of the farmland owner/operators to correct project-related impacts on the affected agricultural resources.

76. Niagara Mohawk shall provide all farm owners/operators with a telephone number to facilitate direct contact with Niagara Mohawk and the project Agricultural or Environmental Specialist(s) through all of the stages of the project. The farm owner/operators shall also be provided with a telephone number to facilitate direct contact with Niagara Mohawk during operation and maintenance of the transmission line.

Chemical Spills

77. The EM&CP shall include Fuel and Chemical Handling Procedures, and a spill response and route emergency plan. This plan shall provide proposed methods of handling spills of petroleum products and any hazardous or controlled substance which may be stored or

utilized during construction, operation or maintenance of this Transmission Facility. Niagara Mohawk shall immediately notify DEC of any spills.

Cultural Resources

78. Should archeological materials be encountered during construction, Niagara Mohawk shall 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, Niagara Mohawk shall notify DPS Staff and OPRHP Field Services Bureau 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 scope of impact mitigation has been determined.

79. Should human remains or evidence of human burials be encountered during the conduct of archeological 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, Niagara Mohawk shall notify the DPS Staff and OPRHP Field Services Bureau. All archaeological or burial encounters and their handling shall be reported in the status reports required by Conditions 36 and 54 above.

80. Niagara Mohawk shall avoid adverse impacts on historic structures in the project vicinity by implementing facility location, design, and vegetation management measures described in the Application Supplement, Exhibit 18 plans, and measures to be specified in the EM&CP.

Other Requirements

81. Construction of the Transmission Facility shall not commence until the major electric generating facility proposed by Besicorp-Empire Development Company, LLC has received such permits and approvals as are necessary for it to be constructed pursuant to Article X and any Federal and State permit or licensing requirement.

82. Niagara Mohawk shall file with the Commission a copy of all facilities design studies for the Transmission Facility, including all updates.

83. Upon completion of construction at the Reynolds Road substation, Niagara Mohawk shall provide an assessment of station visibility, landscape condition, and mitigation needs. Views from public streets shall be assessed, and reports on vegetation condition and clearances from station fencing, conductors and other facilities shall be presented for Staff review. Landscape planting, drainage, grading and other mitigation needs shall be assessed and designs presented for addressing site restoration and long-term property and facility management.

84. Non-specular conductors shall be specified for installation for all new facilities and any replaced or modified transmission circuits affected by construction activity approved by this facility certification.

85. Niagara Mohawk shall consult with AT&T Longlines in the final construction design of Segment 3 and report the results of that consultation as part of the EM&CP. If Niagara Mohawk and the AT&T Longlines officials cannot agree on the details of work within the right-of-way, or if those officials fail to respond in a timely fashion, Niagara Mohawk shall notify the Commission in its EM&CP filing and describe fully the disagreements. Nothing in this paragraph alters the Commission jurisdiction pursuant to PSL Article VII.

86. Niagara Mohawk shall have a continuing obligation during the life of the Facility to respond promptly to complaints of any interference caused by the steel monopole structures of Segments 1 and 2 on the broadcast pattern of radio (AM) broadcast towers and amateur (ham) radio licensees. Upon receipt of any such complaint, Niagara Mohawk shall

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identify and mitigate any such interference impacts caused by its Facility through on-site design modifications and off-site mitigation techniques.

87. New structures shall not be sited in a manner that blocks the line-of-sight of the antennae on the microwave cell tower located at the high point of Segment 2 (Tellier Hill) directly adjacent to the right-of-way.

Appendix E to Joint Proposal

GENERAL GUIDELINES FOR
ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PLAN(S)

The environmental management and construction plans (EM&CP), consisting of appropriate maps, charts, illustrations, and text, shall include, but need not be limited to, the following information.

A. Plan and Profile Details. A Line Profile[1] (at an appropriate scale) and plan drawings (scale minimum 1 inch = 200 feet)[2] showing:

1. Facility Location

a. The boundaries of any new, existing and/or expanded right-of-way (ROW)[3] or road boundaries if cables are to be constructed underground in streets; plus areas contiguous to the ROW or street within which the applicant will obtain additional rights; and an explanation of the need for those additional rights.

b. The location of each facility structure (showing its size, material and type and indicating the GSA—595A Federal standard color designation or manufacturers color specification to be used for painted structures), structural foundation, fence, gate, down-guy anchor, and any counterpoise (typical counterpoise drawings will suffice) required for the proposed facility; conductors, insulators and static wires and other components attached to facility structures.

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[1] The lowest conductor of an overhead design should be shown in relation to ground at the maximum permissible conductor temperature for which the line is designed to operate, i.e, normally the shorttime emergency loading temperature specified by the New York ISO. If a lesser conductor temperature is used for the line profile, the maximum sag increase between the conductor temperature and the maximum conductor temperature shall be indicated for each ruling span. For underground facility design, show relation of facility to final surface grade, indicating design depth-of-cover.

[2] Contour lines (preferably at 5-foot intervals) are desirable on the photostrip map if they can be added without obscuring the required information.

[3] The term "ROW" in these *Guidelines* includes property to be used for substations, disposal sites, underground terminals, storage yards, and other associated facilities. Where such properties cannot reasonably be shown on the same plan or photo-strip, maps or plan drawings used for the transmission line, additional maps or drawings at convenient scales should be used.

c. Existing utility or non-utility structures on the ROW, and indicate those to be removed or relocated (include circuit arrangements where new structures will accommodate existing circuits, indicate methods of removal of existing facilities, and show the new locations, types and configurations of relocated facilities).

d. Any relocated or underground facility.

e. The relationship of the proposed facility to nearby fence lines, roads, railways, airfields, property lines, hedgerows, waterbodies, associated facilities, flowing water springs, nearby buildings or structures, major antennas, oil or gas wells, and pipelines or blowdown valves. State any objections raised by Federal, State or local transportation (highways, waterways, or aviation) officials to the final location or manner of installation of, or access to, the Certified facilities.

f. The location of any proposed new or expanded switching station, substation, or other terminal or associated facility (attach plan[4] - plot, grading, drainage, and electrical - and elevation views with architectural details at appropriate scales). Indicate the type and expected impact of outdoor lighting, including design features to avoid off-site illumination and minimize glare; the color and finish of all structures; the locations of temporary or permanent access roads, parking areas, construction contract limit lines, property lines, designated floodways and flood-hazard area limits, buildings, sheds, relocated structures, and any plans for water service and sewage and waste disposal.

g. The location and boundaries of any areas whether located on- or off- ROW proposed to be used for fabrication, designated equipment parking, staging, lay-down and conductor pulling. Indicate also any planned fencing or screening of storage and staging areas.

h. The proposed location of all on- or off-ROW access, temporary construction and permanent maintenance roads, indicating access from other roadways.

2. ROW Clearing

a. The locations of sites, if any, requiring trimming or clearing of vegetation and the geographic limits of such trimming or clearing. Indicate in text and on the drawings the specific methods for the type and manner of cutting, and disposition or disposal method for cut vegetation

[4] Preferably 1" = 50' scale with 2-foot contour lines.

(i.e., chip; cut and pile; salvage merchantable timber, etc.). Designate methods for management of vegetation to be cut or removed at each site, indicating the rationale for the method designated. Sites should be based on an initial ROW vegetation inventory conducted prior to clearing and access road construction, and should be distinguished by criteria such as:

(1) any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods, or

(2) any geographical area bounded at each end by areas requiring distinctly different cut-vegetation methods due to site conditions such as land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards or other factors.

(3) different property-owners requesting specific vegetation treatment or disposal methods.

(4) delineation and protection of desirable vegetation species.

(5) indication of areas requiring (off-ROW) danger tree removal.

b. The location of any areas where specific tree protection measures will be employed to avoid damage to specimen trees, stands of desirable species, important screening trees or hedgerows. Details of specific measures should be specified in text and site plans.

3. Building and Structure Removals

Indicate the locations of any buildings or structures to be acquired, demolished, moved or removed. In text, provide the rationale for the acquisition and removal of buildings or structures.

4. Waterbodies

a. Indicate the name, water quality classification and location of all rivers and streams (whether perennial and intermittent) within 100 feet of, or crossed by, the proposed ROW or any off-ROW access road constructed, improved or maintained for this facility. Indicate the procedures that were followed to inventory such resources and provide copies of any resulting data sheets and summary reports. Describe the measures to be taken in each location to protect streambank stability, stream habitat, and water quality including, but not limited to: crossing technique; crossing structure type; timing restriction; and other site-specific measures appropriate

to the location for impact minimization, resource protection, and facility construction management. On the plan maps, indicate:

(1) stream crossing method and delineate any designated streamside "protective or buffer zone" in which construction activities will be restricted to the extent necessary to minimize impacts on rivers and streams;

(2) the activities to be restricted in such zones;

(3) delineate any designated floodways or flood hazard areas to be traversed by the proposed facility or access roads, or otherwise used for facility construction or the site of associated facilities.

b. Show the location of all potable water sources including springs and wells on the ROW or within 100 feet of the ROW or access roads indicating on a site-by-site basis, precautionary measures to be taken to protect each water source.

5. Wetlands

Indicate the location and type of any wetland (e.g., marsh, meadow, bog, or scrub-shrub or forested swamp) within or adjoining the ROW or any access road, as determined by site investigation and delineation. Indicate in text, and on plans as appropriate, on a site-by-site basis the precautions or measures to be take to protect such wetlands, associated drainage patterns, and wetland functions.

6. Landscaping

Show locations of existing or proposed vegetative plantings, earthwork, or installed features to screen or landscape substations or other facility components. Describe in text and on detailed drawings, any screening or landscaping plans proposed.

7. Noise Sensitive Sites

Show the locations of noise-sensitive areas along the proposed ROW and the specify procedures to be followed to minimize noise impacts related to ROW clearing, facility construction, and operation. Indicate the types of major equipment to be used in construction or facility operation; sound levels at which that equipment operates; days of the week and hours of the day during which that equipment will normally be operated; any exceptions to these schedules; and any

measures to be taken to reduce audible noise levels caused by either construction equipment or facility operation.

8. Other Environmentally Sensitive Areas

a. Indicate the general locations of any known ecologically and environmentally sensitive sites (including rare and endangered species or habitats, deer winter yards, and archaeological sites), within or nearby the proposed ROW or along the general alignment of any access roads to be constructed, improved or maintained for this facility. Indicate the procedures that were followed to identify such resources and specify the measures that will be taken to protect or preserve these resources. Reports prepared to identify and analyze such sites shall be made available to Staff upon request.

b. Indicate the location and identification of sensitive land uses and resources that may be affected by construction of the facilities or by construction-related traffic (i.e., hospitals, emergency services, sanctuaries, schools, residential areas, etc.). Specify measures to minimize impacts on these resources.

9. Recreational Areas

Indicate the locations where existing or planned recreational uses, if known to the applicant at the time of the submission of the EM&CP, would affect or be affected by facility location, construction or other ROW preparation. Explain in text how these recreational uses or plans were (or can be) accommodated in facility construction operation and maintenance.

10. Agricultural Areas

Indicate the locations of prime, unique and significant agricultural lands, vulnerable soils, and underground drainage systems and the locations of sites under cultivation or in active agricultural use, where structures, access roads, counterpoise wires, lay-down areas or wire stringing operations will be located. Designate the site-specific techniques to be implemented to minimize or avoid construction-related impacts to agricultural resources.

B. Description and statement of objectives, techniques, procedures and requirements.

1. Erosion Control

a. Describe the temporary and permanent measures to be taken during all construction phases to stabilize and restore soils, control erosion, and preserve natural drainage patterns in areas where significant soil disturbances (including removal of vegetative cover, grading or excavation) are proposed. Include standards, practices, erosion control measures and techniques to address construction management, communications, planning, monitoring and reporting requirements as appropriate for conformance with Storm Water Pollution Prevention Plan details.

b. In areas of Coastal erosion hazard, include plans to demonstrate compliance with the standards for coastal erosion hazard protection as required by 6 NYCRR Part 505.

2. Fuel and Chemical Handling Procedures

Describe precautions and measures to be followed during clearing, construction and site restoration:

a. to control the storage, handling, transporting and disposal of fuels, oil, chemicals, and other potentially harmful substances; and

b. to avoid spills and improper storage or application in the vicinity of any wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site, or existing recreational area along the facility ROW and access roads.

3. Environmental Supervision

a. Describe protocols for supervising demolition, vegetation clearing (including any use of herbicides), construction and site restoration activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Certificate.

b. Specify the titles and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the demolition, clearing, construction and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate and the *EM&CP*. Indicate the amount of time each supervisor is expected to devote to the project.

c. Explain how all environmental protection provisions will be incorporated into contractual specifications, and communicated to those employees or contractors engaged in demolition, clearing, construction, and restoration.

d. Describe the procedures to "stop work" in the event of a certificate violation. Identify the company's designated contact including phone number, for assuring overall compliance with certificate conditions.

4. Clean-up and Restoration

Describe the applicant's program for ROW clean-up and restoration, including:

a. the removal of any temporary roads; restoration of lay-down or staging areas; the finish grading of any scarified or rutted areas; the removal of waste, scrap metals, surplus or extraneous materials or equipment used;

b. plans, standards and a schedule for the restoration of vegetative cover; include specifications to address:

(1) design standards for ground cover:

(a) species mixes and application rates by site;

(b) site preparation requirements (soil amendments, stone removal, subsoil treatment or drainage measures);

(c) acceptable final cover % by cover type;

(2) planting installation specifications and follow-up responsibilities;

(3) a schedule or projected dates of any seeding and/or planting.

5. Herbicides

a. Specify the locations where herbicides are to be applied. Provide a general discussion of the site conditions (e.g., land use, target and non-target vegetation species composition, height and density) and the choice of herbicide, formulation, application method and timing.

b. Provide a general comparative analysis of any proposed herbicide applications using the following selection criteria: selectivity, efficacy, toxicity, persistence, and cost-effectiveness.

c. Describe the procedures that will be followed during application to protect non-target vegetation, streams, wetlands, potable waters and other waterbodies, and residential areas and recreational users on or near the ROW.

d. The ROW and adjoining properties shall be posted and notified by using the DEC-approved format (ECL Part 33 and 6 NYCRR Part 325); or as may be implemented subject to interim utility guidance, if issued.

6. Agricultural Areas

a. Describe the program, policies and procedures to mitigate agricultural impacts, and explain how construction plans avoid or minimize soil compaction, crop production losses, and potentially wet agricultural soils. Also, list locations where such procedures have been and will be followed in facility construction and restoration.

b. Indicate specific techniques and references to appropriate Agricultural Protection Measures recommended by the NYS Department of Agriculture and Markets, as available.

7. Access Roads

a. Discuss the necessity for access to the ROW, including the areas where temporary or permanent access is required; and the nature of access improvements based on natural features, equipment constraints and vehicles to be used for construction and maintenance, and the duration of access needs through restoration and the maintenance of the facility.

b. Identify the types of access which will he used and the rationale for employing that type of access including consideration of:

(1) temporary installations (i.e., over-land provisions, corduroy, mat and fill, earthen road, geotextile underlayment, gravel surface, etc.);

(2) permanent installations (i.e., cut and fill earthen road, geotextile under-layment, gravel surface, paved surface, etc.);

(3) use of roads, driveways, farm lanes , rail beds, etc.;

(4) other access, such as helicopter or barge placement.

For each temporary and permanent access type provide a figure or diagram showing a typical installation (include top view, cross section and side view with appropriate distances and dimension). Where existing access ways will be used, indicate provisions for upgrading to meet appropriate standards.

c. Indicate the associated drainage and erosion control features to be used for access road construction and maintenance. Provide diagrams and specifications (include plan and side views with appropriate typical dimensions) for each erosion control feature to be used, such as:

(1) staked hay bale or check dam (for ditches or stabilization of topsoil);

(2) broad-based dip or berm (for water diversion across the access road);

(3) roadside ditch with turnout and sediment trap;

(4) French drain;

(5) diversion ditch (water bar);

(6) culvert (including headwalls, aprons, etc.);

(7) sediment retention basin (for diverting out-fall of culvert or side ditch);

(8) silt fencing.

d. Indicate the type of stream crossing method to be used in conjunction with access road construction. Provide diagrams and specifications (include plan and side view with appropriate dimensions) for each crossing device and rationale for their use. Stream crossing devices may include but not be limited to:

(1) ford (with or without gravel);

(2) ford with sill;

(3) timber mat;

(4) culverts including headwalls;

(5) bridges (either temporary or permanent).

Appendix E to Joint Proposal

All diagrams and specifications should include type and size of material to be placed in stream and on stream approaches.

8. ROW Management Plans

a. Describe the interim ROW vegetation management plan to be used for the proposed facility from the beginning of vegetative clearing until the comprehensive site-specific long-range ROW management plan is submitted. Include a description of the initial and follow-up vegetation treatment techniques; and the proposed contents of any post-construction and long-range ROW management plans. Such plans, when submitted, shall describe the goals and objectives and include supporting inventories and analyses, proposed and alternative techniques (including consideration of vegetative screening and buffer areas at locations such as stream crossings, public roadways, and residential areas), schedules, and other important environmental information deemed necessary.

b. Describe interim ROW management plans and standards for securing, stabilizing, monitoring and addressing ROW access roads, facility maintenance, and analysis of compliance with any post-restoration requirements.

9. Organization of Document

The document should include appropriate cross-references, indicating where the plan addresses specific requirements including:

a. These *Environmental Management and Construction Plan Guidelines*;

b. The Commission Article VII Certificate conditions and describing the procedures followed or that will be followed to comply with those requirements.

c. If any particular requirements of these documents are not applicable, so indicate.