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SUPPLEMENTAL CULTURAL RESOURCES MANAGEMENT PLAN

**Champlain Hudson Power Express HVDC Transmission Line Project
Astoria Rainey Cable (Segment 23)**

[REDACTED for Public Distribution]

Lake Champlain to New York City
Queens, New York City, New York

HAA 4268-SCRMP Seg 23
SHPO 09PR03910

Submitted to:

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MANAGEMENT SUMMARY

SHPO Number: 09PR03910
Involved Agencies: U.S. Department of Energy, U.S. Army Corps of Engineers, NYSHPO
Phase of survey: Cultural Resources Management Plan (Supplemental)

LOCATION INFORMATION

Municipality: New York City
County: Borough of Queens

CULTURAL RESOURCE MANAGEMENT PLAN OVERVIEW

Objective: *The purpose of this Supplemental Cultural Resources Management Plan is to synthesize data sets into one document, and to provide OPRHP/DPS contact information for identified roles within the original Cultural Resource Management Plan drafted by TRC in 2015 and finalized in 2021.*

The plan also proposes Programmatic Allowances and an Archeological Monitoring Plan to assist with ongoing review and compliance as stipulated in the Programmatic Agreement between DOE and NYSHPO in 2021.

The current Supplemental CRMP focuses on Segment 23, the Astoria Rainey Cable, in the Borough of Queens.

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Date of Report: October 2023 [REDACTED version created 13 February 2024]

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LIST OF ACRONYMS

ACHP – Advisory Council on Historic Preservation
AMP – Archeological Monitoring Plan
APE – Area of Potential Effect
BMP – Best Practices Management Plan (2012)
CA – Consulting Archeologist
CFR – code of federal regulations
CHPE, LLC – Champlain Hudson Power Express, LLC
CLG –Certified Local Government
CMP –corrugates metal pipe
CRMP – Cultural Resources Management Plan
CRIS – Cultural Resource Inventory System (NYSHPO)
EM&CP – Environmental Management and Construction Plan
DOE – U.S. Department of Energy
GIS – Geographic Information System
GPS – Global Positioning System
HABS – Historic American Building Survey
Hartgen – Hartgen Archeological Associates, Inc.
HDD – horizontal directional drilling
HAER – Historic American Engineering Record
HALS – Historic American Landscape Survey
HVAC – high-voltage alternating current
HVDC – high-voltage direct current
LOW –Limits of Work
MOA – Memorandum of Agreement
MP – mile post, railroad
MW – megawatt
NHPA – National Historic Preservation Act
NRE – National Register-eligible
NHL – National Historic Landmark
NRHP –National Register of Historic Places
NYAC – New York Archaeological Council
NYSHPO – New York State Historic Preservation Officer
NYSM – New York State Museum
OPRHP – Office of Parks, Recreation and Historic Preservation
PPO – Project Preservation Officer
RCP – Reinforced concrete pipe
ROW – Right-of-Way
SOI – Secretary of the Interior
SRHP –State Register of Historic Places
TRC – TRC Companies, Inc

CULTURAL RESOURCES MANAGEMENT PLAN

1 Introduction

Hartgen Archeological Associates, Inc. (Hartgen) has been retained to provide a Supplemental Cultural Resources Management Plan (CRMP) to the CRMP developed by TRC (2021) (Appendix 1) for the proposed Champlain Hudson Power Express (Project) located over multiple counties in New York State. This Supplemental CRMP addresses an overland portion of cable route in the Borough of Queens, in New York City, known as Segment 23 of the Project. This portion of the Project extends from the Rainey Generating Station on 35th Avenue at the segment's southwestern end, to the Astoria Generation Complex at 3101 20th Avenue on the northeastern end, totaling 3.5 miles.

The Project has received approvals by the U.S. Department of Energy (DOE), and the U.S. Army Corps of Engineers, with consultation from the New York State Historic Preservation Office (NYSHPO). The goal of the Supplemental CRMP is to provide a framework for managing potential impacts to known, relevant historical properties and archeological sites (determined to be eligible for or listed in the National Register of Historic Places). Sites discovered during construction activities will also be managed in the Supplemental CRMP's framework. In addition, this management plan will create a comprehensive framework for identifying and undertaking additional archeological work that may be required prior to and during the construction of the Project.

TRC Companies, Inc. (TRC) created a draft comprehensive Cultural Resources Management Plan in 2015, finalized in 2021 to include three additional reports. The management plan is referred to throughout the current document (Appendix 1), with this document serving to fully incorporate the relevant information for Phase I of construction into one succinct document. The CRMP (TRC 2021) provided detailed procedures for unanticipated discoveries, monitoring during construction-related ground disturbance, and monitoring during post-construction operations; all stipulations of the CRMP remain applicable. In the event of a conflict between this document and that provided in Appendix 1, the CRMP (TRC 2021) will prevail.

This Supplemental CRMP has been developed in response to Programmatic Agreement Stipulation IV(B) and Stipulation II(C)(8 – 11 and 19) and to assist Project compliance with Section 106 of the National Historical Preservation Act. The supplemental plan will be reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) as well as the aforementioned federal agencies. This plan was established according to the New York Archaeological Council's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* (1994), which are endorsed by OPRHP.

The Programmatic Agreement Among The U.S. Department of Energy, And The New York State Historic Preservation Officer For Managing Historic Properties That May Be Affected By Authorizing The Construction, Operation, Connection And Maintenance Of The Champlain Hudson Power Express HVDC Transmission Line Project (Programmatic Agreement), executed in 2021, stipulates completion of a Cultural Resources Management Plan (CRMP) to create procedures for the consideration and management of historic properties within the Champlain Hudson Power Express HVDC Transmission Line Project (Project).

Stipulation IV(B) within the Programmatic Agreement specifies the CRMP will be applied in lieu of Section 106 implementing regulations 36 CFR Part 800.4 – 800.6 to satisfy requirements of compliance with Section 106 of the National Historical Preservation Act (16 U.S.C. 470) related to identification of historic properties (36 CFR Part 800 800.4), assessment of adverse effects (36 CFR Part 800 800.5), and resolution of adverse effects (36 CFR Part 800.6).

Current design and engineering requirements indicate effects to historic and landscape resources may also require consideration throughout project execution; this Supplemental CRMP supports streamlined coordination and consultation with NYSHPO through agreement on programmatic allowances and treatments. This Supplemental CRMP provides structure and process for implementing requirements of the Programmatic Agreement and the CRMP (TRC 2021).

2 Project Information

The Project involves the construction of approximately 339 miles of a high voltage direct current underground and underwater transmission line, running from Montréal, Canada to Queens, New York. This transmission line will bring 1,250 megawatts of hydropower to replace the use of fossil fuels, reducing carbon emissions and helping achieve renewable and clean energy in New York State. This proposed project will provide enough power for more than 1 million homes throughout New York State. Installation of this transmission line will occur primarily beneath the ground within roadway and railroad right of way. Direct impacts to streams and waterbodies are avoided through means such as attaching to existing infrastructures (bridges and culverts) or incorporating the use of horizontal directional drilling (HDD).

Several archeological reports by Hartgen and TRC examined and detailed the sensitivity and potential of the APE. These resources have been utilized in the creation of the Cultural Resource Management Plan.

The bolded reports include portions of the most current Project (Segment 23) and provide relevant background information.

- Hartgen. 2010a. Pre-Phase IA Archeological Screening: Champlain Hudson Power Express.
- Hartgen. 2010b. Phase IA Literature Review and Archeological Sensitivity Assessment: Champlain-Hudson Power Express.
- Hartgen. 2012. Phase IB Archeological Field Reconnaissance and Phase II Archeological Site Evaluation: Champlain Hudson Power Express, Canadian Pacific Railway Segment.
- Hartgen. 2013a. GIS Analysis: Archeological Sites within APE Archeological Sites Intersected by a 50-ft wide Construction Corridor Along the November 2012 CHPE/TDI Centerline.
- Hartgen. 2013b. GIS Analysis NRHP Properties within APE National Register of Historic Place Eligible (NRE) and Listed (NRL) Properties Intersected by a 50-ft wide Construction Corridor along the November 2012 CHPE/TDI Centerline.
- Hartgen. 2013c. GIS Analysis Underwater Resources within APE Underwater Anomalies and Sites within Lake Champlain and the Hudson River Intersected by a 50-ft wide Construction Corridor along the November 2012 CHPE/TDI Centerline.
- TRC. 2020a. Phase IA Archeological Assessment of Champlain-Hudson Alternative Routes, New York.
- **TRC. 2020b. Phase IA Archeological Assessment of Champlain Hudson Astoria Converter Station and Astoria Preferred Alternative Route, Boroughs of Queens, New York.**
- TRC. 2020c. Phase IA Archeological Assessment of Champlain-Hudson Power Express Project, Harlem Rail Yard Preferred Alternative, Boroughs of Queens, New York.
- TRC. 2021. Phase IA Archeological Assessment of the Champlain-Hudson New Scotland Converter Station, New Scotland, Albany County, New York.
- TRC. 2022. Phase IA Archeological Survey letter for the Stony Point Horizontal Directional Drill (HDD), Stony Point, Rockland County, New York.

2.1 Description of the Project

The area of potential effects (APE) includes portions of the Project that will be directly altered by the proposed undertaking. The overall APE encompasses 339 linear miles; the width of the APE varies. For the overall cable route, the Project is divided into 14 terrestrial packages with their associated EM&CP submittals (Table 1).

Table 1. CHPE Packages, Routes, and Locations.

EM&CP		Location Description	Segment Length (miles)	EM&CP Filing with DPS	PSC Approval Date	Anticipated Start of Construction
Construction Segment	Design Packages					
OVERLAND SEGMENTS						
1, 2	1A/1B	Putnam to Dresden/ Dresden to Whitehall	17.6	April 15, 2022	October 13, 2022	November 2022
3	1C/2	Whitehall to Fort Ann Fort Ann to Kingsbury	20.8	December 23, 2022	May 18, 2023	June 2023
8	5A	Rotterdam to Bethlehem	16.99	December 21, 2022	June 26, 2023	August 2023
9	5B	Selkirk Bypass	5.31	December 21, 2022	June 26, 2023	August 2023
4, 5	3	Kingsbury to Milton	26.5	April 24, 2023	August 17, 2023	September 2023
10	6	Bethlehem to Catskill	20.9	September 2023	TBD	November 2023
13, 14, 15	8	Queens	2.13	August 11, 2023	TBD	October 2023
6	4A	Milton to Ballston	10.2	August 4, 2023	TBD	October 2023
7	4B	Ballston to Schenectady/Rotterdam	9.6	August 4, 2023	TBD	October 2023
11	7A	Catskill to Germantown	8.6	March 30, 2023	August 17, 2023	September 2023
12	7B	Stony Point to Haverstraw	7.6	April 28, 2023	August 17, 2023	September 2023
Laydown Yards EM&CP	3, 5B, 6	Fort Edward, Bethlehem, Coxsackie	N/A	November 11, 2022	February 16, 2023	February 2023
MARINE SEGMENTS						
16	9	Transitional HDD (Stony Point)	N/A	September 29, 2022	March 20, 2023	June 2023
17	10	3 Transitional HDDs (Putnam, Catskill, Congers)	N/A	December 14, 2022	April 20, 2023	June 2023
18A	11A	Lake Champlain (Pre-Lay Mattressing)	96.8	June 21, 2023	July 20, 2023	TBD
18B	11B	Lake Champlain (Cable Installation)	96.8	January 2024	TBD	May 2024
19A	12	Hudson River (Pre-Lay Mattressing)	89.1	August 4, 2023	TBD	September 2023
19B	13	Hudson River (Cable Installation)	89.1	March 2024	TBD	August 2024
20	14	Harlem River	6.3	December 2023	TBD	2025
22	22	Converter Station, Astoria Complex, (Queens)	N/A	January 31, 2023	May 18, 2023	June 2023
23	TBD	Astoria Rainey Cable HVAC System, (Queens)	3	December 2023	TBD	June 2024

Changes in the APE, including those necessary to avoid known historic and archeological resources, may be required to accommodate project implementation. Changes to the APE will follow methodology outlined in the CRMP (TRC 2021). The CRMP (TRC 2021) states:

If the corridor is changed or if a construction zone wider than 55 feet (terrestrial) or 50 feet (in-water) is required to build the Project, then the APE will be adjusted accordingly. All additional efforts to identify, assess, and manage cultural resources shall use the same guidance as that stipulated in the CRMP. It shall be the responsibility of the PPO and his/her designee to work with the appropriately trained archaeologist to ensure that survey and assessment of new APE construction areas is completed before construction takes place (TRC 2021).

Changes in the APE and associated survey and reporting will be provided to Signatories of the Programmatic Agreement in conjunction with annual reporting requirements (Section 3.6 Reporting Requirements).

This Supplemental CRMP addresses the overland portion of route in the Borough of Queens, meant to convey AC electricity between the Rainey and Astoria stations. The cable route between the two facilities is approximately 3.4 miles long (see Appendix 1).

3 Segment 23 (Astoria Rainey Cable)

3.1 Supplemental CRMP Objectives

Each component of the segment, including the manhole series, was evaluated. Areas outside the permitted route were further evaluated to determine whether the areas had been previously disturbed (lacking archeological potential) or were undisturbed (having archeological potential). Recommendations are proposed for either archeological monitoring during construction (in the manner described in Section 4), or for archeological testing previous to construction.

Archeological testing may be utilized in advance of construction. Testing would be conducted by the excavation of 40 cm tests placed at 50-foot intervals within the areas defined below. Excavated soil would be passed through 0.25-inch hardware mesh when feasible and examined for both precontact (Native American) and historic artifacts. The stratigraphy of each test would be recorded including the depth, soil description, and artifact content. The location of each shovel test would be plotted on the project map.

The testing shall adhere to the New York Archaeological Council's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* (1994), which are endorsed by OPRHP. The investigation shall be overseen by an Archeologist as defined under the Secretary of the Interior's Professional Qualification Standards outlined in *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines as Amended and Annotated* and required under Title 36 of the Code of Federal Regulations, Section 61 (36 CFR 61).

The survey report(s) shall be prepared according to OPRHP's *State Historic Preservation Office (SHPO) Phase I Archeological Report Format Requirements* (2005) or another format acceptable to OPRHP. As appropriate, reports will contain text, tables, color maps and photographs, shovel test records, and an artifact inventory.

3.2 Overview

This package includes a 345kV, alternating current cable route in the Borough of Queens, New York City. The construction activities in this segment include ductbank excavations. The ductbanks will be placed in concrete with flowable fill above and with appropriate subbases, bases and asphalt pavement repair (Figure 1).

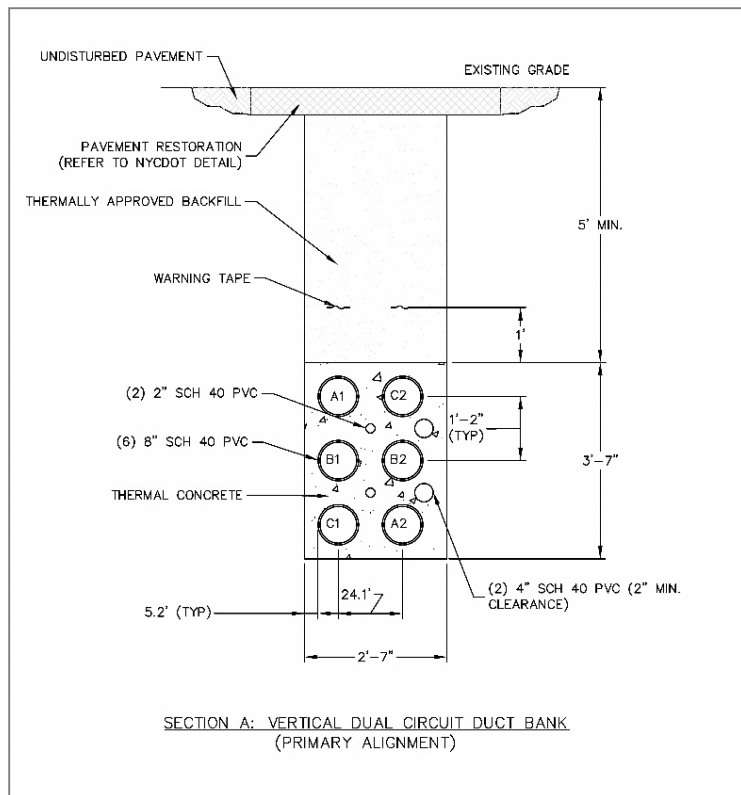


Figure 1. Typical duct bank for the Astoria Rainey cable, to be installed 8.6 feet below the present road surfaces. Taken from Langan 2023, Sheet CS501.

Disturbance beyond the typical ductbanks include the location of splice vaults in manholes (Table 2). These are discussed in detail below relative to potential archeological resources and to previous evaluation and assessment.

Table 2. Proposed Activities along Segment 23 (Astoria Rainey Cable).

Item	Station Number	Drawing	Street	Notes/Recommendations
Begin Segment	0+00	1	35 th Avenue, northwest corner of Rainey Substation.	Vicinity of 18 th -century, family cemetery whose exact location is unknown.
Manhole (MH) 2	15+81	7	Vernon Boulevard.	None.
MH 3	37+63	15	14 th Street.	None.
MH 4	59+46	23	14 th Street.	None.
MH 5	80+14	31	Shore Drive, non-motorized traffic.	None.
MH 6	100+48	38	Shore Drive, non-motorized traffic.	None.
MH 7	121+93	46	Shore Boulevard, open to motorized vehicles.	Adjacent to Ralph DeMarco park.
MH 8	142+65	53/54	20 th Avenue.	None.
MH 9	161+49	61	19 th Avenue.	None.
End Segment	177+24	67	31 st Street. Astoria Annex Substation.	None.

3.2.1 Splice Locations and Manholes

Various splices will be located inside manholes. They will be installed to connect the cable segments together into an integrated whole. The splice boxes will generally be 28 feet long and 10 feet wide (Langan 2023:Sheet CS503). In all, eight splice locations have been identified (Manholes 2 to 9). Archeological testing or monitoring is recommended for Manhole 2 on Vernon Boulevard because of its proximity to an archeological site.

3.2.2 Deviations from Permitted Route

A Phase IA literature review was completed in 2012 for a proposed cable route of similar length (this report was not submitted to NYSOPRHP). The 2012 route began and ended at about the same points as Segment 23 (the Rainey substation and the Astoria Annex substation), but its route on city streets between those two points was considerably different than the route currently proposed for Segment 23 (Hartgen Archeological Associates 2012:Map 7). Only approximately 1,485 feet (of the overall 17,700-foot-long cable alignment) between the termini is the same as the 2012 route. This SCRMP draws on that 2012 report for background information about the Astoria Rainey Cable.

3.2.3 Characteristics of Current Segment 23 Route

A portion of the cable's route within the Rainey Substation is paved, and a portion is currently an earthen surface (Figure 2). On its exit from the Rainey Substation, the Astoria Rainey cable route will descend in elevation approximately 2 feet to Vernon Boulevard (Figure 3).

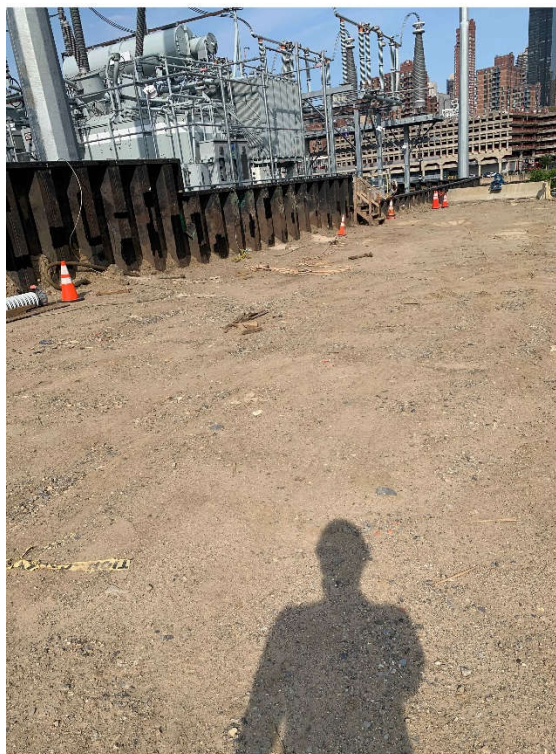


Figure 2. Rainey substation near the East River bank, where the cable route will have a 90-degree turn progressing north, and then east towards the point of view of the photo. View facing west southwest.



Figure 3. Rainey substation's entrance from Vernon Boulevard. The East River lies behind the electrical facility, separating Queens from Roosevelt and Manhattan islands. View facing west.

The route will progress parallel to the East River shoreline, following Vernon Boulevard. After a couple of blocks on Broadway, the route will use 14th Street to cross the 19th-century core of Astoria (Figures 4 and 5).



Figure 4. Intersection of 14th Street and 31st Avenue, part of the Astoria Rainey cable route. The building on the right side of the photograph is the former city Department of Health building at 12-36 31st Avenue. View facing southwest.



Figure 5. 14th Street just north of its intersection with Astoria Boulevard, with the retaining wall for St. George's Episcopal Church's cemetery. View facing north.

The cable route then follows Shore Boulevard to the East River shoreline alongside Astoria Park (Figures 6 and 7).



Figure 6. Shore Boulevard between the East River (on the left) and Astoria Park (on the right). The bridge in the background is the Hell Gate railroad bridge. View facing northeast.



Figure 7. Sidewalk and bicycle paths alongside Shore Boulevard, alongside Astoria Park, beneath the Robert F. Kennedy / Triborough bridge. View facing southwest.

At the north end of Shore Boulevard, the route will be adjacent to Ralph Demarco Park (Figure 8).



Figure 8. Astoria Rainey cable route on Shore Boulevard at its junction with 20th Avenue. The greenspace on the right is Ralph Demarco Park. View facing southwest.

The route will be in 20th Avenue until near 31st Street, where there is an entrance to the Astoria Annex substation and the related Con Ed / NYPA complex (Figure 9).



Figure 9. 20th Avenue near 29th Street. View facing northwest.

Besides several power generating structures, the substation vicinity is used for storage of transformers and vehicles (Figures 10 and 11).



Figure 10. Spur of 19th Avenue, the route the Astoria Rainey cable will take to reach the Astoria Annex substation. View facing northeast.



Figure 11. Astoria Annex substation area. View facing northeast from 20th Avenue, near the Crescent Street intersection.

3.3 Historic Properties

There are no known historic properties within Segment 23 of the Project. However, there are seven (7) inventoried properties (six of which are National Register eligible or listed) within 200 feet of the Project in the segment, but since the cable route is located in the streets and roadways, those historic properties are not likely to be affected by the Project.

Table 3. Inventoried historic properties within 200 feet of the Astoria Rainey Cable.

USN	Property Name	Status	Location	Proximity to Project
08101.000043	Hell Gate Bridge	NRE	Railroad bridge over East River. See Figures 5 and 11.	Crosses over Project on Shore Boulevard. The eastern bridge support is 23 feet away (Langan 2023:Sheet CU201).
08101.006250	Astoria Play Center	NRE	Southeast side of Shore Boulevard, northwest side of 19 th Street	Adjacent to Project on Shore Boulevard.
08101.000051	Triborough Bridge	NRE	AKA Robert F. Kennedy Bridge, carrying I-278 over East River	Crosses over Project on Shore Boulevard. Nearest bridge support is 70 feet away (Langan 2023:Sheet CU202).
08101.011575	P.S. 171 Peter G. Van Last	NRE	14 th Street and 30 th Avenue. See Figure 13.	Adjacent to Project on 14 th Street, northeast side of intersection w/30 th Avenue.
08101.012627	Department of Health City of New York	NRE	14 th Street and 31 st Avenue, 12-36 31 st Avenue (Figure 4).	Adjacent to Project on 14 th Street, southwest side of intersection w/31 st Avenue.
08101.013236	Noguchi Studio and Museum	NRE	16 th Street and 33 rd Road	Adjacent to Project on Vernon Boulevard, between 16 th Street and 33 rd Road.

USN	Property Name	Status	Location	Proximity to Project
LP-02196	Astoria Park Pool and Play Center	-	Within Astoria Play Center (08101.006250) on 19 th St. between Ditmars Boulevard and Astoria Park South.	Adjacent to Project on Shore Boulevard. Represents NYC's largest and oldest public pool.



Figure 12. Southeastern tower or base of the Hell Gate Bridge (08101.000043), a 1917 railroad bridge that crosses the East River from Randalls Island to Queens. The Astoria-Rainey cable route will be in Shore Boulevard, in the foreground (near the bottom) of this photo. View facing southeast.



Figure 13. Public School 171 (Peter G. Van Last, 08101.011575), at the eastern corner of 14th Street and 30th Avenue. The Astoria Rainey cable route will be in 14th Street, on the left edge of this photograph. View facing east northeast.

There are thirteen (13) previously reported archeological sites within one quarter mile (or 402 meters) of the Project. Two of the sites were *precontact* in nature (that is, pertaining to human occupation before c. 1609, the date of Henry Hudson’s voyage), and the other eleven were historic. All of the historic sites are historically known cemeteries, compiled by Elizabeth Meade (2020).

Only four of the archeological sites were close to the Project (Table 4).

Table 4. Previously reported archeological sites close to the Astoria Rainey Cable.

Site No.	Site Identifier	Status	Type
08101.013974	Berrian-Remsen Family Cemetery	Undetermined	Historic with Human Remains
08101.013967	Saint George’s Church Cemetery (Astoria)	Undetermined	Historic with Human Remains
08101.000100	Sunwick (Bolton #111)	Undetermined	Precontact
08101.013970	Delafield Family Cemetery	Undetermined	Historic with Human Remains

3.3.1 Sunwick Site

The Sunwick (Bolton #111) site is a reported shell midden site. Shell middens are accumulations of mollusk shells (clam, oyster, or mussel), sometimes dozens of feet high, created as food waste in precontact times. The Sunwick site was reported by R.P. Bolton in a 1922 monograph *Indian Paths in the Great Metropolis*. Sunwick refers to an Algonquin word, Sunswick, which may have denoted “woman chief” or “Sachem’s wife”, and which was the pre-1815 name for the portion of Queens known today as Ravenswood (anonymous 2023).



Figure 14. The lowest, northernmost portion of Rainey Park on the northwest side of the Astoria Rainey cable route. View facing west northwest.

3.3.2 St. George’s Church Cemetery

St. George’s Episcopal Church, on whose grounds a cemetery is located, was established in its current location on 14th Street c. 1825. The church building dates from 1904, which replaced the first edifice in 1894 (Walsh 2014). The adjoining streets (Astoria Boulevard, 14th Street, and 27th Avenue) are irregular and they conform to

the street pattern contemporary with the cemetery. Because of this, it is unlikely that a buried cable route which stays within the public right-of-way of 14th Street will impact any graves, burials, or human remains associated with the St. George's Church Cemetery.

3.3.3 Family Cemeteries (Delafield and Berrian-Remsen)

The two family cemeteries (the Delafield Cemetery on the southwest end of the cable route, and the Berrian-Remsen Cemetery at the northeast end) likely pre-dated the Queens street grid. However, because the Delafield Cemetery was on a single parcel of known location, its location is easier to pinpoint (Meade 2020:Map 2.4-2).

The Berrian-Remsen Cemetery could be anywhere within an approximately 6.5-acre area, the former outlines of Berrian Island northeast of 16th Avenue (Meade 2020:Map 2.4-3).

According to the website Find a Grave, the Berrian-Remsen Cemetery was also known as the Berrien [sic] Island Cemetery. Berrien Island was subsumed by fill, and then developed for Consolidated Edison's gas manufacturing plant. When the plant was built in 1902, the cemetery was destroyed (Anonymous 2023).

Only three burials are known for the Berrian-Remsen Cemetery: Cornelius Berrien (1697-1767); Sarah Hallett Berrien (1704-1797), and Fredrich Auerhein (1890)(Anonymous 2023). Both the Berrien and Remsen families held slaves, raising the possibility that their island cemetery could have contained burials of enslaved people (Meade 2020:127).

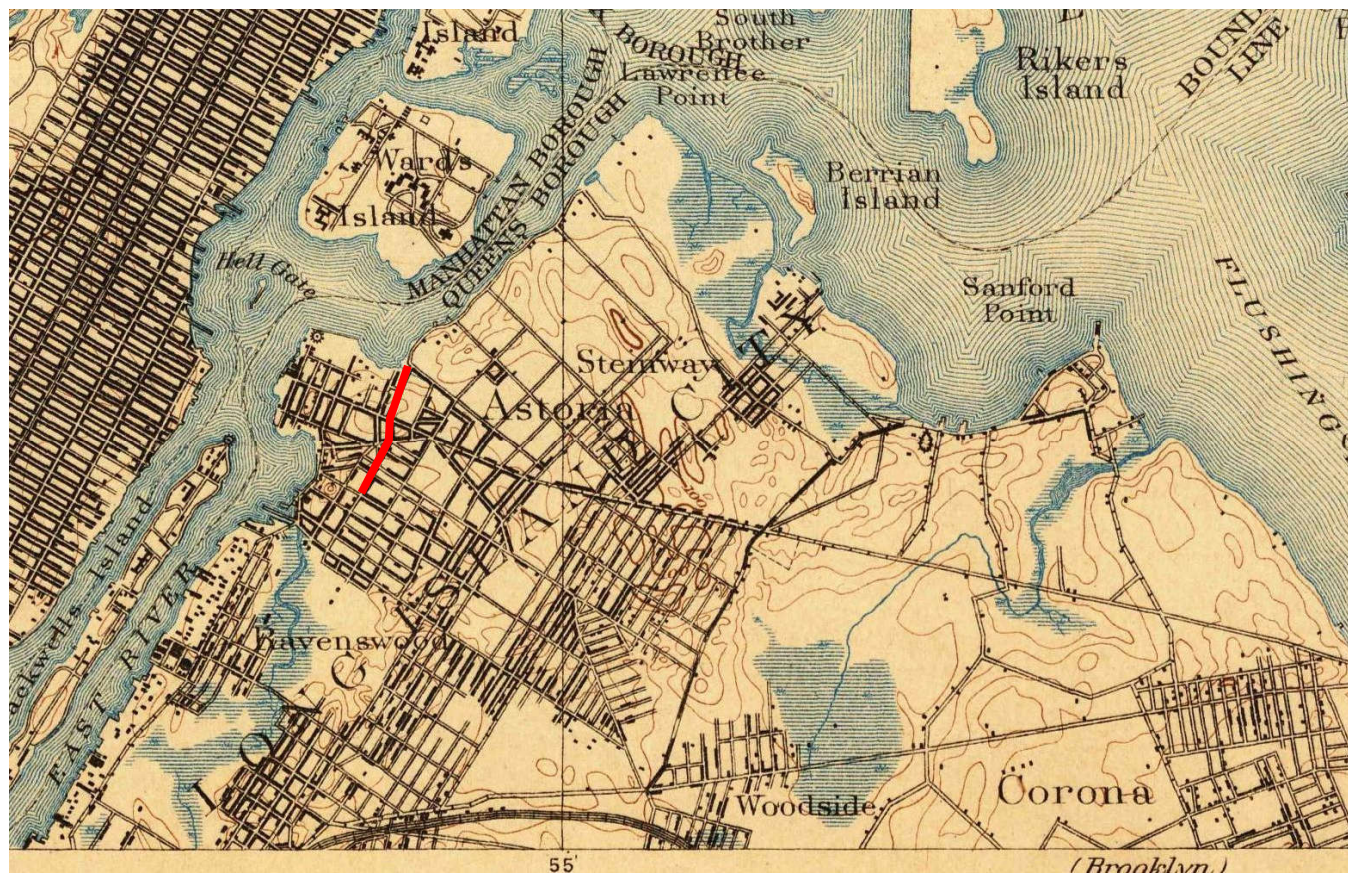


Figure 15. 1898 USGS map (a portion of the Harlem 15-minute quadrangle). A portion of the Astoria Rainey cable route through the historic center of Astoria is indicated in red.

3.4 Construction Timeline

The construction timeline is November 2022 to December 2025 for the entire CHPE Project.

4 Cultural Resource Management Plan

4.1 Objective

It is the objective of this CRMP to demonstrate a comprehensive plan for cultural resources encountered during the construction and installation of the transmission line, as well as the various other components affiliated with the line.

TRC created a CRMP (2021) for the permitting process. The plan provides guidance for those monitoring activities not indicated in the CRMP (TRC 2021) which specifically addressed previously identified sites within or along the permitted route, and also dealt with unanticipated discoveries when an archeologist is not present.

Three areas of monitoring have been previously identified in the current segment of the Project (see pages 6 and 24 of this report). This current report serves as the supplemental CRMP for the now planned construction activities, tasked with synthesizing the previously reported data into one document and identifying roles and points of contact for communication ease.

4.2 Heritage Areas, Special Events, and Other Resources

As part of the Section 106 process, the federal agency solicited comment and feedback from Tribal Nations that have expressed an interest in the regions in which the Project is to be constructed. As part of that endeavor, no traditional cultural properties were identified within or immediately adjacent to the Project. No other heritage areas or special events have been identified within this segment of the Project. The Certificate Holder, and its assignees, continues to solicit information from the public and other stakeholders to identify such areas, should they exist. If a heritage area or special event is identified, the Project will coordinate mitigation measures which may include restrictions on workspace or access to sites, scheduling considerations, or work hour reductions.

4.3 Project Preservation Officer (PPO)

Hartgen will act as the Consulting Archeologists (CA) for the purpose of this effort. The CA will work closely with the Project Preservation Officer (PPO); the PPO or their designee will be present for all ground disturbing activities, and will have “stop-work” authority. The PPO will be part of the prime construction management team.

It is the responsibility of the CA to train this individual as a PPO and to provide a hands-on workshop for construction personnel, as designated by the PPO. The PPO and the construction team should have an understanding of cultural resources present in different areas, as well as understanding the potential for unknown cultural deposits. It is the responsibility of the PPO to implement the CRMP (TRC 2021) and ensure that requirements and conditions of the CRMP are met. Table 5 includes the necessary contact information.

The PPO (or designee) will have the authority to cease excavation or construction work. In the event of encountering cultural materials or human remains, it is the responsibility of the PPO (or designee) to halt construction activities and contact and coordinate with the CA to visit the location of the discoveries as quickly as possible.

The Project Preservation Officer (PPO), shall in turn notify the Certificate/Permit Holder (TDI/CHPE), who shall notify NY SHPO, the US Army Corps of Engineers (USACE), DPS, other stakeholders and Tribal Nations, as appropriate within 24 hours of the initial reporting of the finds, per the Certificate Conditions 110 and 111 and USACE Permit NAN-2009-01089-M7, General Conditions C.

During this time, work in the immediate vicinity of the find must halt and the area of concern fenced or otherwise protected from construction activities. Once the area is secured, activity adjacent to the find may continue during the consultation process. Per 36 CFR Part 800.13(b)(3), NY SHPO, other stakeholders and Tribal Nations will have 48 hours from the time of notification to respond.

In the event of these discoveries, the CA will have up to three workdays to excavate and remove cultural material from the APE before the construction continues. The CA, in consultation with the PPO and the NYSHPO, may request additional archeological field assistance to complete the necessary work in a timely manner. It is the responsibility of the PPO (or designee) to work with the appropriately trained archeologists to ensure that the survey and assessment of any change in the APE is completed prior to construction taking place.

4.4 Identification of Historic Properties

Changes in the APE or modifications to work proposed within the APE will prompt review of the subject location(s) for historic properties. The review will include archeological survey as specified in the CRMP (TRC 2021) in addition to completion of a files search that will include previous survey data through New York CRIS and may be supplemented with local assessor records, historic topographic maps, historic aerial images, Sanborn Fire Insurance and other historic maps, and other resources as available.

Properties are typically considered to hold historic potential when they meet or exceed 50 years of age. The Project may elect to consider the historic potential of properties approaching this age threshold to accommodate anticipated construction horizons. The Project will complete a survey evaluation for properties that meet or exceed the age threshold for historic potential, have no existing determination of NRHP eligibility or a determination ten or more years old, and may be affected by project activities. The evaluation will be completed by a cultural resource specialist who meets or exceeds the Secretary of the Interior's Professional Qualification Standards (SOI Standards) in a discipline appropriate for the subject site; archeological sites will be evaluated by professionals who meet or exceed the SOI Standards in the area of archeology; architectural and landscape sites will be evaluated by professionals who meet or exceed the SOI Standards in the area of Architectural History. Survey evaluations will be subject to quality assurance review by a professional other than the author(s) who meets or exceeds applicable SOI Standards. Survey information will be input into the New York CRIS system prior to submission of annual reports on January 10 of each calendar year the agreement is in effect.

4.5 Barriers and Other Protective Measures

No additional protective measures with respect to cultural resources have been identified or requested by stakeholders for Segment 23 of the Project. If portions of the Project are altered, additional assessment, which may include desktop review, pedestrian survey, and/or archeological shovel tests, will be required to determine the presence or absence of cultural resources. Should cultural resources be identified, the Certificate Holder will avoid these resources if possible. Protective measures may include installation of temporary fencing and/or site delineation on Facility maps. Should an archeological site be impacted by Project activities, mitigation will include notification procedures and data recovery as stipulated in the Section 4.8 of the CRMP, and/or other treatment measures determined through consultation with NYSHPO, Tribal Nations, and consulting parties.

4.6 Reporting Requirements

The CRMP (TRC 2021) establishes a requirement for annual reporting concerning activities conducted under the CRMP:

The PPO will prepare an annual report to the DOE and NYSHPO (and any of the other signatory or consulting parties listed in the Programmatic Agreement), which summarizes activities conducted under this CRMP on an annual basis for as long as this CRMP (TRC 2021) is in effect (i.e., through post-construction monitoring). The report will be completed

and submitted on or before January 10 of each year. The CRMP may be updated and/or revised as appropriate to improve its implementation so long as concurrence is reached by the parties involved is achieved. The annual report will include a summary of all historic properties and archaeological resources that may have been encountered during construction and how they were treated. Post-construction reports will identify which cultural resources were monitored and provide a summary of resource conditions and whether looting or other forms of ground disturbance were noted (TRC 2021).

The PPO will establish and maintain:

- A system of tracking archeological monitoring reports;
- Application of Program Comments, Exemptions, or Program Alternatives;
- Application of Programmatic Allowances;
- Implementation of Treatment Measures;
- Potential changes to APE;
- Annual report that summarizes the above items stipulated by the CRMP (TRC 2021).

4.7 Programmatic Allowances

Activities considered Programmatic Allowance are not exempt from archeological monitoring and remain subject to unanticipated discovery protocols, including stop-work provisions, as contained in the CRMP (TRC 2021).

Programmatic Allowances include actions where historic properties will not be affected or effects to historic properties hold limited potential to diminish historic integrity. Where Programmatic Allowance(s) are applicable, the action will not require independent consultation with the State Historic Preservation Office (SHPO).

Application of Programmatic Allowances requires review by Project Preservation Officer (PPO). The PPO must complete:

- Memorandum to file containing a verbal description of work proposed, and a verbal description and map of geographic area subject to the work proposed;
- Summary of file search and/or literature review conducted to identify potential historic properties;
- Description of historic properties affected (if any);
- Justification for the application of one or more Programmatic Allowances.

The Project will maintain a tracking system of memoranda applying Programmatic Allowances, which will be communicated to NYSHPO and the Programmatic Agreement signatories in an annual report.

In addition to the Programmatic Allowances contained in this document, the Project may include application of relevant Section 106 Program Comments and program alternatives including but not limited to:

- Program Comment for Actions Affecting Post-1945 Concrete and Steel Bridges (*Federal Register, Vol. 77, No. 222, November 16, 2012*)
https://www.achp.gov/sites/default/files/program_comments/2017-01/program%20comment%20concrete%20and%20steel%20bridges.pdf
- Program Comment to Exempt Consideration of Effects to Rail Properties within Rail Rights-of-Way (*Federal Register Vol. 84, No. 125, June 28, 2019*)
<https://www.govinfo.gov/content/pkg/FR-2019-06-28/pdf/2019-13779.pdf>
- Advisory Council on Historic Preservation (ACHP) Exemption Regarding Historic Preservation Review Process for Effect to the Interstate Highway System (*Federal Register Vol 70, No. 46, March 10, 2005*)

https://www.achp.gov/sites/default/files/exemptions/2017-01/final_interstate_exemption_notice.pdf

4.7.1 Transportation Facilities

- A. Resurfacing existing roadways and/or replacement in-kind of highway signals, signage, or appurtenances when approved by the owner of the transportation facility.
- B. Replacement in-kind of railroad signals, crossing materials, and other railroad features or appurtenances when approved by the owner of the transportation facility.
- C. Installation of utility attachments on bridges in areas with existing utility attachments.

4.7.2 Ground Disturbing Activities

- A. Ground disturbing activities within areas of documented previous disturbance.
- B. Ground disturbing activities within non-historic and non-contributing properties or features when no vertical improvements are proposed. Vertical improvements may consist of, but are not limited to, buildings, structures, and other form of infrastructure with height above ground and constructed by the project.
- C. Ground disturbing activities within historic and contributing properties when action is discrete (including but not limited to edges of agricultural fields, wooded areas, lawns, or curbs), where no contributing or potentially contributing buildings, structures, objects, sites, or features are present (including but not limited to slate sidewalks, hitching posts, carriage steps, mature trees, fences, retaining walls, and other landscaping dating to the historic period of 50 years or more in age).

4.7.3 Temporary Staging and Temporary Facilities

- A. Temporary staging or stockpiling within existing parking areas.
- B. Temporary staging or stockpiling within transportation rights of way.
- C. Temporary staging or stockpiling within areas with documented previous ground disturbance when the ground is returned to pre-construction appearance, including contours and vegetation.
- D. Installation of temporary construction support facilities when the ground is returned to pre-construction appearance, including contours and vegetation.
- E. Location of temporary construction trailers not requiring a foundation or pad.

4.7.4 Utilities, Lighting, and Maintenance Facilities

- A. Installation of underground utilities using directional bore drilling or similar method.
- B. Replacement, repair, and/or maintenance of existing underground utilities in-kind when work occurs within the existing utility footprint.
- C. Installation, replacement, or upgrade to lighting within transportation rights of way and/or at Project locations requiring routine maintenance.
- D. Establishing maintenance facilities within Project easements or right of way no more than 10-feet high with a footprint no more than 120 square feet when facility is not located within a State Register of Historic Places (SRHP) or National Register of Historic Places (NRHP) historic district.

4.7.5 Pre-Construction Due Diligence and Testing

- A. Conducting geotechnical testing, hazardous materials sampling, seismic or vibration testing or monitoring, or drill samples.
- B. Wetland testing and delineation.
- C. Wildlife surveys and inventories.
- D. Property line and ownership verification surveys.
- E. Utility location surveys.

4.7.6 Hazard and Hazardous Waste Removal

- A. Removal of debris related to weather or storm damage, or present as a result of modern dumping.
- B. Hazardous waste removal.

4.7.7 Environmentally Sensitive Area (ESA) Protection and Mitigation

- A. Installation of temporary fencing to protect areas of cultural, biological, or other environmentally sensitive area from the effects of construction.
- B. Obtaining credits in/from and existing wetland mitigation bank.
- C. Vegetation or landscaping to support habitat mitigation when the subject action affects less than one-half acre and does not occur within an archeologically sensitive area, as defined by the Supplemental CRMP.

4.7.8 Drainage Improvements

- A. Erosion control measures best management practices including placement of rip rap within non-historic channels, and emergency erosion control measures.
- B. Re-grading or re-establishing existing drainage channels.
- C. Temporary drainage systems including culvert placement and grading, provided the area is returned to pre-construction appearance.
- D. Replacement or up-sizing corrugated metal pipe (CMP), concrete box culvert (CBC), reinforced concrete pipe (RCP), and plastic pipe culverts where no architectural headwalls or wingwalls are present or where these features, if present, will remain in place.

4.7.9 Signage and Surveillance

- A. Installation, maintenance, repair, or removal of security systems.
- B. Installation of signage not located within a NRHP district.
- C. Replacement of existing signs; including within a NRHP district when replacement is in-kind and at the same location as the sign to be replaced.
- D. Maintenance, repair, or removal of signage.
- E. Installation of less than 100 linear feet of security fence within Project easements or right of way when not located within a SRHP or NRHP historic district.

4.7.10 Easements and Right of Way

- A. Acquisition of easements or right of way from non-historic properties and when not located within a State Register of Historic Places (SRHP) or National Register of Historic Places (NRHP) historic district.
- B. Acquisition of easements or right of way for subterranean activities when no surface rights or access is conferred.

4.8 Treatment Measures

When Project actions do not qualify as Programmatic Allowances, the Project will complete an evaluation of the potential for actions to diminish the historic integrity of historic or archeological resources, as defined in 36 CFR Part 800.5(a)(1). The Project may reference applicable National Register Bulletins, published by the National Park Service, to support the evaluation. Project actions found to diminish integrity as defined in 36 CFR Part 800.5(a)(1) will require Treatment Measures. The Project will complete a memorandum documenting eligibility of the resource(s), application of the criteria of adverse effect, avoidance measures considered, efforts to minimize the effect, coordination with property owner(s) or local government(s) in selection of Treatment Measures if applicable, and rationale for application of the selected Treatment Measure, if applicable. A separate Memorandum of Agreement (MOA) will not be required when one or more of the following Treatment

Measures are selected. If the Project action is determined not to diminish integrity, further action will not be required.

The Project will maintain a tracking system of memoranda and Treatment Measures, which will be communicated to NYSHPO and the Programmatic Agreement signatories in the annual report.

This section will not apply to designated National Historic Landmark properties, as consultation with the Department of the Interior is required (36 CFR Part 800.10), generally conducted via consultation with the National Park Service.

4.8.1 Data Recovery

Data recovery and reporting is the preferred mitigation for archeological sites. Implementation of this Treatment Measure will follow protocol contained in CRMP (TRC 2012) Section 4.0 Project Effects and Management Measures. Additional details concerning data recovery for resources identified during archeological monitoring or that are unanticipated discoveries are outlined in more detail below.

4.8.2 Certified Local Government or Historic Preservation Board/Commission Priority Project Sponsorship

The Project crosses through several Certified Local Government (CLGs) jurisdictions. CLG programs are a division of municipal or county government to create and implement local-level historic preservation planning and programming. Many CLGs maintain a formal historic preservation plan containing goals and priority projects for preservation activities within their jurisdiction. Whether or not a CLG maintains a formal historic preservation plan, all are required to maintain a system of identification and documentation of historic properties, sometimes referred to as historic survey. Communities may also maintain a Historic Preservation Board, Commission, or similar entity and choose not to become a CLG. Each program will formally or informally document preservation priorities within their jurisdictions, often identifying lack of funding as a significant barrier to implementation.

Site-specific mitigation often has limited value to advancement of historic preservation. To create broader impact to the historic properties and the communities they serve, the Project may coordinate with CLGs or Historic Preservation Boards/Commissions to sponsor one or more of the priority projects identified within that entity's jurisdiction and not necessarily within the Project APE.

Example projects include, but are not limited to, historic surveys, State or National Register Nominations, historic context documentation, completion (or update) of a strategic preservation plan, completion of a strategic historic survey plan, archeological or architectural history field schools, historic preservation technical trainings or workshops, workshops related to historic preservation tax credits, and more.

New York CLGs are listed on the NYSHPO website at: <https://parks.ny.gov/shpo/certified-local-governments/listing.aspx>

4.8.3 Digital Photography Package

Prior to implementation of the work necessitating implementation of Treatment Measures, a digital photography package will be prepared by an individual meeting the Secretary of the Interior's Professional Qualification Standards. The photography package will include images demonstrating the property in its setting and context, images showing each exterior building elevation, images showing the spatial relationships of building(s) and features of the site, and appropriate detail images. A map showing photograph locations and view direction will be included. A photography log will be included containing photograph numbers, cardinal direction viewpoint, historic resource name and number (if applicable), street address (if applicable), city or town, county, state, and image description. The digital photography package will follow the National Park Service photography standards for the National Register of Historic Places:

https://www.nps.gov/subjects/nationalregister/upload/Photo_Policy_update_2013_05_15_508.pdf

Copies of the photography package on archival CD will be provided to NYSHPO, local Historic Preservation Board or Commission, and/or interested local or state repositories. One set of archivally produced, archivally labelled photographs will be provided to the NYSHPO.

4.8.4 National Park Service Heritage Documentation (HABS/HAER/HALS)

Prior to implementation of the work necessitating implementation of Treatment Measures, the property subject to the work will be documented to National Park Service standards using the appropriate heritage documentation form: Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS). Work will be completed by a Cultural Resource Specialist who meets or exceeds the Secretary of the Interior's Professional Qualification Standards. The appropriate level of documentation (Level I, Level II, Level III) will be selected based on the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation, as published in the Federal Register July 21, 2003: https://www.NationalParkService.gov/hdp/standards/standards_regs.pdf

The Project will follow HABS/HAER/HALS Standards & Guidelines published by National Park Service Heritage Documentation Programs. The Project will coordinate with the National Park Service Northeast Region to obtain an applicable HABS/HAER/HALS. The Project will complete comment resolution with the National Park Service Northeast Region and submit final documentation for transmittal to the Library of Congress.

4.8.5 Public Interpretation

Public interpretation will be designed and produced, which may include print or digital media, on-site or off-site signage, workshops or technical trainings, or other means of engaging and educating interested public regarding historic properties. If the public interpretation involves physical signage, installation will require agreements from the landowner accepting the sign(s) including responsibility for maintenance.

Completion of public interpretation as a Treatment Measure will be executed independent of the commitment to provide \$5,000 in educational investment included in the CRMP (TRC 2021).

4.9 Property Owner Requests

The Project may accommodate property owner requests, including privately and publicly held properties, that may exceed Project needs or requirements. If a property owner request accommodated by the Project escalates permitting, consultation, or Treatment Measure requirements, the subject property owner will assume responsibility for associated costs.

5 Archeological Monitoring Methodology

5.1 Objective

The objective of the archeological monitoring is to identify and document archeological deposits that may be encountered in areas that were previously inaccessible for archeological survey or not considered during the initial resource assessment, specifically in those areas outside of the originally permitted route. The monitoring methodology creates an efficient and streamlined notification process and means to determine the potential eligibility of resources for inclusion on the National Register, and for the creation and adoption of timely and effective mitigation strategies.

5.2 Monitoring

The Consulting Archeologist will observe the contractor's excavations within designated areas as indicated by station numbers in the Supplemental CRMPs (Table 6). On the basis of such observations, the Consulting

Archeologist may request a short-term cessation of work in the vicinity of a potential archeological site or find in order to record information or to evaluate exposed archeological deposits. The Consulting Archeologist may request the on-site supervisor for time to evaluate significant finds, deposits, or other archeological materials in an effort to assess their eligibility for the National Register.

The Consulting Archeologist may direct the Contractor's workers in the use of machinery on a very limited basis to assist in the exposure of material of archeological importance. This assistance will comprise work which would otherwise be done without archeological involvement, but where archeological direction can ensure that significant material is not disturbed.

The Consulting Archeologist will inspect excavation areas, soil profiles, backdirt piles, and will collect artifact and soil samples as appropriate. The Consulting Archeologist will map and document archeological deposits using field notes, photography, and measured scale drawings. The locations of archeological deposits will be mapped with a submeter GPS unit.

Archeological monitoring and associated site or find evaluation time will vary depending on the type of site or find encountered. Typical stop-work requests to complete archeological evaluation will be accommodated within one hour or less, often within fifteen minutes. Stop-work will be limited to an area within 50 feet of the potential archeological find; work may continue outside the area of the potential archeological find provided work occurs in an area not subject to archeological monitoring or an additional Consulting Archeologist is available to observe the work.

5.3 Notification

For archeological finds that may be National Register-eligible but cannot be adequately recorded during a short cessation of work (typically one hour or less per find) and cannot be otherwise avoided, the Consulting Archeologist will notify the on-site Supervisor and request a halt to construction activities near the find. The Consulting Archeologist shall notify the Project Preservation Officer (PPO), who shall in turn notify the Certificate/Permit Holder (TDI/CHPE), NY SHPO, the US Army Corps of Engineers (USACE), DPS, other stakeholders and Tribal Nations, as appropriate within 24 hours of the initial reporting of the finds, per the Certificate Conditions 110 and 111 and USACE Permit NAN-2009-01089-M7, General Conditions C. During this time, work in the immediate vicinity of the find must halt and the area of concern fenced or otherwise protected from construction activities. Once the area is secured, activity adjacent to the find may continue during the consultation process. Per 36 CFR Part 800.13(b)(3), NY SHPO, other stakeholders and Tribal Nations will have 48 hours from the time of notification to respond.

5.4 Determination of Eligibility

The NYSHPO will make a determination of eligibility for the archeological resource based on the information provided by the Archeological Monitor and PPO. The NYSHPO shall receive this information from electronic communications and respond within 48 hours, per 36 CFR Part 800.13(b)(3).

5.5 Determination of Effects, Mitigation Efforts and Dispute Resolution

It is expected that potential archeological finds will be located within a relatively narrow construction corridor with limited means for avoidance. When a site is determined eligible for inclusion on the National Register, avoidance is not possible, and continued construction requires disturbance of the site, the resulting Section 106 determination of effect will be Adverse Effect. Determinations of Adverse Effect require mitigation treatment to resolve; a separate Memorandum of Agreement will not be required when mitigation treatments contained within this document, or a CRMP associated with the area of the subject archeological site, is selected. Dispute resolution among the parties will be guided by the CRMP (TRC 2021).

5.5.1 Data Recovery Mitigation Strategy

Data recovery mitigation strategy will be outlined in a brief plan that provides guidance on the level of effort expected, square meters of excavation, sampling percentage, and number of anticipated feature excavations. The strategy will provide a schedule for the proposed recovery/documentation efforts, including options to expedite the process, which may include 10-hour working days and additional crew. The mitigation plan shall also include a protocol for artifact collection, processing, cataloging, analyses, and final curation of materials, as outlined in the CRMP (TRC 2021) Section 4.3. The data recovery plan will be provided to NYSHPO, Tribes, and other stakeholders prior to implementation; these parties will have up to 15 days to review and provide comment. Data Recovery can begin as soon as notification to proceed is provided from NYSHPO. The PPO will notify the NYSHPO, Tribes, and other stakeholders of the completion of the fieldwork and that portion of the project shall be cleared to resume construction.

5.5.2 Alternative Archeological Mitigation

Alternative archeological mitigation efforts that contemplate non-traditional excavation and/or data recovery methods may be appropriate considering the circumstances. Numerous treatment methods may be selected including, but not limited to, off-site archeology, non-invasive archeology in the vicinity, and other appropriate strategies. Factors that may influence such decisions include the Project's constraints (in terms of construction corridor width and depth), weather and soil conditions, hazardous work environments, other health and safety concerns, and Project schedule.

5.5.3 Project Contacts

Through the many moving parts of this Project, efficient and immediate contact and consultation will be vital. The Project contacts are listed in the table below:

Table 5. Project Contacts.

Agency/Organization	Role	Contact person	Contact information
E – J Electrical Installation Company	Project Preservation Officer	Sal Ansaldi	sansaldi@ej1899.com 917.946.5043
Langan Engineering, D.P.C.	Engineer of Record	Greg DelMastro	gdelmastro@langan.com 914.391.9608
U.S. Department of Energy	Stakeholder	Melissa Pauley	melissa.pauley@hq.doe.gov
U.S. Army Corps of Engineers	Stakeholder	Stephan Ryba	Stephan.a.ryba@usace.army.mil
New York State Historic Preservation Office (NYSHPO)	Stakeholder	Nancy Herter	Nancy.herter@parks.ny.gov 518.268.2179
New York City Landmarks Preservation Commission, Archaeology Department	Stakeholder	Amanda Sutphin	212.602.6353, Director of Archaeology, 1 Centre St, 9 th Floor, New York 10007
New York DPS	Stakeholder	Matthew Smith	matthew.smith@dps.ny.gov
Hartgen Archeological Associates	Consulting Archeologist	Matthew Kirk	mkirk@hargen.com 518.283.0534, 518.300.5940
Transmission Developers Inc.	Applicants/Owner	Ayokunle "Kunle" Kafi, PE, CEM	Ayokunle.kafi@transmissiondevelopers.com 347.920.6550
Delaware Nation	Tribal Nation	Carissa Speck	(405) 247-2448, Ext. 1403 cspeck@delawarenation-nsn.gov
Delaware Tribe of Indians	Tribal Nation	Susan Bachor	610.761.7452 sbachor@delawaretribe.org
Shinnecock Nation	Tribal Nation	Jeremy Dennis	631.283.6143 adminoffice@shinnecock.org

Agency/Organization	Role	Contact person	Contact information
			jeremynative@gmail.com
St. Regis Mohawk Tribe	Tribal Nation	Darren Bonaparte	518.358.2272, ext. 2163 darren.bonaparte@srmt-nsn.gov
Stockbridge-Munsee Community	Tribal Nation	Jeff Bendremer	413.884.6029 thpo@mohican-nsn.gov
National Park Service	Stakeholder	Kathy Schlegel	215.597.1726 kathy_schlegel@nps.gov
Advisory Council on Historic Preservation	Stakeholder	Stephanie Stevens	202.354.2102 stephanie_stephens@nps.gov

6 Deliverables

6.1 Periodic Updates

The PPO in coordination with and under the guidance of the CA will provide periodic (bimonthly) updates on the progress of cable installation via email to the stakeholders. The communication will include project progress, discussion of unanticipated cultural resources, and the schedule for future work.

6.2 Annual Report

The CA will provide an annual report detailing the activities completed under the CRMP to the DOE and NYSHPO for as long as the CRMP is in effect. This report will be completed and submitted on or before January 10th each year. This report will include a summary of all historic properties and archeological resources that may have been encountered during construction and how they were treated. Post construction reports will identify which cultural resources were monitored and provide a summary of resource conditions and whether forms of disturbance were noted.

7 Summary of Recommended Effort

Given the current Astoria Rainey Cable alignment, it is still appropriate to monitor the East River overlook at the Rainey substation, due to precontact archeological sensitivity. This area likely has massive amounts of fill and monitoring is only needed for excavations deeper than 3 feet.

Monitoring is also recommended for Manhole 2 and of the cable route adjacent to Rainey Park.

Monitoring is also recommended along 14th Street in the historic heart of Astoria (north of Astoria Boulevard and south of 26th Avenue), adjacent to St. George’s Episcopal Church and its cemetery.

At the northeastern terminus of the segment, monitoring is recommended for the portion of the cable route that will be in the footprint of Berrien Island (see Figure 14 on page 14 for the depiction of the island in Long Island Sound). Because of the amount of filling likely to have occurred in the location, monitoring in the vicinity of Berrien Island is only needed for excavations deeper than 3 feet.

In summary, we are recommending archeological monitoring during construction for four areas of the Astoria Rainey Cable (Table 6).

Table 6. Resources and Recommendations in CHPE Segment 23, Astoria Rainey Cable.

Resources	Activity	Stations	Location	Conditions	Recommendation
[redacted]	Duct Bank Trench	0+00 [beginning] to 6+25	Beginning of segment within Rainey substation, northwest of Vernon Boulevard	Likely some filled land, paved or graveled surfaces, industrial use.	Monitoring during construction, or testing, for all excavation work deeper than 3 feet below the current ground surface.

Resources	Activity	Stations	Location	Conditions	Recommendation
[redacted]	Duct Bank Trench and Manhole 2	15+00 to 20+00	Vernon Boulevard alongside Rainey Park	Paved roadway adjacent to east side of city park.	Monitoring during construction.
[redacted]	Duct Bank Trench	62+00 to 71+00	14 th Street between Astoria Boulevard and 26 th Avenue	Paved roadway adjacent to 19 th - century cemetery and houses.	Monitoring during construction.
[redacted]	Duct Bank Trench	171+25 to 177+25 [terminus]	Northeast end of segment within Astoria Annex substation, northeast of 16 th Avenue	Filled land, partly paved, in industrial use.	Monitoring during construction, or testing, for all excavation work deeper than 3 feet below the current ground surface.

8 Bibliography

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Champlain Hudson Power Express, Borough of Queens, NY
Supplemental Cultural Resources Management Plan, Segment 23 (Astoria Rainey Cable)
REDACTED for Public Use

**Appendix 1: Drawing of Astoria Rainey Cable Route in Queens (Sheet CS006 from Langan
2023).**

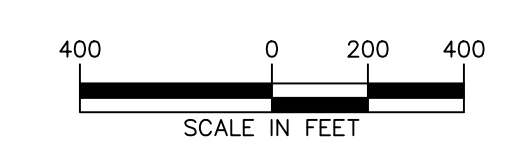


MANHOLE DISTANCES FOR PULLING CALCULATION							
MANHOLE	TYPICAL DUCT BANK CONDUIT		XLPE CABLE			STATION	DISTANCE (FT)
	SIZE	TYPE	VOLTAGE CLASS	SIZE	TYPE		
RAINEY SUBSTATION TO MH-2	8 IN	FRE	345-kV	2500MM ²	XLPE	0+00.00 TO 0+85.00	1581.44
	8 IN	PVC, SCH 40				0+85.00 TO 15+81.44	
MH-2 TO MH-3	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	15+81.44 TO 37+63.38	2,181.94
MH-3 TO MH-4	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	37+63.38 TO 59+45.77	2,182.39
MH-4 TO MH-5	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	59+45.77 TO 80+13.75	2,067.98
MH-5 TO MH-6	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	80+13.75 TO 100+47.67	2,033.92
MH-6 TO MH-7	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	100+47.67 TO 121+92.50	2,144.83
MH-7 TO MH-8	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	121+92.50 TO 142+65.49	2,072.99
MH-8 TO MH-9	8 IN	PVC, SCH 40	345-kV	2500MM ²	XLPE	142+65.49 TO 161+49.20	1,883.71
	8 IN	PVC, SCH 40				161+49.20 TO 177.24.42	
MH-9 TO ASTORIA ANNEX SUBSTATION	8 IN	FRE	345-kV	2500MM ²	XLPE	161+49.20 TO 177.24.42	1,575.22

STRUCTURE TABLE *					
STRUCTURE NAME:	STATION	NORTHING	EASTING	RIM	RIM 2
RAINEY GIS	0+00.00	217631.2801	999973.3475	-	-
MH-2	15+81.44	218386.3681	1000897.3184	19.834	19.453
MH-3	37+63.38	218557.2860	1002716.0388	9.990	10.031
MH-4	59+45.77	220426.6566	1003825.8774	14.108	15.254
MH-5	80+13.75	222306.3988	1004274.9771	17.719	17.963

STRUCTURE TABLE *					
STRUCTURE NAME:	STATION	NORTHING	EASTING	RIM	RIM 2
MH-6	100+47.67	223618.5588	1005775.0885	12.227	12.127
MH-7	121+92.50	225043.4083	1007337.8111	11.094	11.448
MH-8	142+65.37	224737.2068	1008712.6034	31.640	32.052
MH-9	161+49.08	223643.8610	1010121.8472	21.000	-
ASTORIA ANNEX GIS	177+24.30	224694.3727	1010946.4363	-	-

*NOTE: MANHOLE RIMS ARE APPROXIMATE. RIMS SHALL BE SET BASED ON EXISTING GRADE ONCE MANHOLE IS SET.



Date	Description	No.
Revisions		



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SIGNATURE: W. CHARLES UTSHIG JR.
 DATE SIGNED: PROFESSIONAL ENGINEER NY Lic. No. 062303

Project: **CHPE ARC PROJECT**
3.5 MILE UG TRANSMISSION
 ASTORIA, NEW YORK
 QUEENS COUNTY

Drawing Title: **AERIAL KEY MAP**

Project No. **19008801**
 Date: **7/14/2023**
 Drawn By: **LM**
 Checked By: **CU**
 Drawing No. **CS006**
 Sheet **6** of **85**

**Appendix 2: Champlain Hudson Power Express Cultural Resources Management Plan
(TRC 2021)**

NOTE: APPENDIX 2 IS NOT INCLUDED IN THE PUBLIC VERSION of
THIS SUPPLEMENTAL CULTURAL RESOURCES MANAGEMENT PLAN

Appendix 3: SHPO Human Remains Protocol 2021

**State Historic Preservation Office/
New York State Office of Parks, Recreation and Historic Preservation
Human Remains Discovery Protocol
(January 2021)**

If human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented.

- Human remains shall be treated with dignity and respect. Should human remains or suspected human remains be encountered, work in the general area of the discovery shall stop immediately and the location shall be secured and protected from damage and disturbance.
- If skeletal remains are identified and the archaeologist is not able to conclusively determine if they are human, the remains and any associated materials shall be left in place. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist shall assess the remains in situ to help determine if they are human.
- If the remains are determined to be human, law enforcement, the SHPO, the appropriate Indian Nations, and the involved state and federal agencies shall be notified immediately. If law enforcement determines that the burial site is not a criminal matter, no skeletal remains or associated materials shall be removed until appropriate consultation takes place.
- If human remains are determined to be Native American, they shall be left in place and protected from further disturbance until a plan for their avoidance or removal is developed. Please note that avoidance is the preferred option of the SHPO and the Indian Nations. The involved agency shall consult SHPO and the appropriate Indian Nations to develop a plan of action. Photographs of Native American human remains and associated materials should not be taken without consulting with the involved Indian Nations.
- If human remains are determined to be non-Native American, the remains shall be left in place and protected from further disturbance until a plan for their avoidance or removal is developed. Please note that avoidance is the preferred option of the SHPO. The involved agency shall consult SHPO and other appropriate parties to develop a plan of action.
- The SHPO recommends that burial information is not released to the public to protect burial sites from possible looting.