

Appendix II-N4

Historic Resources Visual Effects Assessment (HRVEA) – Larrabee Alternative

Note:

On March 26, 2021, Atlantic Shores Offshore Wind, LLC (Atlantic Shores) submitted a Construction and Operations Plan (COP) to BOEM for the southern portion of Lease OCS-A 0499. On June 30, 2021, the New Jersey Board of Public Utilities (NJ BPU) awarded Atlantic Shores an Offshore Renewable Energy Credit (OREC) allowance to deliver 1,509.6 megawatts (MW) of offshore renewable wind energy into the State of New Jersey. In response to this award, Atlantic Shores updated Volume 1 of the COP to divide the southern portion of Lease OCS-A 0499 into two separate and electrically distinct Projects. Project 1 will deliver renewable energy under this OREC allowance and Project 2 will be developed to support future New Jersey solicitations and power purchase agreements.

As a result of the June 30, 2021 NJ BPU OREC award, Atlantic Shores updated Volume I (Project Information) of the COP in August 2021 to reflect the two Projects. COP Volume II (Affected Environment) and applicable Appendices do not currently include this update and will be updated to reflect Projects 1 and 2 as part Atlantic Shores' December 2021 COP revision.

Historic Resources Visual Effects Assessment

Atlantic Shores Offshore Wind Project – Larrabee Onshore Substation (Alternative)

Howell Township, Monmouth County, New Jersey

Prepared for:



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MANAGEMENT SUMMARY

Involvement State/Federal Agencies: Bureau of Ocean Energy Management
New Jersey State Historic Preservation Office
New Jersey Department of Environmental Protection

Phase of Survey: Historic Resources Visual Effects Assessment

Location Information: Howell Township, Monmouth County, New Jersey

Onshore Substation Site: An approximately 12.2-acre (4.9 ha) forested parcel

USGS 7.5-Minute Quadrangles: *Lakewood, NJ*

Historic Resources Visual Effects Assessment

Overview: The Historic Resources Study Area for the Historic Resources Visual Effects Assessment includes a 1-mile (1.6 km) radius from the proposed Alternative Larrabee Onshore Substation (as further described herein).

There are 14 previously identified aboveground historic properties, which include:

- A total of two aboveground historic properties that were previously determined to be S/NRHP-eligible
- A total of 12 NJHPO-identified aboveground historic properties without formal determinations of S/NRHP eligibility

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Date of Report: March 2021

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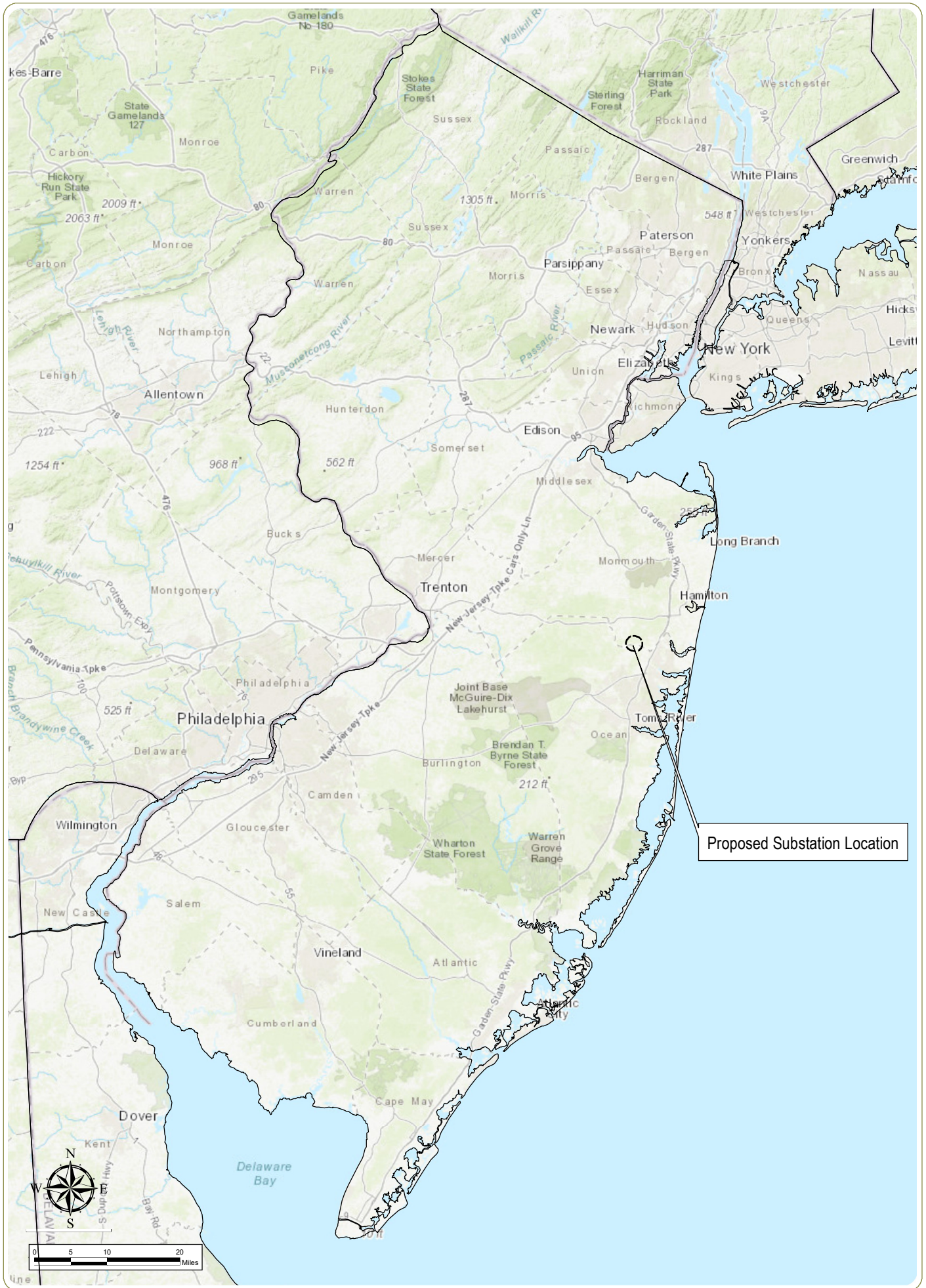
Attachment A. NJHPO Correspondence

1.0 INTRODUCTION

1.1 Purpose of the Investigation

On behalf of Atlantic Shores Offshore Wind, LLC (Atlantic Shores), a 50/50 joint venture between EDF-RE Offshore Development, LLC, a wholly owned subsidiary of EDF Renewables, Inc. (EDF Renewables) and Shell New Energies US LLC (Shell), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) prepared this Historic Resources Visual Effects Assessment for the proposed Alternative Larrabee Onshore Substation (or the substation), located in Howell Township, Monmouth County, New Jersey (Figure 1.1-1). The Historic Resources Visual Effects Assessment (HRVEA) was prepared to assist the New Jersey Department of Environmental Protection (NJDEP), New Jersey State Historic Preservation Office (NJHPO), the Bureau of Ocean and Energy Management (BOEM), relevant New Jersey State and/or Federal agencies and consulting partners in their review of the substation under Section 7:4 of the NJAC, the State of New Jersey Executive Order #215, and/or Section 106 of the National Historic Preservation Act, as applicable, and in support of the Atlantic Shores Construction and Operations Plan (COP) for Atlantic Shores' proposal to develop the Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0499 for the generation of renewable energy generation from offshore wind.

The purpose of the HRVEA is to identify and document aboveground historic properties within the substation's Area of Potential Effect (APE) (as described below in Section 1.2) that have been previously identified by NJHPO. The HRVEA has been conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior (SOI) Standards for archaeology and historic preservation (36 CFR Part 61), as appropriate. The HRVEA report was prepared in accordance with applicable portions of NJAC § 7:4-8.6, *Standards for Architectural Survey Reports* (NJHPO, 2008). A Phase IA archaeological survey assessing the potential impacts of the substation on subsurface cultural resources is being prepared and will be provided under separate cover as Appendix II-P2 of the COP.



Proposed Substation Location

1.2 Substation Location and Description

The Project involves the construction and operation of the Alternative Larrabee Onshore Substation in Howell Township, Monmouth County, New Jersey (Figure 1.1-1). The substation is an onshore component of the Atlantic Shores Offshore Wind Project (the Project). The potential effect on aboveground historic properties from the Project offshore facilities will be presented under separate cover.

The Larrabee Onshore Substation is a gas-insulated substation consisting of two static synchronous compensators (STATCOM), an aboveground system of electrical bus bars and transformers, a control building, and a lightning mast which will be up to 80 feet (24.4 m) tall. The tallest components of the substation will be two 125-foot-tall transmission poles in the southeast corner of the site. The substation will receive electricity produced by the offshore components of the Project via a buried onshore interconnection cable to convert the incoming voltage is transformed to the voltage at the existing grid point of interconnection (POI).

The following terms are used throughout this document to describe the proposed action:

<u>Atlantic Shores Offshore Wind Project:</u>	Atlantic Shores proposal to develop the Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A0499 for generation of renewable energy from offshore wind comprised of up to 200 total wind turbine generator (WTG) and up to 10 offshore substation (OSS) positions, or The Project.
<u>Larrabee Onshore Substation:</u>	A landside gas-insulated substation constructed for Atlantic Shores that contains transformers and other electrical gear, or the substation.
<u>Larrabee Onshore Substation Site:</u>	The parcel of land where an onshore substation may be located, consisting of an approximately 12.2-acre (4.9 ha) existing paved lot in Howell Township, Monmouth County, New Jersey (see Figure 1.3-1), or the substation site.
<u>Historic Resources Study Area:</u>	The area within 1 mile (1.6 km) of the onshore substation site boundary (see Figure 1.3-1).
<u>APE for Direct Effects:</u>	The APE for Direct Effects for the substation is the area containing all proposed soil disturbance associated with the substation. This includes all land-based soil disturbance associated with the Larrabee Onshore Substation (see Figure 1.3-1).
<u>APE for Indirect Effects:</u>	The APE for Indirect Effects on aboveground historic properties includes those areas where the substation may result in indirect effects on aboveground historic properties, such as visual or auditory impacts. As presently envisioned, the APE for Indirect Effects would be confined to areas where the proposed substation would be visible (based on viewshed analysis) or where noise created by the substation would be audible. Therefore, the APE for Indirect Effects will include those areas within 1 mile (1.6 km) around the substation where the components are anticipated to be visible. For the purposes of this report, the APE for Indirect

Effects is coterminous with the Historic Resources Study Area, as defined in Section 1.3 (see Figure 1.3-1).

For the purposes of evaluating previously identified aboveground historic properties, the following terms are used throughout the HRVEA report:

- *S/NRHP-Listed Above-Ground Historic Property* is defined as buildings, districts, objects, structures and/or sites that have been added to the New Jersey and/or National Register of Historic Places;
- *S/NRHP-Eligible Above-Ground Historic Property* is defined as buildings, districts, objects, structures and/or sites that have been determined by NJHPO as eligible for listing in the New Jersey and National Register of Historic Places, as indicated by inclusion in the publicly available data on the LUCY website and the NJHPO's quarterly updated listing of S/NRHP-listed and -eligible above ground historic properties; and
- *NJHPO-Identified Above-Ground Historic Property* is defined as buildings, districts, objects, structures and/or sites that are included in the publicly available data on the LUCY website as having been surveyed, but for which there has not been a formal determination of S/NRHP eligibility.

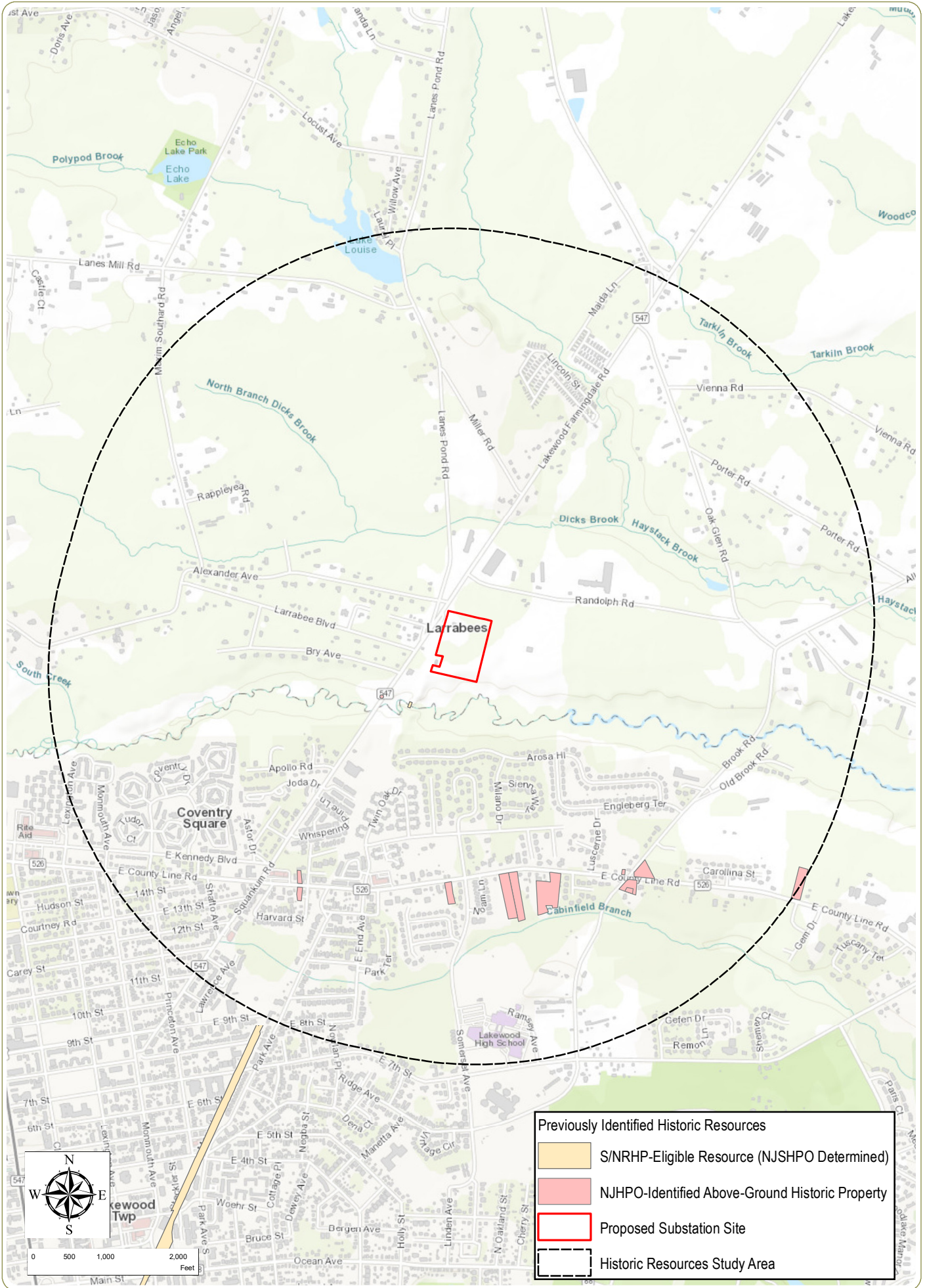
1.3 Historic Resources Study Area and Area of Potential Effect (APE)

Construction of the substation will not require the demolition or physical alteration of any buildings or other aboveground historic properties. The potential effect of the substation on a given historic property would be a change in the property's visual setting resulting from the introduction of new structures/buildings. As it pertains to historic properties, *setting* is defined as "the physical environment of a historic property" and is one of seven aspects of a property's *integrity*, which refers to the "ability of a property to convey its significance" (NPS, 1990). The other aspects of integrity include location, design, materials, workmanship, feeling, and association (NPS, 1990).

The APE for Direct Effects for the substation is defined as all areas where potential soil disturbance (or other direct, physical impacts) is anticipated during construction of the substation. The APE for Direct Effects for the proposed substation is an approximately 12.2-acre (4.9 ha) parcel encompassing an idle wooded area, a scrap vehicle lot, and an overhead electrical transmission ROW, located between Lakewood Farmington Road and the existing POI substation.

The APE for Indirect Effects on aboveground historic properties includes those areas where the substation may result in indirect effects on a given historic property, such as visual or auditory impacts (resulting from the introduction of new stacks or other substation components) in the property's setting. Indirect effects could theoretically consist of auditory and/or visual impacts. In order to provide the most conservative assessment of potential impacts, the APE for Indirect

Effects will include all areas within 1 mile (1.6 km) of the proposed substation and is therefore coterminous with the Historic Resources Study Area, which includes portions of Howell Township, Monmouth County, and Lakewood Township, Ocean County (see Figure 1.3-1).



Previously Identified Historic Resources

- S/NRHP-Eligible Resource (NJSHPO Determined)
- NJHPO-Identified Above-Ground Historic Property
- Proposed Substation Site
- Historic Resources Study Area



0 500 1,000 2,000 Feet

1.4 Agency Consultation

The submission of this HRVEA is provided as the initial consultation with NJHPO for the substation. Preliminary correspondence with NJHPO (see Appendix A) was limited to requests for determinations of eligibility for individual aboveground historic properties. The APE for a project is determined through consultation with the relevant State Historic Preservation Offices (SHPOs), in this case NJHPO, and Tribal Historic Preservation Offices (THPOs).. Therefore, this HRVEA presents a preliminary APE for Indirect Effects as formal consultation has not yet been initiated.

2.0 BACKGROUND AND SITE HISTORY

2.1 History of the Historic Resources Study Area

Archives and repositories consulted during EDR's research for the substation included the online digital collections of the Library of Congress, the State of New Jersey official website, David Rumsey Historical Map Collection, the Monmouth County Historic Inventory website, and the United States Geological Survey (USGS), and EDR's in-house collection of reference materials. Additionally, EDR reviewed the *History of Monmouth County, New Jersey* (Ellis, 1885), *Early Dutch Settlers of Monmouth County, New Jersey* (Beekman, 1901), *History of New Jersey* (Meredith and Hood, 1921), *History of Monmouth County, New Jersey* (Lewis Co., 1922), the *Story of New Jersey's Civil Boundaries 1606-1968* (Snyder, 1969), and the *Monmouth County Master Plan* (Monmouth County, 2016) for the historic context of the substation site and Historic Resources Study Area.

The substation is located in the Howell Township, Monmouth County, New Jersey. Monmouth County's 665 square miles (1,722 sq km) are situated along the Jersey Shore south of New York Bay, and are divided into 53 municipal subdivisions, including townships, cities, towns, boroughs, and villages. The Historic Resources Study Area for the substation consists of a 1-mile (1.6 km) radius around the proposed substation site.

What is now known as New Jersey has been the site of human occupation for at least 8,000 years. At the time of European first contact, Monmouth County, like most of New Jersey, was occupied by the Lenni Lenape people. In Monmouth County, the local branch was the Minsi Lenape, or the "people of the stone country". Among the earliest white settlers to this part of New Jersey were the Dutch, centered around present-day Jersey City, but some settlements extended south into Monmouth County (Meredith and Hood, 1921; Snyder, 1969).

The New Jersey colonies came under English control when the Dutch were defeated in 1664. For the next century, emigres from Holland, Huguenots from France, and Scots, among others, made New Jersey their home. During this early colonial period, the colony was split into two halves, East and West Jersey. In 1683, Monmouth County was established by the English in East Jersey (Snyder, 1969). During the American Revolution, northern New Jersey was the site of many battles, including the crucial Battle of Monmouth (1778). For four months in 1783, the City of Princeton served as the United States' capital (Meredith and Hood, 1921).

Howell Township was formed in 1801 from a subdivision of Shrewsbury Township. By 1832 the county had a modest commercial economy consisting of 17 mills, two distilleries, and a furnace (Ellis, 1885). The township was itself subdivided three times in the mid-nineteenth century. The production of pig iron was a major industry in Monmouth County, with over 500 workers employed at the Allaire Works on the Manansquan River between 1821 and 1846

(Morrison, 1950). In 1850, Ocean County was partitioned from Monmouth County (OCCHC, 2020). In 1853, a rail line was constructed which connected Camden with points in Monmouth County, and by 1860 rail lines had successfully linked most areas of the state (Morrison, 1950).

At the turn of the twentieth century, immigration from Europe increased dramatically, doubling the population of New Jersey, with many new arrivals settling in Monmouth County. Chemical and electronics manufacturing expanded significantly during the Second World War and afterwards (Monmouth County Planning, 2016). Monmouth and Ocean Counties followed the national trends of suburbanization, and after the construction of the Garden State Parkway, population and development expanded quickly. Today Monmouth County is one of the wealthiest counties in the United States, benefiting from its legacy of manufacturing, while Ocean County has remained the fastest growing county in New Jersey for much of the past 60 years (New Jersey, 2020; OCCHC, 2020).

2.2 Previously Identified Historic Resources

EDR reviewed the Look Up Cultural Resources Yourself (LUCY) website maintained by NJHPO and the Monmouth County Historic Sites Inventory website to identify significant historic buildings, resources and/or districts located within the 1-mile (1.6 km) Historic Resources Study Area for the Alternative Larrabee Onshore Substation (Monmouth County Parks, 2020; NJHPO, 2020a). Previously identified S/NRHP-eligible aboveground historic properties within the Historic Resources Study Area include an historic district located along a railway transportation corridor, and a stone arch railroad bridge. Information regarding aboveground historic properties listed in or eligible for listing in the S/NRHP is available online in the form of an annotated bibliography which is updated quarterly¹. Due to the COVID-19 pandemic, accessibility to NJHPO documentation is limited. However, a request was submitted to NJHPO via email on September 22, 2020 for digitized determinations of eligibility and NJHPO opinions. On October 7, 2020, NJHPO staff responded to the request via email, providing scanned determinations of eligibility for the requested aboveground historic properties. A copy of this correspondence is included as Appendix A.

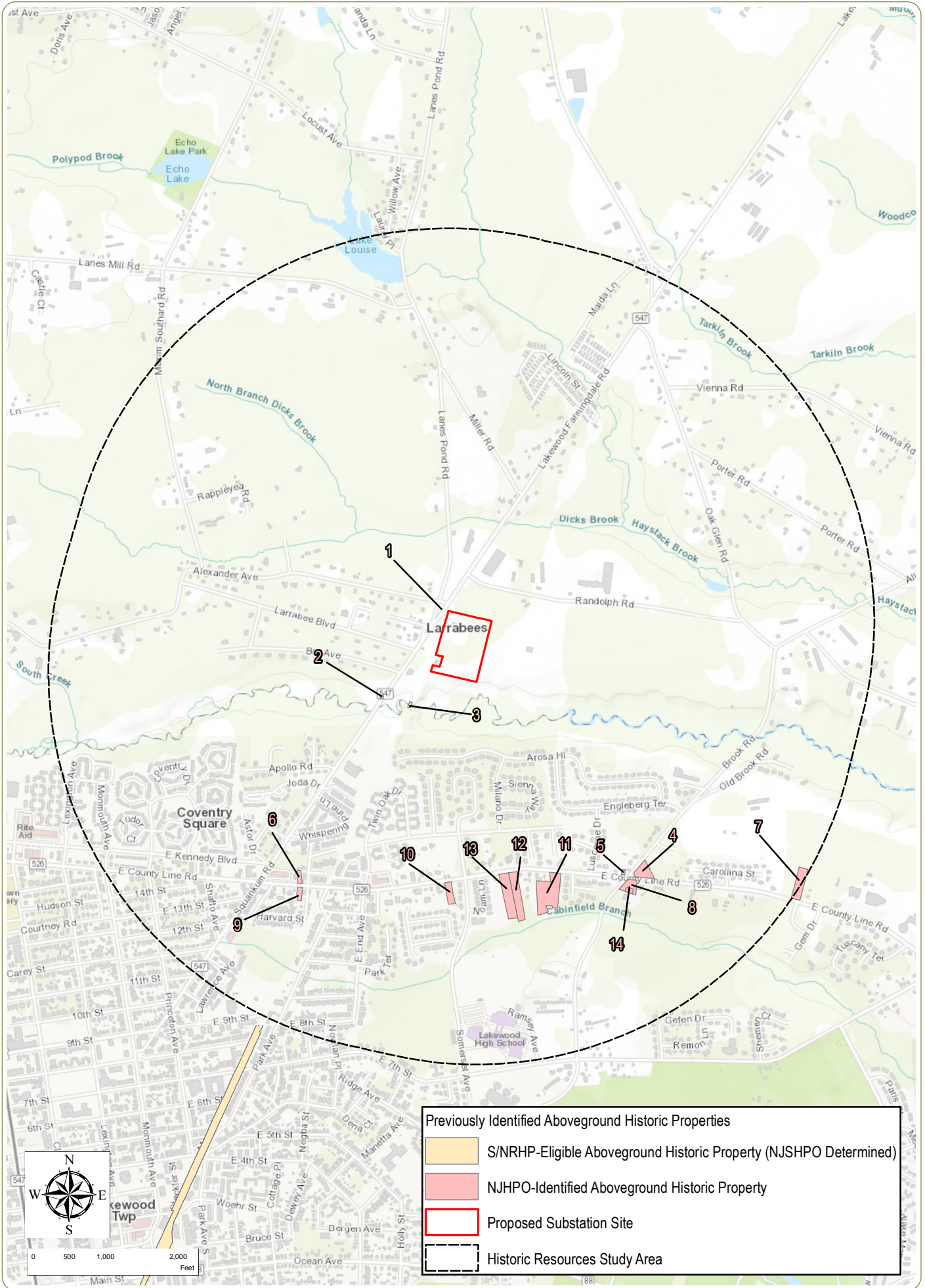
A total of 14 aboveground historic properties were identified in the Historic Resources Study Area, including two aboveground historic properties previously determined eligible for listing in the S/NRHP by NJHPO and 12 individual aboveground historic properties have not been formally evaluated by NJHPO for S/NRHP eligibility. These properties are included in Table 2.1-1 below. The location of these aboveground historic properties is depicted in Figure 2.2-1.





¹ Available at https://www.nj.gov/dep/hpo/1identify/nrsr_lists.htm.

Table 2.2-1. Previously Identified Above-Ground Historic Properties

Map ID	Name (if applicable)	Address	Description	S/NRHP Eligibility Status	Source
1	New Jersey Southern Railroad Historic District	Abandoned railway bed	A former passenger railroad between New York, NY and Atlantic City, NJ. The Lakewood station was constructed in 1860. The district was determined S/NRHP-eligible in 2008.	S/NRHP-Eligible Above-Ground Historic Property (NJHPO Determined)	NJHPO Data File; Online Bibliography (NJHPO, 2020b); Lichtenstein, 1994
2	New Jersey Central Railroad Bridge (1319-21)	NJCRR over the Metedeconk River	No description available.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
3	New Jersey Southern Railroad Stone Arch Bridge	NJSRR over the North Branch of the Metedeconk River	No description available, Determined S/NRHP-eligible in 2008.	S/NRHP-Eligible Above-Ground Historic Property (NJHPO Determined)	NJHPO Data File; Online Bibliography (NJHPO, 2020c)
4	None	1105 East County Line Road	An early twentieth century one-story stucco house (original NJHPO-identified aboveground historic property appears demolished).	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
5	None	1021 East County Line Road	An early twenty-first century two-story residence (original NJHPO-identified aboveground historic property appears demolished).	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
6	None	621 East County Line Road	An early twentieth century two-story residence.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
7	None	1127 East County Line Road	An early twenty-first century two-story school building (original NJHPO-identified aboveground historic property appears demolished).	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
8	None	1100 East County Line Road	An early twentieth century two-story residence.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
9	None	618 East County Line Road	An early twenty-first century two-story apartment building (original NJHPO-identified aboveground historic property appears demolished).	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File

Map ID	Name (if applicable)	Address	Description	S/NRHP Eligibility Status	Source
10	None	944 East County Line Road	An early twentieth century two-story residence.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
11	None	970 East County Road	An early twentieth century one-and-one-half-story residence.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
12	None	954 East County Line Road	A late nineteenth century two-story vernacular residence.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
13	None	950 East County Line Road	An early twenty-first century two-story residence (original NJHPO-identified aboveground historic property appears demolished).	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File
14	Unidentified Outbuilding, circa 1947-1953	1100 East County Line Road	An early twentieth century one-story shed.	NJHPO-Identified Above-Ground Historic Property	NJHPO Data File



Previously Identified Aboveground Historic Properties	
	S/NRHP-Eligible Aboveground Historic Property (NJSHPO Determined)
	NJHPO-Identified Aboveground Historic Property
	Proposed Substation Site
	Historic Resources Study Area

2.3 Previous Cultural Resources Surveys

A review of the NJHPO website indicates that 11 previous cultural resources surveys have been conducted within the Historic Resources Study Area. These reports include archaeological surveys, architectural surveys, mitigation plans and reports, and combined architectural and archaeological surveys, and are on file at the NJHPO at Trenton, NJ. Information regarding previous cultural resources surveys is available online in the form of an annotated bibliography which is updated quarterly by NJHPO, and which are available for review by appointment at NJHPO's Trenton, New Jersey offices. As mentioned previously, due to the COVID-19 pandemic, accessibility to NJHPO documentation at their offices is limited. However, a request was submitted via email on September 22, 2020 for digitized cultural resources surveys within the Historic Resources Study Area. On October 7, 2020, NJHPO staff responded to the request via email indicating that NJHPO could not provide electronic versions of cultural resources survey. A copy of this correspondence is included as Appendix A.

In order to provide the most conservative enumeration of previous historic resources surveys possible, the list below includes all reports noted in NJHPO's bibliography as historic architecture reports located within the Howell or Lakewood Townships where the survey boundaries are not explicit. County-wide surveys were also included in order to provide a comprehensive view of all previous historic resource surveys that have occurred within the Historic Resources Study Area.

They include the following titles:

- *Historic Period Archaeological Survey, Initial Phase Including Freehold, Howell, and Upper Freehold Townships, Monmouth County, New Jersey. Appendices III and IV* (Envirosphere Company, 1989);
- *Phase I Archaeological Survey, Replacement of Eighth Fairway Bridge, Howell Park Golf Course... Howell Township, Monmouth County, New Jersey* (RGA, 2013);
- *Phase IB and Phase II Archaeological Surveys. Proposed construction of a Two-Story Medical Office Building, Township of Howell, Monmouth County, New Jersey* (RGA, 2016);
- *Cultural Resources Inventory of the... Intersection, Jerseyville, Howell township, Monmouth County, New Jersey* (Parsons Engineering Science, Inc., 1998);
- *Monmouth County Historic Sites Inventory [Volume 22: Howell Township]* (Monmouth County Parks, 1984);
- *New Jersey Historic Sites Inventory, Ocean County [Volume 1, Introduction]* (Heritage Studies, Inc., 1981);
- *Post Sandy Historic Resources Survey Compilation* (NJDEP, 2015);
- *New Jersey Transit Historic Railroad Bridge Survey: Summary Report* (DeLeuw, Cather & Co., 1998);

- *Monmouth-Ocean-Middlesex Commuter Rail, Environmental Impact Study, Historic Architectural Resources Background Study: Ocean County (MOM Ocean County HARBS) Volume I & II* (Lynn Drobbin & Assoc., 2006);
- *The New Jersey Historic Bridge Survey: Ocean County* (A.G. Lichtenstein & Associates, Inc, 1994); and
- *New Jersey Historic Sites Inventory, Ocean County [Volume 15, Lakewood Township]* (Heritage Studies, Inc, 1981).

2.4 Existing Conditions

The substation is proposed in Howell Township, Monmouth County, approximately a half-mile (0.8 km) northeast of Lakewood Township, Ocean County. The proposed substation site is set on an approximately 12.2-acre (4.9 ha) parcel encompassing a forested area, a scrap vehicle lot, and an overhead electrical transmission ROW, and is located immediately east of an existing approximately 12-acre (4.9 ha) substation (see Figure 2.4-1). The existing substation features a tall lightning mast similar to the one proposed as part of the substation. In addition, the existing substation is located at the intersection of three major powerline corridors. The proposed substation site is surrounded by a mostly light residential neighborhood, while the densely developed Lakewood community is approximately 0.3-mile (0.5 km) to the southwest in Ocean County.



Figure 2.4-1 Aerial view of existing conditions at the proposed substation site (Google Earth, 2020).
The substation boundary is shown in red. Note the existing substation immediately to the east.

3.0 POTENTIAL EFFECT ON ABOVE-GROUND HISTORIC RESOURCES

3.1 Criteria for Evaluating the Significance of Above-Ground Historic Resources

Criteria set forth by the National Park Service for evaluating historic properties (36 CFR §60.4) state that a historic building, district, object, structure or site is significant (i.e., eligible for listing on the S/NRHP) if the property conveys:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- (B) that are associated with the lives of persons significant in our past; or*
- (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- (D) that have yielded, or may be likely to yield, information important in prehistory or history (CFR, 2004a; NPS, 1990).*

Historically significant properties are defined by NJAC 7:4-1:3 as follows:

"Historic property" means any district, site, building, structure or object significant in American history, architecture, archaeology, engineering and culture.

3.2 Setting of Above-Ground Historic Properties within the Historic Resources Study Area

The substation is located within a focused area of previous infrastructure development, including an approximately 12-acre (4.9 ha) existing substation at the intersection of three major powerline corridors, set within a mixed suburban residential-industrial neighborhood outside of Lakewood Township (see Figure 3.2-1). The substation will be located on a site currently occupied by a forested area, portions of which screen an existing vehicle scrapyard from Lakewood Farmington Road. In addition, a portion of an existing powerline corridor passes through the proposed substation site. There are no buildings directly adjacent to the proposed substation site. A residential neighborhood is located to the west on the far side of Lanes Pond Road and Lakewood Farmington Road, but this development is largely screened by intervening vegetative growth on either side of the road. Views from the proposed substation site are of modern electrical infrastructure, light industrial buildings, and intermittent but relatively thick growths of trees and vegetation.



Figure 3.2-1 View to the north-northeast toward the proposed substation Site.

The proposed substation site is located beyond the property in the foreground (1251 Lakewood Farmingdale Road) and includes the forested area at left and the powerline corridor at right.

The aboveground historic properties within the Historic Resources Study Area are located within the context of a mid- to late-twentieth century suburban development between the community of Lakewood, Ocean City to the southwest and the mixed residential and industrial areas in the vicinity of, and to the north and west of, the proposed substation location. Lakewood Township has experienced rapid population growth over the past ten years. As a result, there has been construction and redevelopment of parcels in the portion of the Historic Resources Study Area located in Lakewood Township (Raychauduri, 2020). As indicated in Table 2.2-1 above, six of the previously identified aboveground historic properties in the Historic Resources Study Area appear to have been demolished since their original date of identification by NJHPO.

3.3 Potential Effect on Above-Ground Historic Properties

The Federal Regulations entitled “Protection of Historic Resources” (36 CFR Part 800) include in Section 800.5(2) a discussion of potential adverse effects on historic resources. The following types of effects apply to the proposed Alternative Larrabee Onshore Substation (emphasis added):

Adverse effects on historic properties include, but are not limited to: [items i-iii do not apply]; (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. . . .”; [items vi-vii do not apply]” (CFR, 2004b).

The substation's potential effect on a given aboveground historic property would be a change (for instance, resulting from the introduction of new visual elements, such as substation lighting masts) in the property's setting. As it pertains to historic properties, *setting* is defined as “the physical environment of a historic property” and is one of seven aspects of a property's *integrity*, which refers to the “ability of a property to convey its significance” (NPS, 1990:44-45). The other aspects of integrity include location, design, materials, workmanship, feeling, and association (NPS, 1990).

The NJAC 7:4-1.3 defines “encroachment” as follows:

“Encroachment” means the adverse effect upon any district, site, building, structure or object included in the New Jersey Register resulting from the undertaking of a project by the State, a county, municipality or an agency or instrumentality thereof, as determined by application of the Criteria for Determining Whether an Undertaking Constitutes an Encroachment set forth in N.J.A.C. 7:4-7.4 and the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 C.F.R. 68) and “Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (guidelines issued by the National Park Service, incorporated herein by reference) and available from the Historic Preservation Office, PO Box 420, Trenton, New Jersey 08625-0420) or from the Historic Preservation Office website (www.state.nj.us/dep/hpo) or from the National Park Service website (www.nps.gov) or subsequent amendments thereto adopted by the Secretary of the United States Department of the Interior and the National Park Service (NJAC, 2015).”

Adverse effects on historic properties (i.e., encroachment) are further defined in NJAC 7:4-7.4, *Criteria for determining whether an undertaking constitutes an encroachment or will damage or destroy the historic property*, which states:

- (a) *An undertaking will have an adverse effect and therefore constitute an encroachment when the effect of the undertaking on a property listed in the New Jersey Register may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.*

Encroachments include, but are not limited to:

1. *Physical destruction, damage, or alteration of all or part of the registered property;*
2. *Isolation of the registered property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the New Jersey Register;*
3. *Introduction of visual, audible, or atmospheric elements that are out of character with the registered property or alter its setting; and*
4. *Acquisition, transfer, sale, lease, easement on, or an agreement or other permission allowing use of a registered property (NJAC,2015).*

The potential effect of the substation on the visual setting associated with aboveground historic properties is highly variable and is dependent on a number of factors including the distance to the substation, the height of the visible components relative to nearby existing structures, the extent to which the substation is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter and/or modern intrusions in the view. It is also worth noting that visual setting may or may not be an important factor contributing to a given property's historical significance.

Based on the relatively low-profile of the proposed substation equipment, EDR defined a 1-mile (1.6 km) Historic Resources Study Area around the property associated with the proposed substation. While visibility beyond 1 mile (1.6 km) is possible, the nature and degree of potential visual impacts will be minimal beyond 1 mile (1.6 km) due to the density of existing modern development and infrastructure located within the Historic Resources Study Area.

Potential Direct Effects

Construction of the substation will not require the demolition or physical alteration of any aboveground historic properties. Therefore, there will be no direct effect on the two historic districts previously determined to be eligible for listing in the S/NRHP by NJHPO located within the Historic Resources Study Area, or the 13 NJHPO-identified aboveground historic properties located within the Historic Resources Study Area. As noted in Section 1.2, the onshore interconnection cable will be buried along existing roadways and therefore is not anticipated to have an adverse visual effect to aboveground historic properties.

Potential Indirect Effects

Due to the existing conditions within the Historic Resources Study Area, a developed industrial site surrounded by a mixed-used light industrial and residential neighborhood that includes an existing 12-acre (4.9 ha) substation and an automotive scrap yard, it is not likely that the proposed substation will create a noticeable visual intrusion into the surrounding landscape. The construction of the onshore substation would likely not appear out of place in the context of the current land use and existing electrical system infrastructure. Therefore, it is unlikely that the proposed substation would have any indirect visual effect on the two S/NRHP-eligible aboveground historic properties, one of which is a railroad line that passes through a variety of contexts, some more densely developed than the Historic Resources Study Area. Furthermore, the tallest part of the proposed substation would be the two transmission poles which would be up to 125 feet (38.1 m) tall, and therefore would not be significantly different in size and scale from the existing transmission poles in the adjacent substation, or the dozens of electrical towers that converge at the substation.

The anticipated levels of noise generated by onshore facilities are described in greater detail in an Onshore Noise Report, included as Appendix II-T to the COP. Noise generated by the proposed substation will depend on whether high voltage alternating current (HVAC) or high voltage direct current (HVDC) facilities are constructed. It is anticipated that the HVDC design would have generally lesser sound impacts on the surrounding community than HVAC technology. Therefore, only the HVAC onshore substation design was evaluated in this report in order to provide the most conservative assessment of potential noise effects. At this early stage of design, no equipment-specific sound level data were available, so worst-case approximations of potential sound power levels of each piece of equipment were assumed. The noise report results showed that some combination of quieter equipment and/or barrier walls may be needed at all four onshore substation sites in order to meet the NJ DEP sound limits. If necessary, screening will be implemented at the onshore substation sites to the extent feasible to reduce potential noise effects to aboveground historic properties.

In addition, aside from the two previously determined S/NRHP-eligible aboveground historic properties, none of the NJHPO-identified aboveground historic properties within the APE for Indirect Effects appear to satisfy S/NRHP eligibility criteria set forth by the NPS in 36 CFR §60.4, or to meet the New Jersey Register criteria set forth in NJAC 7:4. These properties mostly consist of late-twentieth century and early-twenty-first century residential buildings constructed within a heavily developed urban context, or otherwise appear to be demolished, and as such would not be effected by the construction of additional modern infrastructure.

4.0 SUMMARY

4.1 Summary of Historic Resources Visual Effects Assessment

On behalf of Atlantic Shores, EDR prepared this HRVEA for the proposed Alternative Larrabee Onshore Substation.

There are 14 previously identified aboveground historic properties located within the Historic Resources Study Area for the Larrabee Onshore Substation, including:

- A total of two aboveground historic properties previously determined eligible for listing on the S/NRHP, including one historic district; and
- A total of 12 aboveground historic properties for which S/NRHP eligibility has not been formally determined.

Any potential indirect visual effect resulting from the substation due to the existing conditions and visual setting of the proposed substation site likely will be minimal. No further historic resources surveys are recommended in association with the substation. Noise levels generated by the proposed substations will vary based on the type of facilities (HVAC or HVDC) that are constructed. Further analysis on noise impacts resulting from onshore facilities is included in the Onshore Noise Report (Appendix II-T to the COP).

Per the results of the HRVEA described herein, the Alternative Larrabee Onshore Substation is not anticipated to result in adverse effects on aboveground historic properties. No further surveys or evaluations with respect to aboveground historic properties are recommended in association with the proposed substation.

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ATTACHMENT A. NJHPO CORRESPONDENCE

From: [Romanoski, Christopher](#)
To: [Andrew Roblee](#)
Subject: RE: ATTN: Christopher - Documentation Request
Date: Wednesday, October 7, 2020 2:43:25 PM
Attachments: [SHPO Opinions for Andrew Roblee.zip](#)

[EXTERNAL SENDER]

Andrew,

Attached please find the folder containing the SHPO Opinion letters for the projects you sent. I hope you have no trouble opening and accessing the files. Please note that "Wildthyme" and the Blansingburg School Historic District are in the same letter. I was unable to find the Opinion letter for NJS Stone Arch Bridge, unfortunately.

Regarding the reports, there is no current good way to get them out to researchers as they are not all digitized and the file sizes are sometimes too large to send via email. It's a knot we're working to unwind, but unfortunately that means that right now I am unable to send you the reports.

I hope this is at least somewhat helpful, and if you have any more specific questions feel free to reach out and I'll do my best to answer them.

Christopher

From: Andrew Roblee <aroblee@edrdpc.com>
Sent: Tuesday, October 6, 2020 11:15 AM
To: Romanoski, Christopher <Christopher.Romanoski@dep.nj.gov>
Subject: [EXTERNAL] RE: ATTN: Christopher - Documentation Request

Thanks Christopher,

I understand and appreciate your attention to this. I would be grateful for whatever information you are able to provide. Stay safe!

Andrew Roblee
Project Architectural Historian
217 Montgomery Street, Suite 1000, Syracuse, New York 13202
P. 315.471.0688 :: C. 315.224.6344 :: F. 315.471.1061
E. aroblee@edrdpc.com :: www.edrdpc.com

From: Romanoski, Christopher <Christopher.Romanoski@dep.nj.gov>
Sent: Tuesday, October 6, 2020 11:03 AM
To: Andrew Roblee <aroblee@edrdpc.com>
Subject: RE: ATTN: Christopher - Documentation Request

[EXTERNAL SENDER]

Hi Andrew,

I'm sorry so much time has passed on this. I do not work at the HPO full time these days so I have to scatter my tasks through when I can work and there have been very pressing items on my agenda.

I will work on getting the SHPO opinions for you tomorrow as I'll be in the office with access to the files. I will have to get back to you regarding our current process for sending out full reports, as it may not be possible at this time because of email constraints.

Again I apologize and I hope you're well,
Christopher

From: Andrew Roblee <aroblee@edrdpc.com>

Sent: Tuesday, September 22, 2020 3:31 PM

To: DEP NJHPO <NJHPO@dep.nj.gov>

Subject: [EXTERNAL] ATTN: Christopher - Documentation Request

Hello Christopher,

Thank you for taking my call earlier and being so helpful. I have attached a spreadsheet with the eligible resources I was interested in. Let me know if there is enough information included on the sheets for this request. Any DOEs or SHPO opinions that provide background and/or descriptions of the resources would be greatly appreciated. I also included a list of Cultural Resources Surveys I was hoping to get ahold of as well. I know we didn't discuss that on the phone, so I apologize, but I thought I would throw these out there as well and see what might be available?

I would be extremely grateful for whatever assistance you might be able to provide.

P.S. We have a mutual colleague, Erin Frederickson. I was in grad school with her! She gave you high praise.

Andrew Roblee

Project Architectural Historian

Environmental Design & Research,

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