



# E2 Project Management LLC

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September 12, 2018

Ms. Lisa Olesky  
Subcarrier Communications  
139 White Oak Lane  
Old Bridge, New Jersey 08857

**Subject: Summary of National Environmental Policy Act Checklist  
Wireless Facility Tower Upgrade – Wanaque Tower  
1 Skyline Drive, Wanaque, Passaic County, New Jersey  
Block 250 Lot 1**

Dear Ms. Olesky:

This letter summarizes E2 Project Management LLC's (E2PM) research and findings in response to the National Environmental Policy Act (NEPA) Checklist (Attachment A) questions 1 through 10 for the Wanaque Tower site located at 1 Skyline Drive in the Borough of Wanaque, Passaic County, New Jersey. The site is represented as Block 250, Lot 1, owned by Subcarrier Communications. The site property is approximately 1.396 acres in size (per survey), with an approximate latitude and longitude of N41.0541667°, W-074.2543333° with a ground elevation ranging 838-876 feet above mean sea level (NAD83), gradually sloping downward to the northeast. It is accessed from Skyline Drive via an existing gravel driveway and currently improved with an existing 110-foot tall guyed lattice tower and two wireless wood-frame equipment shelters. Cannonball Trail currently traverses the east/east-central section of the subject property. The subject property is effectively surrounded by upland forest interspersed with forested wetlands.

According to Zoning Drawings prepared by E2PM, Subcarrier Communications plans to remove and replace an existing wireless communication tower located at the referenced address above. Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace the existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. An eight-foot tall chain-link fence is proposed to be installed around a part of the site with a gate at the existing driveway. Utility conduit will be routed underground in an existing trench to an existing utility pole located adjacent to Skyline Drive and access to the facility will be via the existing gravel drive (See attached zoning drawings). All proposed activities will be taking place within the already disturbed area of the property, with no new grading or tree removal required. The proposed project would be wholly-located on the existing graveled area with no expansion into the adjacent forested area.

## INFORMATION SOURCES

In addition to the Environmental Data Resources, Inc. (EDR) *NEPACheck*® Report, (Attachment B), the following sources were investigated to answer questions 1 through 10 on the NEPA Checklist.

- To evaluate whether the project would affect (1) areas proposed for, listed on, or eligible to be listed on the National Register of Historic Places (NRHP) or the New Jersey Register of Historic Properties, or (2) areas with archaeological significance, and pursuant to Section 106 of the

National Historic Preservation Act of 1966 (NHPA), as amended, E2PM, has undertaken a historical investigation for the proposed tower construction in Wanaque, New Jersey.

- E2PM contacted the New Jersey Department of Environmental Protection (NJDEP), Office of Natural Lands Management, Natural Heritage Program, for information on State listed endangered, threatened, and special-status species, including plants, invertebrates, fish, amphibians, and mammals that may occur near the project site.
- E2PM reviewed the U.S. Department of the Interior, Fish and Wildlife Service (USFWS) New Jersey website for the latest regulations, guidelines and information on federally listed endangered and threatened species pursuant to Section 7 of the Endangered Species Act (ESA). In addition, a full Section 7 Consultation was required due to the nature of the proposed action. An Official Species List was generated to provide details regarding the project area and the latest October 2016 USFWS Communication Tower and Antenna Consultation in New Jersey guidelines were reviewed and adhered to (see Attachment C for reference).
- The proposed work must complete the participation process of Indian Tribes Organizations pursuant to Section IV of the NHPA. The Indian Tribes Organizations were contacted through the Federal Communications Commission (FCC's) Tower Construction Notification System (TCNS) in regards to information pertaining to the presence or absence of archaeological resources in the project area.

## **SUMMARY OF NEPA CHECKLIST RESULTS**

The following sections summarize the findings based on the above referenced sources by E2PM.

### **Officially Designated Wilderness Area/Wildlife Preserve**

Based on the site visit and the EDR *NEPACheck*® Report, the project site is not in or adjacent to a designated wilderness area. Therefore, implementation of the project is not likely to affect any designated wilderness areas, wildlife preserves, National Parks, or State Parks.

### **Threatened and Endangered Species/Proposed Threatened and Endangered Species**

E2PM conducted a preliminary review of the USFWS Information Planning and Conservation System (IPaC) and the NJDEP Natural Heritage Program Database to determine if there could be a potential impact to Federal or State listed threatened or endangered species. The official species IPaC list initially generated on May 21, 2018 (updated September 12, 2018) indicated that the endangered Indiana Bat and threatened Northern Long Eared Bat (NLEB) and Small Whorled Pogonia could potentially exist within the vicinity of the project area. The NJDEP Natural Heritage Program responded March 1, 2018 indicating that additional species of concern were listed for the site including the endangered or threatened Barred Owl, Red-Shouldered Hawk, Grey Petaltail, Bobcat, Northern Myotis, Timber Rattlesnake, Wood Turtle, and several other special concern species. However, neither the IPaC report nor the Natural Heritage Report indicates any critical habitat for any of the identified species of concern in the project location footprint. In addition, E2PM site investigations confirm that there is no presence of potential threatened or endangered species habitat to be disturbed for the proposed project.

With the project area listed on the IPaC as having the potential for NLEB species or habitat, further review of USFWS's Bat Municipality List (last updated April 2017) indicated that Wanaque Township was listed as having "hibernation/maternity" occurrence for NLEB. The listing for Wanaque was also depicted as red text; therefore, it is a municipality with documented NLEB roost trees and is a municipality that does have or is within .25 miles from a known hibernaculum. Although listed in red text with the potential of Indiana Bat or NLEB to exist within the surrounding vicinity of the proposed

area of disturbance for the project; no tree or vegetation removal is proposed for this project; therefore, impacts to possible NLEB habitat, if present, is not anticipated.

Further, according to the October 2016 USFWS “Communication Tower and Antenna Consultation in New Jersey” documentation (Attachment C), the USFWS has determined that the following proposed actions are not likely to adversely affect federally listed species in New Jersey, nor have any significant impacts on migratory birds or other wildlife resources under Service jurisdiction:

- routine maintenance (e.g., painting, antenna replacement) at existing tower sites or other existing tower support structures;
- repair or replacement of existing towers and/or equipment;
- co-location of new equipment or antennas on an existing structure (e.g., tower, water tank, flagpole, building), where proposed activities will not require the addition of lights or guy wires to an existing structure, or increase the height of an existing structure above 200 feet; and
- construction of new towers without lights or guy wires, under 200 feet in height

PROVIDED that:

1. all ground disturbance is at least 150 feet from any beach or dune;
2. in areas where the iPac species list<sup>1</sup> includes bog turtle, red knot, Indiana bat, dwarf wedgemussel, swamp pink, Knieskern's beaked-rush, sensitive joint-vetch, or Hirsts' panic grass: (a) any net gain in impervious surface is under 0.25 acre, AND (b) all ground disturbance is at least 150 feet from any wetland or open water (e.g., river, stream, pond, lake) or is limited to existing developed areas (e.g., rooftops, pavement, gravel, maintained lawn);
3. in areas where the iPac species list includes Indiana bat, any tree clearing is under 0.25 acre (including for access roads) and trees over 5 inches diameter at breast height will be cut between October 1 and March 31; in municipalities<sup>2</sup> with hibernation occurrence, cutting will occur between November 16 and March 31;
4. in areas where the iPac species list includes NLEB, the project will comply with the 4(d) rule;
5. the project is consistent with the Service's National Bald Eagle Management Guidelines;
6. the project is not located in a National Wildlife Refuge;
7. removal of native vegetation (which provides migratory bird habitat) will not exceed 0.5 acre; and
8. tree clearing will be seasonally restricted from March 1 to August 31 OR, if clearing will occur during that season, all trees will be inspected no more than 24 hours prior to cutting to ensure no active nests of any migratory bird are present.

This project meets all listed requirements with the exception of the proposed construction being over 200 feet in height. Therefore, based on regulations set forth by the USFWS, further consultation with the USFWS was required for the implementation of the proposed project. A full USFWS consultation package was sent to USFWS on May 22, 2018 for further review, comment and/or approval of the project. On June 7, 2018, USFWS responded indicating that the Service concurs that the proposed project is not likely to adversely affect federally listed or candidate species at the project site for the following reasons:

- Indiana Bat – Discountable effects – no trees will be removed

- Northern Long-eared bat – Unsuitable Habitat
- Small whorled pogonia – Unsuitable Habitat

No other federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the proposed project's impact area. Therefore, no further consultation pursuant to the ESA is required with the USFWS for threatened and endangered species. This response is located in the Attachment C of this report.

### **Migratory Birds**

As it pertains to migratory birds, USFWS New Jersey Field Office recognizes that individual project review by the Service is not required under certain conditions. USFWS indicates that migratory birds are a Federal trust resource and are protected under the MBTA. Communication towers may pose a hazard to migrating birds and to birds nesting in the area. Risk factors include tower height, physical design, lighting, and site location relative to migratory corridors and bird concentration areas. In addition, certain communication towers may adversely affect federally listed threatened and endangered species through direct disturbance of listed plants and animals, impacts to their habitats, and/or creation of a collision hazard for listed birds and bats. USFWS recommendations published in updated October 2016 Guidelines for Communication Tower and Antenna Consultation in New Jersey and the 2013 USFWS Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning, state the following requirements as it pertains to preventing adverse effects to migratory birds:

- Collocation of the communications equipment on an existing communication tower or other structure (e.g., billboard, water and transmission tower, distribution pole, or building mount) is strongly recommended.
- If collocation is not feasible and a new tower or towers are to be constructed, it is strongly recommended that the new tower(s) should be not more than 199 feet above ground level (AGL), and that construction techniques should not require guy wires. Such towers should be unlighted if Federal Aviation Administration (FAA) regulations and lighting standards permit.
- If constructing multiple towers, the cumulative impacts of all the towers to migratory birds – especially to Birds of Conservation Concern (FWS 2008) and threatened and endangered species, as well as the impacts of each individual tower, should be considered during the development of a project.
- The topography of the proposed tower site and surrounding habitat should be clearly noted, especially in regard to surrounding hills, mountains, mountain passes, ridge lines, rivers, lakes, wetlands, and other habitat types used by raptors, Birds of Conservation Concern, and state and federally listed species, and other birds of concern.
- If at all possible, new towers should be sited within existing "antenna farms" (i.e., clusters of towers), in degraded areas (e.g., strip mines or other heavily industrialized areas), in commercial agricultural lands, in Superfund sites, or other areas where bird habitat is poor or marginal.
- If taller (> 199 ft AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used.
- Tower designs using guy wires for support, which are proposed to be located in known raptor or waterbird concentrations areas, daily movement routes, major diurnal migratory bird movement routes, staging areas, or stopover sites, should have daytime visual markers or bird deterrent devices installed on the wires to prevent collisions by these diurnally moving species.
- Towers and appendant facilities should be designed, sited, and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint."
- If, prior to tower design, siting and construction, if it has been determined that a significant number of breeding, feeding and roosting birds, especially of Birds of Conservation Concern,



state or federally-listed bird species, and eagles are known to habitually use the proposed tower construction area, relocation to an alternate site is highly recommended.

- Security lighting for on-ground facilities, equipment and infrastructure should be motion- or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination, but still allow safe nighttime access to the site.
- Representatives from the USFWS or researchers from the Research Subcommittee of the Communication Tower Working Group should be allowed access to the site to evaluate bird activity as deemed necessary.
- Towers no longer in use, not re-licensed by the FCC for use, or determined to be obsolete should be removed from the site within 12 months of cessation of use.
- In order to obtain information on the usefulness of these guidelines in preventing bird strikes and better understanding impacts from habitat fragmentation, please advise USFWS personnel of the final location and specifications of the proposed tower, and which measures recommended in these guidelines were implemented.

Most applicable requirements were considered for the siting and design of the proposed project and were adhered to through implementing certain mitigating factors such as tower siting in a minimally sensitive areas and eliminating the need for guy wires or FAA obstruction lighting. However, the proposed project is to be more than 199 feet above ground level. Therefore, not all requirements are met and impacts to migratory birds could be a possibility.

As indicated previously, the USFWS was consulted on May 22, 2018 for comment or approval of this project. A response was received on June 7, 2018 indicating that no further consultation pursuant to the ESA is required with the USFWS. ***However, the Service does recommend that the proposed work abides by the April 2018 “Migratory Bird Treaty Act Conservation Opportunities Revisions to Federal Aviation Administration Obstruction Marking and Lighting Advisory Circular” recommended best practices on lightning for towers taller than 199 feet*** (See in Attachment C). It summarizes that the revised advisory circular prescribes:

- Effective immediately, all new towers >350 feet AGL may only use flashing obstruction lighting
- Effective 15 September 2016, all towers between 151 and 350 feet AGL will employ only flashing L-810 side lights, after which all new towers >150 feet AGL may only use flashing obstruction lights
- Aircraft Detection Lighting Systems (ADLS) may be used on all towers – ADLS are sensor-based lighting systems that automatically activate the obstruction lights upon the radar detection of aircraft approaching the obstruction. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of obstruction lights.

## **Critical Habitats**

As indicated in the previous section of this document, the NHP and the USFWS has indicated that no critical habitat is known to occur within the immediate vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the ESA is required by the USFWS and NJDEP.

## **Historic Sites**

According to the EDR *NEPACheck*® Report, the project site is not listed in the NRHP. Pursuant to Section 106 of the NHPA as amended, E2PM has undertaken a historical investigation for the proposed tower installation in Wanaque, New Jersey. Based on a review of the records at the New Jersey State Historic Preservation Office (NJ SHPO) and a site visit, E2PM has determined that there are no listed or eligible for listing in the National Register of Historic Places (NRHP) historic properties located within either the Area of Potential Effects (APE) for Direct Effects, or the Area of Potential Effects (APE) for Indirect Effects. The APE for Direct Effects encompasses the area that will be directly affected by the

installation of the proposed wireless telecommunications facility. The APE for Direct Effects includes Block 250, Lot 1, which is 1 Skyline Drive, Borough of Wanaque, NJ 07465.

The APE for Indirect Effects encompasses the area from which the proposed wireless telecommunications facility may be visible. A 1-mile radius APE was used based on the language contained within Section VI, Part C, 4a of the 2005 Nationwide Programmatic Agreement which recommends that “the presumed APE for visual effects for construction of new Facilities is the area from which the Tower will be visible: within a mile from the tower site if the proposed Tower is 200 feet or more in overall height”.

The project site sits atop Ramapo Mountain, in Ramapo Mountain State Forest, at an elevation of 880 feet amsl. The geographic area within the APE therefore slopes away from the site in almost every direction and is heavily wooded. Skyline Drive is the only paved road in the radius, with the exception of a few residential streets within a mid-late 20<sup>th</sup> century residential development to the northwest.

A review of historic and cartographic documents pertaining to the development of the APE – direct effects was conducted at the New Jersey State Library, the New Jersey State Museum, and the New Jersey Historic Preservation Office, all located in Trenton, as well as through online sources. As a result of this research, the APE – direct effects is characterized as historically undeveloped woodland. More specifically, the 1861 Hopkins *Map of Bergen and Passaic Counties, New Jersey* indicates no historic structures or farmsteads situated proximal to the APE – direct effects. The closest developed areas are located more than 1,000 feet (304.8 meters) to the west and across New Jersey State Route 284 (1861 Hopkins; DE Figure 1). Historic aerial images from 1930 show a continued lack of development near the APE – direct effects (USDA 1930; DE Figure 2). Historic aerial imagery provided by [historicaerials.com](http://historicaerials.com) (which cannot be reproduced due to copyright, but which are accessible at [www.historicaerials.com](http://www.historicaerials.com)), shows that the APE - direct effects remained undeveloped throughout much of the twentieth century until around 1966 when it appears the tower is present (NETR 2018). No further changes are noted within the APE – direct effects.

Archaeological site location predictive models indicate that Native American sites are commonly found in undisturbed areas in close proximity (within 500 feet) to sources of surface potable water with slopes less than 10-15 percent. The APE – direct effects sits on an artificially leveled portion of the downslope of a ridge with slopes of 15-35%. The soils are described as rocky outcrop and rock outcrops and boulders litter the landscape. There are no previously identified archaeological sites recorded proximal to the APE – direct effects and no nearby sources of surface potable water or standing wetlands. Based upon the environmental characteristics of the APE – direct effects, particularly the rocky soils, steep slopes, and lack of potable water sources, it is characterized as having no sensitivity for potential prehistoric activity and/or site locations. In addition, given that historic mapping indicated no previously documented historic structures within or proximal (within 300 feet) to the APE – direct effects, it is considered to have low to no sensitivity to contain previously undocumented historic archaeological resources.

Based upon the available information, the APE – direct effects is assessed as having low to no sensitivity to contain previously undocumented prehistoric and/or historic archaeological resources. As a result, the project will not affect any archaeological resources and no further archaeological work is recommended for the project as currently designed.

Based on these findings, there are no listed or eligible for listing in the National Register of Historic Places (NRHP) historic properties located within either the APE for Direct Effects, or the APE for Indirect Effects.

On April 4, 2018, E2PM submitted their findings to the NJ SHPO. On May 3, 2018, the NJHPO requested more information which was subsequently provided on May 4, 2018. The NJ SHPO did not provide comments within the 30-day review period. According to the 2005 NPA, this establishes a presumption that the NJ SHPO concurs with the applicant’s determination that there are no sites,

structures or objects listed on, or determined eligible for listing on the National Register of Historic Places located within the APE for Direct Effects and that there are no sites, structures or objects listed in, or determined eligible for listing in the National Register of Historic Places located within the project's APE for Indirect Effects. The Section 106 process is therefore complete.

Refer to Attachment C for a copy of E2PM's findings, consultation information with NJ SHPO and status provided by the FCC website. Refer to Attachment C for a copy of the complete FCC Form 620 submission and notification.

### **Native American Religious Sites**

The EDR *NEPACheck*® Report revealed that the subject property is not located on a designated Indian reservation. The proposed work must complete the participation of Indian Tribes Organization Pursuant to Section IV of the NHPA. Several Tribes were identified through the Tower Construction Notification System (TCNS) (TCNS # 168574); the Delaware Nation, Narragansett Indian Tribe, Keweenaw Bay Indian Community, Bad River Band of Lake Superior Tribe of Chippewa Indians, Red Cliff Band of Lake Superior Tribe of Chippewa Indians, Eastern Shawnee Tribe of Oklahoma, Wyandotte Nation, Shawnee Tribe, Lac Du Flambeau Band of Lake Superior Tribe of Chippewa Indians, and the Delaware Tribe. The identified tribes were contacted and indicated either no interest in the proposed project site or indicated that no known historic properties would be negatively impacted by the construction of the proposed facility or were unresponsive and have been referred to the FCC for final contact and the appropriate waiting period has expired. Native American consultation is complete.

Refer to Attachment C for copies of tribal consultation letters and responses.

### **Floodplain**

According to the Federal Emergency Management Agency (FEMA) GIS databases (Panel #'s 34031C0142F and 34003C0042G, as well as the NJDEP FHA mapping, the subject property is not located within a 100-year or 500-year flood plain or flood hazard area and flood plain/flood hazard areas are not located proximate to the subject property (See FEMA Flood map in Attachment C)

### **Surface Features**

Review of the project scope revealed that the proposed installation would not result in any changes to surface features such as wetland fill, deforestation, or water diversion. Pursuant to review of the NJDEP's GIS databases, there are no surface water resources (i.e. rivers, streams, lakes, ponds) located within at least 300 feet of the subject property.

According to the NJDEP's GIS databases, a large area of wetlands is mapped as being located just off the northeastern corner of the subject property. More accurately, as part of the proposed project, wetlands located on and/or proximate to the subject property were delineated, survey-located, and mapped by VS Land Data on October 6, 2016. A relatively large area of wetlands was delineated as occupying the northeast corner of the subject property and extending off-site to the east/southeast. At their closest point, the delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, as shown on the Final Site Plans, the 8-foot tall chain-link fence is proposed to be installed along the outside limits of the 150-foot transition area.

### **Summary**

Based on the information reviewed and as outlined in the proposed NEPA Checklist questions 1 through 10, E2PM identified no environmental effects from implementation of the proposed project. It is E2PM's professional opinion that an Environmental Assessment (EA) is not required for this project.

However, as indicated in previously, the USFWS indicated in a June 7, 2018 that *“the Service does recommend that the proposed work abides by the April 2018 “Migratory Bird Treaty Act Conservation Opportunities Revisions to Federal Aviation Administration Obstruction Marking and Lighting Advisory Circular” recommended best practices on lightning for towers taller than 199 feet* (See in Attachment C). It summarizes that the revised advisory circular prescribes:

- Effective immediately, all new towers >350 feet AGL may only use flashing obstruction lighting
- Effective 15 September 2016, all towers between 151 and 350 feet AGL will employ only flashing L-810 side lights, after which all new towers >150 feet AGL may only use flashing obstruction lights
- Aircraft Detection Lighting Systems (ADLS) may be used on all towers – ADLS are sensor-based lighting systems that automatically activate the obstruction lights upon the radar detection of aircraft approaching the obstruction. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of obstruction lights.

### **Limitations**

The conclusions presented in this report are professional opinions based solely upon E2PM's interpretation of the information reviewed. It should be recognized that this study was not intended to be a definitive assessment of environmental impacts at the subject property and focused solely on the completion of NEPA Checklist questions 1 through 10. Given that the scope of services for this assessment was limited, it is possible that current unrecognized environmental impacts may exist at the property.

If you have any comments or questions, please contact Christopher Lanna, Natural Resource Manager, at (973) 299-5200.

Sincerely,



Christopher Lanna

Attachment A - NEPA Checklist

Attachment B – EDR *NEPACheck*® Report

Attachment C – Agency Letters/Submittals

Attachment D – Photo Log

Attachment E – Site Location Map and Lease Exhibits

### **References**

Environmental Data Resources, Inc. (EDR), EDR *NEPACheck*® May 25, 2018

USFWS Information, Planning and Conservation (IPAC) System (Initial May 2018; Updated September 2018))

USFWS New Jersey Bat Municipalities Lists

(<http://www.fws.gov/northeast/njfieldoffice/pdf/battowns.pdf>) (April 2017)

USFWS Northern Long-Eared Bat (NLEB) Section 7 Consultation Requirements

USFWS October 2016 Guidelines for Communication Tower and Antenna Consultation in New Jersey

**ATTACHMENT A**

**NATIONAL ENVIRONMENTAL POLICY ACT**  
**CHECKLIST**

## NEPA Compliance

YES	UNK	NO	<b>Site Name: Subcarrier Communications – Wanaque Tower</b> <b>Site Address: 1 Skyline Drive, Wanaque, Passaic County, New Jersey</b> <b>Date: September, 12, 2018</b>
		√	1. Will the facility be located in an officially designated wilderness area? <b>Notes:</b> Subsequent review of the Environmental Data Resources, Inc. (EDR) <i>NEPACheck</i> ® Report revealed that the proposed cellular site would not be located in an officially designated wilderness area.
		√	2. Will the facility be located in an officially designated wildlife preserve? <b>Notes:</b> Subsequent review of the EDR <i>NEPACheck</i> ® Report revealed that the proposed cellular site would not be located in an officially designated wildlife preserve.
		√	3. May the facility affect listed threatened or endangered species? (list appears in 50 CFR 17.11, 17.22, 222.23(a), and 227.4) <b>Notes:</b> Based on the EDR <i>NEPACheck</i> ® Report, US Fish and Wildlife Service (FWS) and the New Jersey Department of Environmental Protection (NJDEP) Natural Heritage (NH) Database, the proposed cellular site will not affect any listed threatened or endangered species. The USFWS official species IPaC list identified the endangered Indiana Bat and threatened Northern Long Eared Bat (NLEB) and Small Whorled Pogonia potentially existing within the vicinity of the project area. The NJDEP Natural Heritage Program indicating that additional species of concern were listed for the site including the endangered or threatened Barred Owl, Red-Shouldered Hawk, Grey Petaltail, Bobcat, Northern Myotis, Timber Rattlesnake, Wood Turtle, and several other special concern species.  With the project area listed on the IPaC as having the potential for NLEB species or habitat, further review of USFWS's Bat Municipality List (last updated April 2017) indicated that Wanaque Township was listed as having "hibernation/maternality" occurrence for NLEB. The listing for Wanaque was also depicted as red text; therefore, it is a municipality with documented NLEB roost trees and is a municipality that does have or is within .25 miles from a known hibernaculum. Although listed in red text with the potential of Indiana Bat or NLEB to exist within the surrounding vicinity of the proposed area of disturbance for the project; no tree or vegetation removal is proposed for this project; therefore, impacts to possible NLEB habitat, if present, is not anticipated.  This project meets all listed USFWS requirements with the exception of the proposed construction being over 200 feet in height. Therefore, based on regulations set forth by the USFWS, further consultation with the USFWS was required for the implementation of the proposed project. A full USFWS consultation package was sent to USFWS on May 22, 2018 for further review, comment and/or approval of the project. On June 7, 2018, USFWS responded indicating that the Service concurs that the proposed project is not likely to adversely affect federally listed or candidate species at the project site.  As it pertains to migratory birds, the USFWS was consulted on May 22, 2018 for comment or approval of this project. A response was received on June 7, 2018 indicating that no further consultation pursuant to the ESA is required with the USFWS. However, the Service does recommend that the proposed work abides by the April 2018 "Migratory Bird Treaty Act Conservation Opportunities Revisions to Federal Aviation Administration Obstruction Marking and Lighting Advisory Circular" recommended best practices on lightning for towers taller than 199 feet (Attachment C). It summarizes that the revised advisory circular prescribes: <ul style="list-style-type: none"> <li>• Effective immediately, all new towers &gt;350 feet AGL may only use flashing obstruction lighting</li> <li>• Effective 15 September 2016, all towers between 151 and 350 feet AGL will employ only flashing L-810 side lights, after which all new towers &gt;150 feet AGL may only use flashing obstruction lights</li> </ul>

## NEPA Compliance

			<ul style="list-style-type: none"> <li>Aircraft Detection Lighting Systems (ADLS) may be used on all towers – ADLS are sensor-based lighting systems that automatically activate the obstruction lights upon the radar detection of aircraft approaching the obstruction. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of obstruction lights.</li> </ul>
		√	<p>4. May the facility threaten any designated critical habitats? (list appears in 50 CFR 17.95, 17.96, and Part 226.)</p> <p><b>Notes:</b> Refer to Notes for Question 3 above.</p>
		√	<p>5. May the facility jeopardize the continued existence of any proposed endangered or threatened species?</p> <p><b>Notes:</b> Refer to Notes for Question 3 above.</p>
		√	<p>6. May the facility result in the destruction or adverse modification of proposed critical habitats?</p> <p><b>Notes:</b> Refer to Notes for Question 3 above.</p>
		√	<p>7. May the facility affect districts, sites, buildings, structures, or objects significant in American history, architecture, archeology, engineering or culture that are listed or are eligible to be listed in the National Register of Historic Places (NRHP) (List appears in 16 U.S.C 470w (5), 36 CFR 60 and 800.)</p> <p><b>Notes:</b> According to the EDR NEPACheck® Report, the project site is not listed in the NRHP. Pursuant to Section 106 of the NHPA as amended, E2PM has undertaken a historical investigation for the proposed tower installation in Wanaque, New Jersey. E2PM determined that there are no listed or eligible for listing in the National Register of Historic Places (NRHP) historic properties located within either the APE for Direct Effects or Indirect Effects. (See full summary provided in the Report)</p> <p>On April 4, 2018, E2PM submitted their findings to the NJ SHPO. On May 3, 2018, the NJHPO requested more information which was subsequently provided on May 4, 2018. The NJ SHPO did not provide comments within the 30-day review period. According to the 2005 NPA, this establishes a presumption that the NJ SHPO concurs with the applicant's determination that there are no sites, structures or objects listed on, or determined eligible for listing on the National Register of Historic Places located within the APE for Direct Effects and that there are no sites, structures or objects listed in, or determined eligible for listing in the National Register of Historic Places located within the project's APE for Indirect Effects. The Section 106 process is therefore complete.</p>
		√	<p>8. May the facility affect Native American religious sites?</p> <p><b>Notes:</b> The EDR NEPACheck® Report revealed that the subject property is not located on a designated Indian reservation. The proposed work must complete the participation of Indian Tribes Organization Pursuant to Section IV of the NHPA. Several Tribes were identified through the Tower Construction Notification System (TCNS) (TCNS # 168574); the Delaware Nation, Narragansett Indian Tribe, Keweenaw Bay Indian Community, Bad River Band of Lake Superior Tribe of Chippewa Indians, Red Cliff Band of Lake Superior Tribe of Chippewa Indians, Eastern Shawnee Tribe of Oklahoma, Wyandotte Nation, Shawnee Tribe, Lac Du Flambeau Band of Lake Superior Tribe of Chippewa Indians, and the Delaware Tribe. The identified tribes were contacted and indicated either no interest in the proposed project site or indicated that no known historic properties would be negatively impacted by the construction of the proposed facility or were unresponsive and have been referred to the FCC for final contact and the appropriate waiting period has expired. Native American consultation is complete.</p>
		√	<p>9. Will the facility be located in a flood plain? (See Executive Order 11988)</p> <p><b>Notes:</b> According to the Federal Emergency Management Agency (FEMA) GIS databases (Panel #'s 34031C0142F and 34003C0042G, as well as the NJDEP FHA mapping, the subject property is not located within a 100-year or 500-year flood plain or flood hazard area and flood plain/flood hazard areas are not located proximate to the subject property.</p>

## NEPA Compliance

		✓	<p>10. Will the construction of the facility involve significant change in surface features such as wetland fill, deforestation, or water diversion? (For wetlands on Federal property, see Executive Order 11990)</p> <p><b>Notes:</b> Review of the project scope revealed that the proposed installation would not result in any changes to surface features such as wetland fill, deforestation, or water diversion. Pursuant to review of the NJDEP's GIS databases, there are no surface water resources (i.e. rivers, streams, lakes, ponds) located within at least 300 feet of the subject property.</p> <p>According to the NJDEP's GIS databases, wetlands are mapped off the northeastern corner of the subject property. As part of the proposed project, wetlands located on and/or proximate to the subject property were delineated, survey-located, and mapped by VS Land Data on October 6, 2016. At their closest point, the delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, as shown on the Final Site Plans, the 8-foot tall chain-link fence is proposed to be installed outside the limits of the 150-foot transition area.</p>
--	--	---	--

Completed by: Christopher Lanna  
**Name**

Natural Resource Manager  
**Title**

  
**Signature**



**ATTACHMENT B**

**ENVIRONMENTAL DATA RESOURCES, INC. NEPACHECK<sup>®</sup> REPORT**

**Wanaque Tower**

1 Skyline Dr  
Wanaque, NJ 07465

Inquiry Number: 5312232.1s  
May 25, 2018

## EDR NEPASearch™ Map Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

## TABLE OF CONTENTS

<b><u>SECTION</u></b>	<b><u>PAGE</u></b>
<b>EDR NEPA Search Description.....</b>	<b>1</b>
<b>Map Findings Summary.....</b>	<b>2</b>
<b>Natural Areas.....</b>	<b>3</b>
<b>Historic Sites.....</b>	<b>25</b>
<b>Flood Plain.....</b>	<b>29</b>
<b>Wetlands.....</b>	<b>31</b>
<b>Wetlands Classification System.....</b>	<b>41</b>
<b>FCC &amp; FAA Sites.....</b>	<b>45</b>
<b>Key Contacts and Government Records Searched.....</b>	<b>49</b>

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EDR NEPASearch DESCRIPTION

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects and actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The EDR NEPASearch Map Report provides information which may be used, in conjunction with additional research, to determine whether a proposed site or action will have significant environmental effect.

### TARGET PROPERTY ADDRESS

WANAQUE TOWER  
1 SKYLINE DR  
WANAQUE, NJ 07465

Inquiry #: 5312232.1s  
Date: 5/25/18

### TARGET PROPERTY COORDINATES

Latitude (North):	41.054317 - 41° 3' 15.5"
Longitude (West):	74.254539 - 74° 15' 16.3"
Universal Transverse Mercator:	Zone 18
UTM X (Meters):	562644.6
UTM Y (Meters):	4544842.5
State Plane X (Feet):	559817.2
State Plane Y (Feet):	809080.9

The report provides maps and data for the following items (where available). Search results are provided in the Map Findings Summary on page 2 of this report.

#### **Section**

#### **Regulation**

##### **Natural Areas Map**

- Federal Lands Data:
  - Officially designated wilderness areas
  - Officially designated wildlife preserves, sanctuaries and refuges
  - Wild and scenic rivers
  - Fish and Wildlife
- Threatened or Endangered Species, Fish and Wildlife, Critical Habitat Data (where available)

47 CFR 1.1307(1)  
47 CFR 1.1307(2)  
  
40 CFR 6.302(e)  
40 CFR 6.302  
47 CFR 1.1307(3); 40 CFR 6.302

##### **Historic Sites Map**

- National Register of Historic Places
- State Historic Places (where available)
- Indian Reservations

47 CFR 1.1307(4); 40 CFR 6.302

##### **Flood Plain Map**

- National Flood Plain Data (where available)

47 CFR 1.1307(6); 40 CFR 6.302

##### **Wetlands Map**

- National Wetlands Inventory Data (where available)

47 CFR 1.1307(7); 40 CFR 6.302

##### **FCC & FAA Map**

- FCC antenna/tower sites, FAA Markings and Obstructions, Airports, Topographic gradient

47 CFR 1.1307(8)

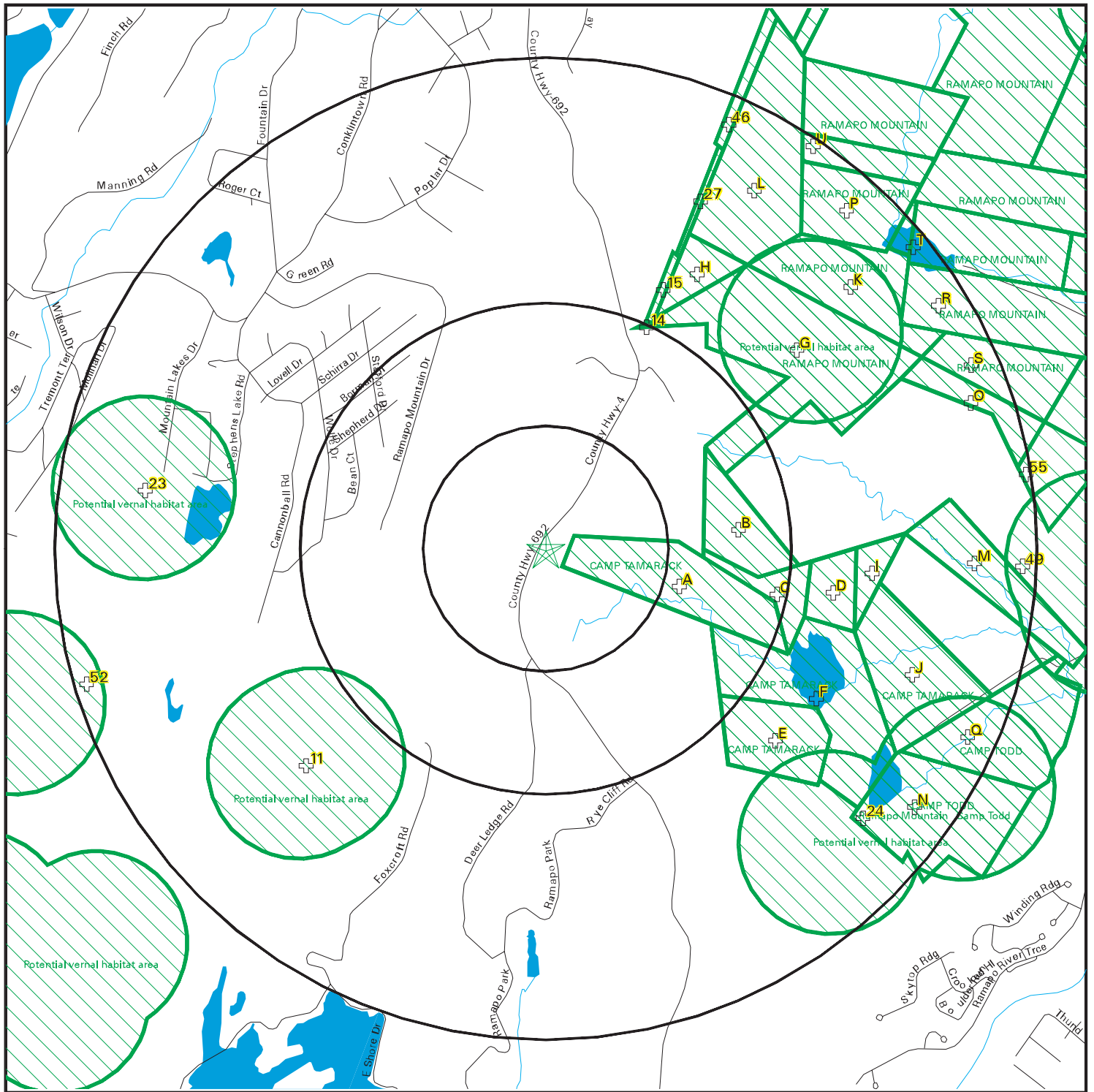
#### **Key Contacts and Government Records Searched**

## MAP FINDINGS SUMMARY

The databases searched in this report are listed below. Database descriptions and other agency contact information is contained in the Key Contacts and Government Records Searched section on page 49 of this report.

Applicable Regulation from 47 CFR/FCC Checklist	Database	Search Distance (Miles)	Within Search	Within 1/8 Mile
<b>NATURAL AREAS MAP</b>				
1.1307a (1) Officially Designated Wilderness Area	US Federal Lands	1.00	NO	NO
	US Wilderness Preservation	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	US Federal Lands	1.00	NO	NO
	US NCED	1.00	NO	NO
	US Critical Water Habitat	1.00	NO	NO
	US Scenic River	1.00	NO	NO
	NJ Open Space - County Owned	1.00	YES	YES
	US Critical Land Habitat	1.00	NO	NO
	US ACEC	1.00	NO	NO
	NJ Open Space - State Owned	1.00	YES	YES
	NJ Vernal Habitat	1.00	YES	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	US Endangered Species	County	YES	N/A
1.1307a (3) Threatened or Endangered Species or Critical Habitat	NJ Natural Heritage Priority S	1.00	NO	NO
<b>HISTORIC SITES MAP</b>				
1.1307a (4) Listed or eligible for National Register	NJ Historic Districts	1.00	YES	NO
1.1307a (4) Listed or eligible for National Register	NJ Historic Properties	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	NJ Archaeological Sites	1.00	YES	NO
1.1307a (4) Listed or eligible for National Register	Potomac Heritage National Scen	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	Natchez Trace National Scenic	1.00	NO	NO
	Indian Reservations	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	US Trails	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	National Register of Hist. Pla	1.00	NO	NO
<b>FLOODPLAIN MAP</b>				
1.1307 (6) Located in a Flood Plain	FLOODPLAIN	1.00	YES	NO
<b>WETLANDS MAP</b>				
1.1307 (7) Change in surface features (wetland fill)	NWI	1.00	YES	YES
	NY COASTAL ZONE	20.00	YES	NO
	NJ COASTAL ZONE	20.00	YES	NO
<b>FCC &amp; FAA SITES MAP</b>				
	Cellular	1.00	NO	NO
	Antenna Structure Registration	1.00	NO	NO
	AM Antenna	1.00	YES	NO
	FM Antenna	1.00	NO	NO
	FAA DOF	1.00	YES	YES
	Airports	1.00	NO	---
	Power Lines	1.00	NO	---

# Natural Areas Map



- |                   |                           |
|-------------------|---------------------------|
| ★ Target Property | ⊕ Locations               |
| ≡ Roads           | ▨ Federal Areas           |
| ≡ County Boundary | ▨ Federal Linear Features |
| ≡ Waterways       | ▨ State Areas             |
| ■ Water           | ▨ State Linear Features   |



SITE NAME: Wanaque Tower  
 ADDRESS: 1 Skyline Dr  
 Wanaque NJ 07465  
 LAT/LONG: 41.054319 / 74.254542

CLIENT: E2 Project Management  
 CONTACT: Kristin Tallamy  
 INQUIRY #: 5312232.1s  
 DATE: May 25, 2018

## NATURAL AREAS MAP FINDINGS

### Federal Endangered Species from the U.S. Fish and Wildlife for PASSAIC County

Group:Mammals

Common Name: Northern Long-Eared Bat  
Status: Threatened

Scientific Name: *Myotis septentrionalis*

### Federal Endangered Species from the U.S. Fish and Wildlife for NJ State

Group:Birds

Common Name: Golden-winged warbler  
Status: Under Review

Scientific Name: *Vermivora chrysoptera*

Common Name: Migrant loggerhead shrike  
Status: Species of Concern

Scientific Name: *Lanius ludovicianus migrans*

Common Name: Black Rail  
Status: Under Review

Scientific Name: *Laterallus jamaicensis*

Group:Flowering Plants

Common Name: No common name  
Status: Species of Concern

Scientific Name: *Hypericum adpressum*

Common Name: [Unnamed] spring-beauty  
Status: Species of Concern

Scientific Name: *Claytonia virginica hammondiae*

Common Name: [Unnamed] bur-marigold  
Status: Species of Concern

Scientific Name: *Bidens bidentoides bidentoides*

Common Name: Variable sedge  
Status: Species of Concern

Scientific Name: *Carex polymorpha*

Common Name: Doll's daisy  
Status: Under Review

Scientific Name: *Boltonia montana*

Common Name: [Unnamed] pondweed  
Status: Species of Concern

Scientific Name: *Potamogeton confervoides*

Common Name: Long's bulrush  
Status: Species of Concern

Scientific Name: *Scirpus longii*

Common Name: Awned meadowbeauty  
Status: Species of Concern

Scientific Name: *Rhexia aristosa*

Common Name: [Unnamed] blazingstar  
Status: Species of Concern

Scientific Name: *Liatris borealis*

Common Name: [Unnamed] sedge  
Status: Species of Concern

Scientific Name: *Carex schweinitzii*

Common Name: Alleghany plum  
Status: Species of Concern

Scientific Name: *Prunus alleghaniensis*

Common Name: Long Beach seedbox  
Status: Under Review

Scientific Name: *Ludwigia brevipes*

Common Name: Ground-spreading tick-trefoil  
Status: Species of Concern

Scientific Name: *Desmodium humifusum*

## NATURAL AREAS MAP FINDINGS

### Federal Endangered Species from the U.S. Fish and Wildlife for NJ State (Continued...)

Common Name: Nuttall's micranthemum	Scientific Name: Micranthemum micranthemoides
Status: Species of Concern	

Common Name: Pickering's morning-glory	Scientific Name: Stylisma pickeringii
Status: Species of Concern	

Common Name: No common name	Scientific Name: Suaeda rolandii
Status: Species of Concern	

Common Name: Pine barrens boneset	Scientific Name: Eupatorium resinosum
Status: Species of Concern	

#### Group:Insects

Common Name: Tawny crescent	Scientific Name: Phyciodes batesii
Status: Species of Concern	

Common Name: Cobblestone tiger beetle	Scientific Name: Cicindela marginipennis
Status: Under Review	

Common Name: Lateral bluet	Scientific Name: Enallagma laterale
Status: Species of Concern	

Common Name: Precious underwing	Scientific Name: Catocala pretiosa pretiosa
Status: Species of Concern	

Common Name: Doll's merolonche	Scientific Name: Merolonche dolli
Status: Species of Concern	

Common Name: Eastern beard grass Skipper	Scientific Name: Atrytone arogos arogos
Status: Species of Concern	

Common Name: Buchholz' dart moth	Scientific Name: Agrotis buchholzi
Status: Species of Concern	

Common Name: Daecke's pyralid moth	Scientific Name: Crambus daeckeellus
Status: Species of Concern	

Common Name: Regal fritillary	Scientific Name: Speyeria idalia
Status: Under Review	

Common Name: Hebard's noctuid moth	Scientific Name: Erythroecia hebardei
Status: Species of Concern	

Common Name: Carter's noctuid moth	Scientific Name: Spartiniophaga carterae
Status: Species of Concern	

Common Name: Grizzled skipper	Scientific Name: Pyrgus centaureae
Status: Species of Concern	

Common Name: Annoited sawfly noctuid moth	Scientific Name: Pyreferra ceromatica
Status: Species of Concern	

Common Name: Banded bog skimmer	Scientific Name: Williamsonia lintneri
Status: Species of Concern	



# NATURAL AREAS MAP FINDINGS

## Federal Endangered Species from the U.S. Fish and Wildlife for NJ State (Continued...)

Common Name: [Unnamed] noctuid moth  
Status: Species of Concern

Scientific Name: Papaipema aerata

Common Name: Barrens Dagger Moth  
Status: Species of Concern

Scientific Name: Acronicta albarufa

Common Name: Extra-striped snaketail  
Status: Species of Concern

Scientific Name: Ophiogomphus anomalus

Common Name: Setose Cream and Brown Mottle microcaddisfly  
Status: Under Review

Scientific Name: Oxyethira setosa

Common Name: Morse's Little Plain Brown sedge  
Status: Under Review

Scientific Name: Lepidostoma morsei

Common Name: Monarch butterfly  
Status: Under Review

Scientific Name: Danaus plexippus plexippus

### Group:Mammals

Common Name: Tuckahoe masked shrew  
Status: Species of Concern

Scientific Name: Sorex cinereus nigriculus

### Group:Reptiles

Common Name: Northern Red-bellied cooter  
Status: Under Review

Scientific Name: Pseudemys rubriventris

Common Name: Wood turtle  
Status: Under Review

Scientific Name: Glyptemys insculpta

Common Name: Northern diamondback terrapin  
Status: Species of Concern

Scientific Name: Malaclemys terrapin terrapin

Common Name: Northern pine snake  
Status: Species of Concern

Scientific Name: Pituophis melanoleucus melanoleucus

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

A1  
ESE  
0-1/8 mi  
233

Pams pin: 0242\_1602\_5  
Munid: 0242  
Block: 1602  
Lot: 5  
Part of: Not Reported  
Gisacres: 30.8411

NJOC00000000145  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000145

---

A2  
ESE  
0-1/8 mi  
233

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_601\_4  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000249  
NJ Open Space - County Owned

---

C3  
East  
1/4-1/2 mi  
1696

Pams pin: 0242\_1602\_4  
Munid: 0242  
Block: 1602  
Lot: 4  
Part of: Not Reported  
Gisacres: 8.1196  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000148

NJOC00000000148  
NJ Open Space - State Owned

---

C4  
East  
1/4-1/2 mi  
1696

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_601\_13

NJNACS000000252  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

Managing Agency: Bergen County  
Primary Use: Campground

B5  
East  
1/4-1/2 mi  
1696

NJOC00000000122  
NJ Open Space - State Owned

Pams pin: 0242\_1602\_6  
Munid: 0242  
Block: 1602  
Lot: 6  
Part of: Not Reported  
Gisacres: 15.1891  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000122

B6  
East  
1/4-1/2 mi  
1696

NJNACS0000000135  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_601\_14  
Managing Agency: Bergen County  
Primary Use: Campground

F7  
ESE  
1/4-1/2 mi  
1954

NJOC00000000159  
NJ Open Space - State Owned

Pams pin: 0242\_1503\_1  
Munid: 0242  
Block: 1503  
Lot: 1  
Part of: Not Reported  
Gisacres: 42.2979  
Facility: CAMP TAMARACK  
Owner: Bergen County

## NATURAL AREAS MAP FINDINGS

Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000159

F8  
ESE  
1/4-1/2 mi  
1954

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_701\_2  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000263  
NJ Open Space - County Owned

G9  
ENE  
1/4-1/2 mi  
2035

Pams pin: 0242\_1601\_2  
Munid: 0242  
Block: 1601  
Lot: 2  
Part of: Not Reported  
Gisacres: 59.6175  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000099

NJOC00000000099  
NJ Open Space - State Owned

G10  
ENE  
1/4-1/2 mi  
2035

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0242\_601\_9  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000217  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

11  
SW  
1/4-1/2 mi  
2393

VPH ID: 2834  
Landscape Region: Skylands  
Habitat Type: Potential vernal habitat area  
Acres: 77.6244389472

NJVH00000002834  
NJ Vernal Habitat

E12  
SE  
1/4-1/2 mi  
2445

Pams pin: 0242\_1503\_2  
Munid: 0242  
Block: 1503  
Lot: 2  
Part of: Not Reported  
Gisacres: 19.3898  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000169

NJOC00000000169  
NJ Open Space - State Owned

E13  
SE  
1/4-1/2 mi  
2445

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_701\_1  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000273  
NJ Open Space - County Owned

14  
NNE  
1/4-1/2 mi  
2568

Pams pin: 1613\_251\_1.01  
Munid: 1613

NJOC00000000105  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Block: 251  
Lot: 1.01  
Part of: Not Reported  
Gisacres: .1367  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000105

---

15  
NNE  
1/2-1 mi  
2674

Pams pin: 1611\_752\_9  
Munid: 1611  
Block: 752  
Lot: 9  
Part of: Not Reported  
Gisacres: 1.4403  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000096

NJOC00000000096  
NJ Open Space - State Owned

---

G16  
NE  
1/2-1 mi  
2698

VPH ID: 2873  
Landscape Region: Skylands  
Habitat Type: Potential vernal habitat area  
Acres: 69.8362392233

NJVH00000002873  
NJ Vernal Habitat

---

H17  
NNE  
1/2-1 mi  
2747

NJNACS0000000211  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0242\_601\_8  
Managing Agency: Bergen County  
Primary Use: Campground

H18  
NNE  
1/2-1 mi  
2747

NJOC00000000092  
NJ Open Space - State Owned

Pams pin: 0242\_1601\_1  
Munid: 0242  
Block: 1601  
Lot: 1  
Part of: Not Reported  
Gisacres: 7.9043  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000092

D19  
East  
1/2-1 mi  
2846

NJOC00000000147  
NJ Open Space - State Owned

Pams pin: 0242\_1602\_3  
Munid: 0242  
Block: 1602  
Lot: 3  
Part of: Not Reported  
Gisacres: 8.8366  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000147

D20  
East  
1/2-1 mi  
2846

NJNACS0000000251  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_601\_12  
Managing Agency: Bergen County  
Primary Use: Campground

I21  
East  
1/2-1 mi  
3337

NJOC00000000143  
NJ Open Space - State Owned

Pams pin: 0242\_1602\_2  
Munid: 0242  
Block: 1602  
Lot: 2  
Part of: Not Reported  
Gisacres: 5.3888  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000143

I22  
East  
1/2-1 mi  
3337

NJNACS0000000247  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_601\_11  
Managing Agency: Bergen County  
Primary Use: Campground

23  
West  
1/2-1 mi  
3390

NJVH00000002864  
NJ Vernal Habitat

VPH ID: 2864  
Landscape Region: Skylands  
Habitat Type: Potential vernal habitat area  
Acres: 69.8362392233



## NATURAL AREAS MAP FINDINGS

24  
SE  
1/2-1 mi  
3411

VPH ID: 2829  
Landscape Region: Skylands  
Habitat Type: Potential vernal habitat area  
Acres: 131.635499374

NJVH00000002829  
NJ Vernal Habitat

J25  
ESE  
1/2-1 mi  
3437

Pams pin: 0242\_1604\_3  
Munid: 0242  
Block: 1604  
Lot: 3  
Part of: Not Reported  
Gisacres: 29.9216  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000155

NJOC00000000155  
NJ Open Space - State Owned

J26  
ESE  
1/2-1 mi  
3437

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_701\_5  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000259  
NJ Open Space - County Owned

27  
NNE  
1/2-1 mi  
3446

Pams pin: 1611\_752\_7.01  
Munid: 1611

NJOC00000000068  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Block: 752  
Lot: 7.01  
Part of: Not Reported  
Gisacres: 1.5334  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000068

L28  
NNE  
1/2-1 mi  
3713

Pams pin: 0233\_1\_170  
Munid: 0233  
Block: 1  
Lot: 170  
Part of: Not Reported  
Gisacres: 43.339  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000064

NJOC00000000064  
NJ Open Space - State Owned

L29  
NNE  
1/2-1 mi  
3713

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_170  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000184  
NJ Open Space - County Owned

K30  
NE  
1/2-1 mi  
3744

NJOC00000000091  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Pams pin: 0233\_1\_169  
Munid: 0233  
Block: 1  
Lot: 169  
Part of: Not Reported  
Gisacres: 27.3306  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000091

---

K31  
NE  
1/2-1 mi  
3744

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_169  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000210  
NJ Open Space - County Owned

---

M32  
East  
1/2-1 mi  
3867

Pams pin: 0242\_1603\_10  
Munid: 0242  
Block: 1603  
Lot: 10  
Part of: Not Reported  
Gisacres: 21.5175  
Facility: CAMP TAMARACK  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: Not Reported  
L source: SUR83  
Edr id: NJOC00000000138

NJOC00000000138  
NJ Open Space - State Owned

---

M33  
East  
1/2-1 mi  
3867

NJNACS0000000242  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

Facility Name: Ramapo Mountain Camp Tamarack  
Parcel Code: 0242\_701\_7  
Managing Agency: Bergen County  
Primary Use: Campground

O34  
ENE  
1/2-1 mi  
4233

NJOC00000000110  
NJ Open Space - State Owned

Pams pin: 0242\_1603\_1  
Munid: 0242  
Block: 1603  
Lot: 1  
Part of: Not Reported  
Gisacres: 10.351  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000110

O35  
ENE  
1/2-1 mi  
4233

NJNACS0000000122  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0242\_701\_11  
Managing Agency: Bergen County  
Primary Use: Campground

N36  
SE  
1/2-1 mi  
4347

NJNACS0000000277  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Todd  
Parcel Code: 0242\_701\_3  
Managing Agency: Bergen County  
Primary Use: Campground

## NATURAL AREAS MAP FINDINGS

N37  
SE  
1/2-1 mi  
4347

Pams pin: 0242\_1505\_1  
Munid: 0242  
Block: 1505  
Lot: 1  
Part of: Not Reported  
Gisacres: 37.0337  
Facility: CAMP TODD  
Owner: Bergen County  
Co owners: STATE OF NJ  
Managed by: Not Reported  
Use: GREENWAY  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2005/08  
L source: SUR83  
Edr id: NJOC00000000173

NJOC00000000173  
NJ Open Space - State Owned

P38  
NE  
1/2-1 mi  
4358

Pams pin: 0233\_1\_171  
Munid: 0233  
Block: 1  
Lot: 171  
Part of: Not Reported  
Gisacres: 19.8472  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000074

NJOC00000000074  
NJ Open Space - State Owned

P39  
NE  
1/2-1 mi  
4358

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_171  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000193  
NJ Open Space - County Owned

## NATURAL AREAS MAP FINDINGS

Q40  
ESE  
1/2-1 mi  
4392

Pams pin: 0242\_1604\_2  
Munid: 0242  
Block: 1604  
Lot: 2  
Part of: Not Reported  
Gisacres: 31.4593  
Facility: CAMP TODD  
Owner: Bergen County  
Co owners: STATE OF NJ  
Managed by: Not Reported  
Use: GREENWAY  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2005/08  
L source: SUR83  
Edr id: NJOC00000000163

NJOC00000000163  
NJ Open Space - State Owned

Q41  
ESE  
1/2-1 mi  
4392

Facility Name: Ramapo Mountain Camp Todd  
Parcel Code: 0242\_701\_4  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000267  
NJ Open Space - County Owned

R42  
ENE  
1/2-1 mi  
4517

Pams pin: 0233\_1\_164  
Munid: 0233  
Block: 1  
Lot: 164  
Part of: Not Reported  
Gisacres: 50.6038  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83

NJOC00000000098  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Edr id: NJOC00000000098

R43  
ENE  
1/2-1 mi  
4517

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_164  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000216  
NJ Open Space - County Owned

S44  
ENE  
1/2-1 mi  
4538

Pams pin: 0233\_1\_163  
Munid: 0233  
Block: 1  
Lot: 163  
Part of: Not Reported  
Gisacres: 19.0247  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC000000000107

NJOC000000000107  
NJ Open Space - State Owned

S45  
ENE  
1/2-1 mi  
4538

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_163  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS0000000119  
NJ Open Space - County Owned

46  
NNE  
1/2-1 mi  
4694

NJOC000000000063  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

Pams pin: 1611\_752\_10  
Munid: 1611  
Block: 752  
Lot: 10  
Part of: Not Reported  
Gisacres: 4.2692  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000063

T47  
NE  
1/2-1 mi  
4895

NJOC00000000080  
NJ Open Space - State Owned

Pams pin: 0233\_1\_168  
Munid: 0233  
Block: 1  
Lot: 168  
Part of: Not Reported  
Gisacres: 1.8708  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000080

T48  
NE  
1/2-1 mi  
4895

NJNACS000000199  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_168  
Managing Agency: Bergen County  
Primary Use: Campground

49  
East  
1/2-1 mi  
4945

NJVH00000002855  
NJ Vernal Habitat



## NATURAL AREAS MAP FINDINGS

VPH ID: 2855  
Landscape Region: Skylands  
Habitat Type: Vernal habitat area  
Acres: 90.9976747636

T50  
NE  
1/2-1 mi  
4964

NJOC00000000081  
NJ Open Space - State Owned

Pams pin: 0233\_1\_167  
Munid: 0233  
Block: 1  
Lot: 167  
Part of: Not Reported  
Gisacres: 24.8318  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000081

T51  
NE  
1/2-1 mi  
4964

NJNACS0000000200  
NJ Open Space - County Owned

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_167  
Managing Agency: Bergen County  
Primary Use: Campground

52  
WSW  
1/2-1 mi  
4975

NJVH00000002840  
NJ Vernal Habitat

VPH ID: 2840  
Landscape Region: Skylands  
Habitat Type: Potential vernal habitat area  
Acres: 69.8362392232

## NATURAL AREAS MAP FINDINGS

U53  
NNE  
1/2-1 mi  
4996

Pams pin: 0233\_1\_172  
Munid: 0233  
Block: 1  
Lot: 172  
Part of: Not Reported  
Gisacres: 9.5517  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000067

NJOC00000000067  
NJ Open Space - State Owned

U54  
NNE  
1/2-1 mi  
4996

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_172  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000187  
NJ Open Space - County Owned

55  
East  
1/2-1 mi  
5149

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0242\_701\_12  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000130  
NJ Open Space - County Owned

U56  
NNE  
1/2-1 mi  
5257

Pams pin: 0233\_1\_173  
Munid: 0233

NJOC00000000065  
NJ Open Space - State Owned

## NATURAL AREAS MAP FINDINGS

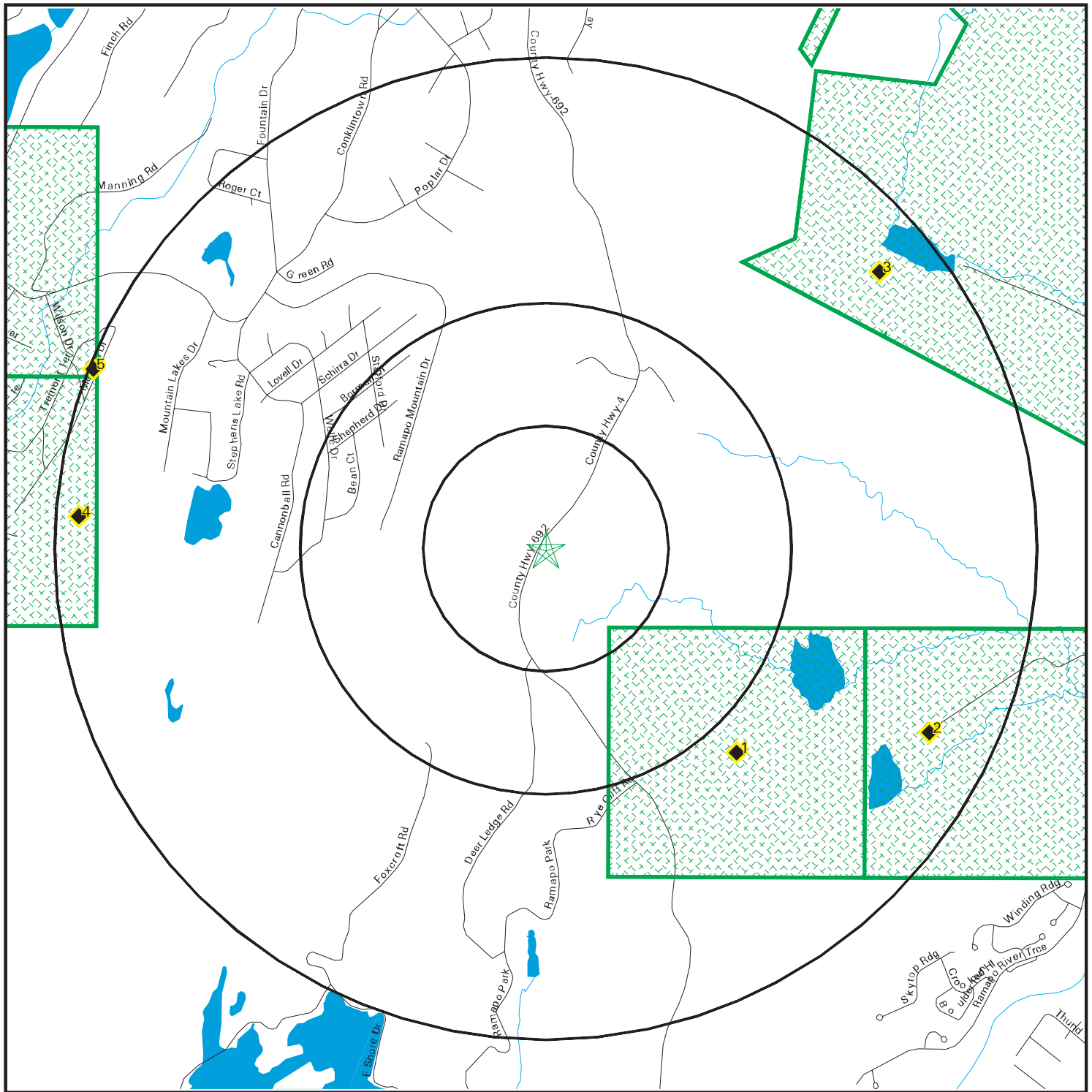
Block: 1  
Lot: 173  
Part of: Not Reported  
Gisacres: 27.9563  
Facility: RAMAPO MOUNTAIN  
Owner: Bergen County  
Co owners: Not Reported  
Managed by: Not Reported  
Use: CAMP  
Old block: Not Reported  
Old lot: Not Reported  
L entry: 2002/02  
L source: SUR83  
Edr id: NJOC00000000065

U57  
NNE  
1/2-1 mi  
5257

Facility Name: Ramapo Mountain Camp Glen Gray  
Parcel Code: 0233\_1\_173  
Managing Agency: Bergen County  
Primary Use: Campground

NJNACS000000185  
NJ Open Space - County Owned

# Historic Sites Map



- ★ Target Property
- ◇ Historic Sites
- ◇ Federal Historic Areas
- ◇ State Historic Areas
- ◇ US Indian Reservations
- ◇ Scenic Trail
- Streets
- County Boundary
- Waterways
- Water



SITE NAME: Wanaque Tower  
 ADDRESS: 1 Skyline Dr  
 Wanaque NJ 07465  
 LAT/LONG: 41.054319 / 74.254542

CLIENT: E2 Project Management  
 CONTACT: Kristin Tallamy  
 INQUIRY #: 5312232.1s  
 DATE: May 25, 2018

# HISTORIC SITES MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

1  
SE  
1/8-1/4 mi  
1085  
Archaeological Grid: EG45  
Not Reported  
NJ

NJSHPOG00000328  
NJ Archaeological Sites

NJ Site Grid Cell: EG45  
NJ Site Grid Label: Archaeological Grid: EG45  
Designation Status: IDENTIFIED  
Notes: Not Reported

2  
ESE  
1/2-1 mi  
3538  
Archaeological Grid: EH45  
Not Reported  
NJ

NJSHPOG00000330  
NJ Archaeological Sites

NJ Site Grid Cell: EH45  
NJ Site Grid Label: Archaeological Grid: EH45  
Designation Status: IDENTIFIED  
Notes: Not Reported

3  
NE  
1/2-1 mi  
3737  
Camp Glen Gray  
Not Reported  
NJ

NJSHPOD00000046  
NJ Historic Districts

Alternate Name: Not Reported  
Status: IDENTIFIED  
Status Update Date: 13-NOV-99  
Demolished: NO  
National Historic Landmark: NO  
NHL Date: Not Reported  
National Register Date: Not Reported  
State Register Date: Not Reported  
Determination of Eligibility Date: Not Reported  
SHPO Opinion Date: Not Reported  
Certification of Eligibility Date: Not Reported  
Local Designation Date: Not Reported  
Beginning Period of Significance: 0  
Ending Period of Significance: 0  
National Register Criteria Code: Not Reported  
NR Criteria Consideration Code: Not Reported  
Survey ID: 11872  
Survey Name: Inactive National Register Nominations Compilation: Bergen County  
(Contextual Reference)  
Survey Date: 13-NOV-99  
Survey Shelf Code: MULT GB 266b  
Survey Recommendation: Potentially Eligible

## HISTORIC SITES MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

NJEMS Project Record ID:	0
Prior Survey:	NO
Multiple Property Listing Name:	Not Reported
NRIS ID:	Not Reported
Location Restricted:	NO
Historic Sites Inventory #:	Not Reported
NR Criteria Considerations:	Not Reported
Notes:	Eligibility possible, Integrity unknown

4  
West  
1/2-1 mi  
4830

Archaeological Grid: ED44  
Not Reported  
NJ

NJSHPOG00000308  
NJ Archaeological Sites

NJ Site Grid Cell:	ED44
NJ Site Grid Label:	Archaeological Grid: ED44
Designation Status:	IDENTIFIED
Notes:	Not Reported

5  
WNW  
1/2-1 mi  
5167

Archaeological Grid: ED43  
Not Reported  
NJ

NJSHPOG00000291  
NJ Archaeological Sites

NJ Site Grid Cell:	ED43
NJ Site Grid Label:	Archaeological Grid: ED43
Designation Status:	IDENTIFIED
Notes:	Not Reported

## UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:

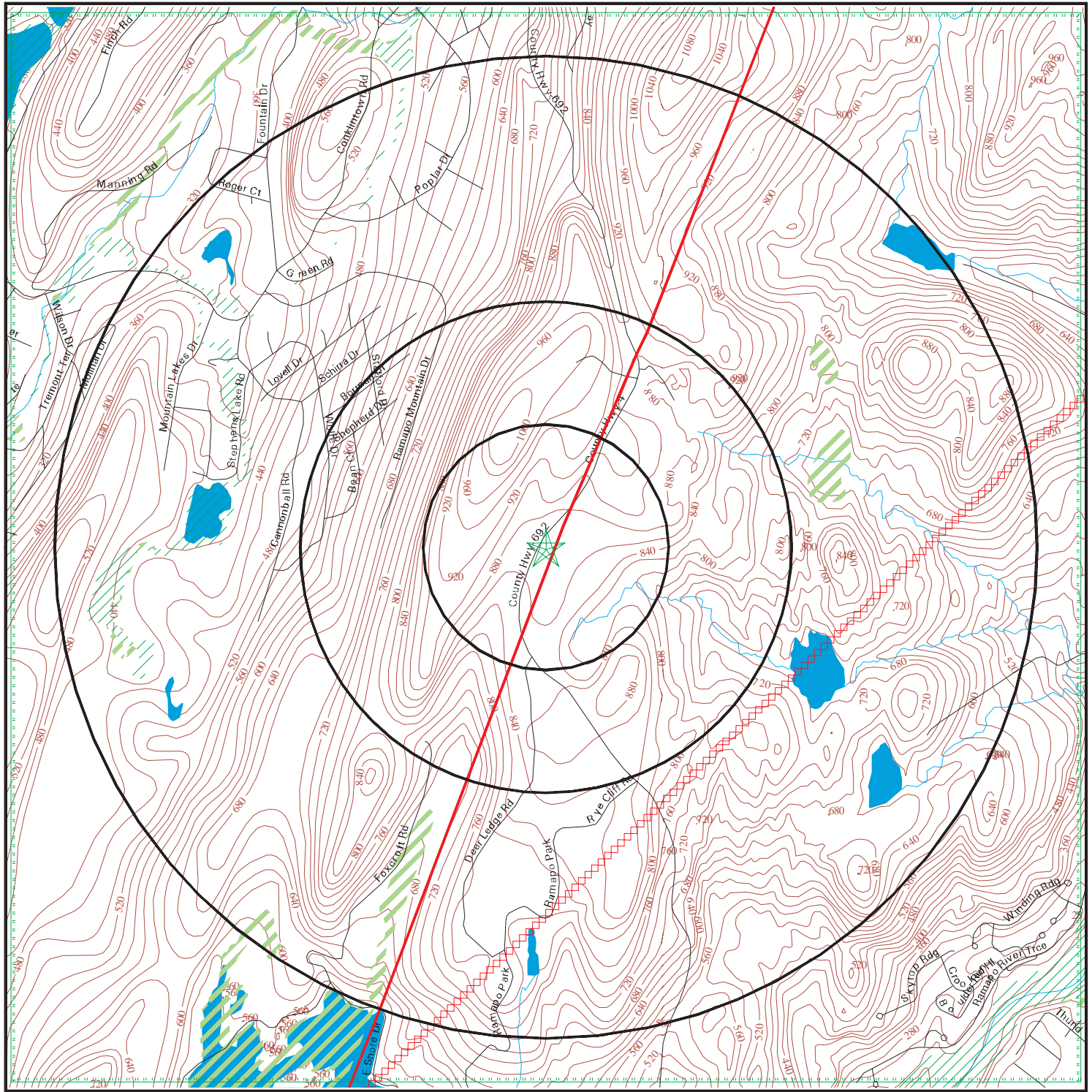
Status  
EDR ID  
Database

Hopper Gristmill Site  
Address Restricted  
Mahwah, NJ

Unmappable  
83001524  
National Register of Hist. Places

Ref #: 83001524  
Multiple Property Name: Not Reported  
County: Bergen  
Restricted: X  
Certification: LISTED IN THE NATIONAL REGISTER  
Certification Date: 19830303  
Type: Site  
# of Contrib Bldgs: 0  
# of Contrib Sites: 1  
# of Contrib Objects: 0  
# of Contrib Structs: 1  
Documents: <https://npgallery.nps.gov/AssetDetail/NRIS/83001524>

# Flood Plain Map



- Major Roads
- Contour Lines
- Waterways
- County Boundary

- Pipe Lines
- Fault Lines

- Water
- 100-year flood zone
- 500-year flood zone
- Electronic FEMA data available
- Electronic FEMA data not available



SITE NAME: Wanaque Tower  
 ADDRESS: 1 Skyline Dr  
 Wanaque NJ 07465  
 LAT/LONG: 41.054319 / 74.254542

CLIENT: E2 Project Management  
 CONTACT: Kristin Tallamy  
 INQUIRY #: 5312232.1s  
 DATE: May 25, 2018

TC5312232.1s Page 29 of 56



## FLOOD PLAIN MAP FINDINGS

Source: FEMA FIRM Flood Data, FEMA Q3 Flood Data

Flood Panel Number	FEMA Source Type
--------------------	------------------

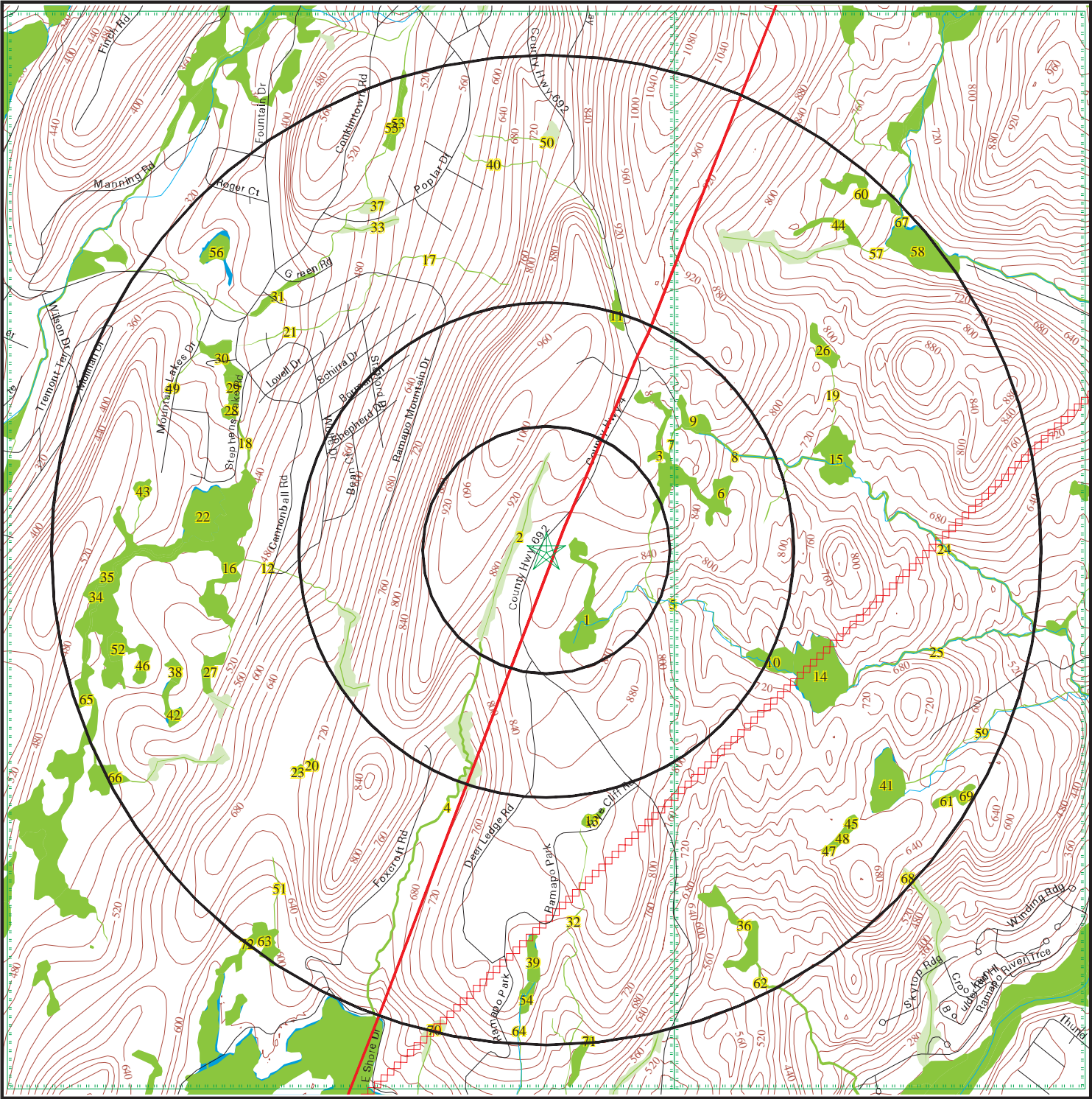
Flood Plain panel at target property:

34031C0142F	(FEMA FIRM Flood data)
-------------	------------------------

Additional Flood Plain panel(s) in search area:

34031C0134F	(FEMA FIRM Flood data)
34031C0153F	(FEMA FIRM Flood data)
3404070006B	(FEMA Q3 Flood data)
34003C0042F	(FEMA Q3 Flood data)
34003C0061F	(FEMA Q3 Flood data)
34003C0061G	(FEMA FIRM Flood data)

National Wetlands Inventory Map



- Major Roads
- Contour Lines
- Waterways
- County Boundary

Fault Lines

- Water
- National Wetlands Inventory
- State Wetlands
- Electronic NWI data available
- Electronic NWI data not available



SITE NAME: Wanaque Tower  
ADDRESS: 1 Skyline Dr  
Wanaque NJ 07465  
LAT/LONG: 41.054319 / 74.254542

CLIENT: E2 Project Management  
CONTACT: Kristin Tallamy  
INQUIRY #: 5312232.1s  
DATE: May 25, 2018

## WETLANDS MAP FINDINGS

Source: Fish and Wildlife Service NWI data

NWI hardcopy map at target property: Wanaque

Additional NWI hardcopy map(s) in search area:  
Ramsey

Map ID

Direction

Distance

Distance (ft.)

Code and Description\*

Database

1	PFO1E	NWI
ENE	[P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally	
0-1/8 mi	Flooded/Saturated	
242	Lat/Lon: 41.054466 / -74.253685	
2	PFO1B	NWI
WNW	[P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated	
0-1/8 mi		
320	Lat/Lon: 41.054806 / -74.255508	
3	PFO1E	NWI
ENE	[P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally	
1/8-1/4 mi	Flooded/Saturated	
1150	Lat/Lon: 41.055107 / -74.250504	
4	R3UBH	NWI
SW	[R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded	
1/8-1/4 mi		
1200	Lat/Lon: 41.051636 / -74.257057	
5	R4SBC	NWI
ESE	[R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded	
1/4-1/2 mi		
1423	Lat/Lon: 41.052883 / -74.249741	
6	PFO1B	NWI
ENE	[P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated	
1/4-1/2 mi		
1511	Lat/Lon: 41.056225 / -74.249672	
7	R4SBA	NWI
NE	[R] Riverine [4] Intermittent [SB] Streambed [A] Temporarily Flooded	
1/4-1/2 mi		
1666	Lat/Lon: 41.057144 / -74.249786	
8	R3UBH	NWI
NE	[R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded	
1/4-1/2 mi		
1860	Lat/Lon: 41.057796 / -74.249596	

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
9 NE 1/4-1/2 mi 1974	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.058014 / -74.249298	NWI
10 ESE 1/4-1/2 mi 2401	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.051292 / -74.246803	NWI
11 NNE 1/4-1/2 mi 2474	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.060738 / -74.251602	NWI
12 West 1/2-1 mi 2641	R4SBCx [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded [x] Excavated Lat/Lon: 41.053505 / -74.264061	NWI
13 SSE 1/2-1 mi 2814	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.046776 / -74.252327	NWI
14 ESE 1/2-1 mi 2870	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.051563 / -74.244789	NWI
15 ENE 1/2-1 mi 3029	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.056442 / -74.243919	NWI
16 West 1/2-1 mi 3148	PFO1Ch [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [C] Seasonally Flooded [h] Diked/Impounded Lat/Lon: 41.055183 / -74.265900	NWI
17 NNW 1/2-1 mi 3304	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.062836 / -74.258667	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
18 WNW 1/2-1 mi 3306	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.056931 / -74.266022	NWI
19 ENE 1/2-1 mi 3323	R4SBA [R] Riverine [4] Intermittent [SB] Streambed [A] Temporarily Flooded Lat/Lon: 41.057968 / -74.243492	NWI
20 SW 1/2-1 mi 3331	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.048222 / -74.263542	NWI
21 NW 1/2-1 mi 3405	R4SBCx [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded [x] Excavated Lat/Lon: 41.060852 / -74.263374	NWI
22 West 1/2-1 mi 3431	PUBHh [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded Lat/Lon: 41.055351 / -74.266907	NWI
23 SW 1/2-1 mi 3465	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.048042 / -74.263985	NWI
24 ENE 1/2-1 mi 3469	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.056305 / -74.242233	NWI
25 ESE 1/2-1 mi 3535	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.050335 / -74.242851	NWI
26 NE 1/2-1 mi 3537	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.059994 / -74.244133	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
27 WSW 1/2-1 mi 3585	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.051334 / -74.266930	NWI
28 WNW 1/2-1 mi 3594	PFO1C [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [C] Seasonally Flooded Lat/Lon: 41.058189 / -74.266533	NWI
29 WNW 1/2-1 mi 3686	PUBHh [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded Lat/Lon: 41.058949 / -74.266426	NWI
30 WNW 1/2-1 mi 3732	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.059387 / -74.266304	NWI
31 NW 1/2-1 mi 3827	PFO1A [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [A] Temporarily Flooded Lat/Lon: 41.062347 / -74.263496	NWI
32 South 1/2-1 mi 3830	R4SBA [R] Riverine [4] Intermittent [SB] Streambed [A] Temporarily Flooded Lat/Lon: 41.043861 / -74.253090	NWI
33 NNW 1/2-1 mi 3859	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.063999 / -74.260239	NWI
34 West 1/2-1 mi 3862	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.054535 / -74.268547	NWI
35 West 1/2-1 mi 3881	PFO1Ch [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [C] Seasonally Flooded [h] Diked/Impounded Lat/Lon: 41.054565 / -74.268608	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
36 SSE 1/2-1 mi 3996	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.044518 / -74.248032	NWI
37 NNW 1/2-1 mi 4060	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.064480 / -74.260590	NWI
38 WSW 1/2-1 mi 4069	PFO1Ch [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [C] Seasonally Flooded [h] Diked/Impounded Lat/Lon: 41.050842 / -74.268570	NWI
39 South 1/2-1 mi 4100	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.043068 / -74.254929	NWI
40 North 1/2-1 mi 4108	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.065533 / -74.256149	NWI
41 ESE 1/2-1 mi 4163	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.048191 / -74.241791	NWI
42 WSW 1/2-1 mi 4174	PUBHh [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded Lat/Lon: 41.050396 / -74.268768	NWI
43 West 1/2-1 mi 4256	PUBH [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.056087 / -74.269798	NWI
44 NE 1/2-1 mi 4265	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.063522 / -74.244980	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
45 SE 1/2-1 mi 4298	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.046471 / -74.242905	NWI
46 WSW 1/2-1 mi 4329	PEM1F [P] Palustrine [EM] Emergent [1] Persistent [F] Semipermanently Flooded Lat/Lon: 41.051414 / -74.269760	NWI
47 SE 1/2-1 mi 4338	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.045582 / -74.243843	NWI
48 SE 1/2-1 mi 4340	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.046211 / -74.243011	NWI
49 WNW 1/2-1 mi 4350	R4SBA [R] Riverine [4] Intermittent [SB] Streambed [A] Temporarily Flooded Lat/Lon: 41.059101 / -74.268997	NWI
50 North 1/2-1 mi 4364	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.066296 / -74.254105	NWI
51 SW 1/2-1 mi 4380	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.045361 / -74.265137	NWI
52 WSW 1/2-1 mi 4504	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.051399 / -74.270416	NWI
53 NNW 1/2-1 mi 4556	PEM1C [P] Palustrine [EM] Emergent [1] Persistent [C] Seasonally Flooded Lat/Lon: 41.065998 / -74.260460	NWI

\*See Wetland Classification System for additional information.



## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
54 South 1/2-1 mi 4607	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.041679 / -74.255203	NWI
55 NNW 1/2-1 mi 4621	PEM1C [P] Palustrine [EM] Emergent [1] Persistent [C] Seasonally Flooded Lat/Lon: 41.066105 / -74.260742	NWI
56 NW 1/2-1 mi 4623	PUBHh [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded Lat/Lon: 41.062840 / -74.266968	NWI
57 NE 1/2-1 mi 4656	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.063091 / -74.242256	NWI
58 NE 1/2-1 mi 4863	PUBHh [P] Palustrine [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded Lat/Lon: 41.063229 / -74.241394	NWI
59 ESE 1/2-1 mi 4884	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.048729 / -74.238441	NWI
60 NE 1/2-1 mi 4889	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.065025 / -74.243851	NWI
61 ESE 1/2-1 mi 4922	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.046967 / -74.239563	NWI
62 SSE 1/2-1 mi 4932	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.042248 / -74.246422	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
63 SW 1/2-1 mi 4960	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.043224 / -74.264969	NWI
64 South 1/2-1 mi 4960	R4SBC [R] Riverine [4] Intermittent [SB] Streambed [C] Seasonally Flooded Lat/Lon: 41.040726 / -74.255569	NWI
65 WSW 1/2-1 mi 4988	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.050781 / -74.272018	NWI
66 WSW 1/2-1 mi 5074	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.047573 / -74.270638	NWI
67 NE 1/2-1 mi 5083	R3UBH [R] Riverine [3] Upper Perennial [UB] Unconsolidated Bottom [H] Permanently Flooded Lat/Lon: 41.063812 / -74.241028	NWI
68 SE 1/2-1 mi 5121	PFO1B [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated Lat/Lon: 41.044937 / -74.240707	NWI
69 ESE 1/2-1 mi 5129	PFO1E [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.047375 / -74.238358	NWI
70 SSW 1/2-1 mi 5183	R4SBA [R] Riverine [4] Intermittent [SB] Streambed [A] Temporarily Flooded Lat/Lon: 41.040455 / -74.258781	NWI
71 South 1/2-1 mi 5198	PSS1E [P] Palustrine [SS] Scrub Shrub [1] Broad-Leaved Deciduous [E] Seasonally Flooded/Saturated Lat/Lon: 41.040112 / -74.252769	NWI

\*See Wetland Classification System for additional information.

## WETLANDS MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)

Code and Description\*

Database

72	PFO1B	NWI
SW	[P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [B] Saturated	
1/2-1 mi		
5247	Lat/Lon: 41.042881 / -74.266113	

\*See Wetland Classification System for additional information.

# WETLANDS CLASSIFICATION SYSTEM

National Wetland Inventory Maps are produced by the U.S. Fish and Wildlife Service, a sub-department of the U.S. Department of the Interior. In 1974, the U.S. Fish and Wildlife Service developed a criteria for wetland classification with four long range objectives:

- to describe ecological units that have certain homogeneous natural attributes,
- to arrange these units in a system that will aid decisions about resource management,
- to furnish units for inventory and mapping, and
- to provide uniformity in concepts and terminology throughout the U.S.

High altitude infrared photographs, soil maps, topographic maps and site visits are the methods used to gather data for the productions of these maps. In the infrared photos, wetlands appear as different colors and these wetlands are then classified by type. Using a hierarchical classification, the maps identify wetland and deepwater habitats according to:

- system
- subsystem
- class
- subclass
- modifiers

(as defined by Cowardin, et al. U.S. Fish and Wildlife Service FWS/OBS 79/31. 1979.)

The classification system consists of five systems:

1. marine
2. estuarine
3. riverine
4. lacustrine
5. palustrine

The marine system consists of deep water tidal habitats and adjacent tidal wetlands. The riverine system consists of all wetlands contained within a channel. The lacustrine systems includes all nontidal wetlands related to swamps, bogs & marshes. The estuarine system consists of deepwater tidal habitats and where ocean water is diluted by fresh water. The palustrine system includes nontidal wetlands dominated by trees and shrubs and where salinity is below .5% in tidal areas. All of these systems are divided in subsystems and then further divided into class.

National Wetland Inventory Maps are produced by transferring gathered data on a standard 7.5 minute U.S.G.S. topographic map. Approximately 52 square miles are covered on a National Wetland Inventory map at a scale of 1:24,000. Electronic data is compiled by digitizing these National Wetland Inventory Maps.

# SYSTEM

## MARINE

### SUBSYSTEM

#### 1 - SUBTIDAL

#### 2 - INTERTIDAL

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom	AB-AQUATIC BED	RF-REEF	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm		1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

# SYSTEM

## E - ESTUARINE

### SUBSYSTEM

#### 1 - SUBTIDAL

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	

### SUBSYSTEM

#### 2 - INTERTIDAL

CLASS	AB-AQUATIC BED	RF-REEF	SB - STREAMBED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	SS-SCRUB SHRUB	FO-FORESTED
Subclass	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

## SYSTEM

## R - RIVERINE

### SUBSYSTEM

1 - TIDAL	2 - LOWER PERENNIAL	3 - UPPER PERENNIAL	4 - INTERMITTENT	5 - UNKNOWN PERENNIAL			
RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	*SB-STREAMBED	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	**EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
1 Bedrock	1 Cobble-Gravel	1 Bedrock	1 Algal	1 Bedrock	1 Cobble-Gravel	2 Nonpersistent	
2 Rubble	2 Sand	2 Rubble	2 Aquatic Moss	2 Rubble	2 Sand		
	3 Mud	3 Cobble-Gravel	3 Rooted Vascular		3 Mud		
	4 Organic	4 Sand	4 Floating Vascular		4 Organic		
		5 Mud	5 Unknown Submergent		5 Vegetated		
		6 Organic	6 Unknown Surface				
		7 Vegetated					

\* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.

\*\*EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

## SYSTEM

## L - LACUSTRINE

### SUBSYSTEM

### 1 - LIMNETIC

	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	

### SUBSYSTEM

### 2 - LITTORAL

	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

## SUBSYSTEM

## P - PALUSTRINE

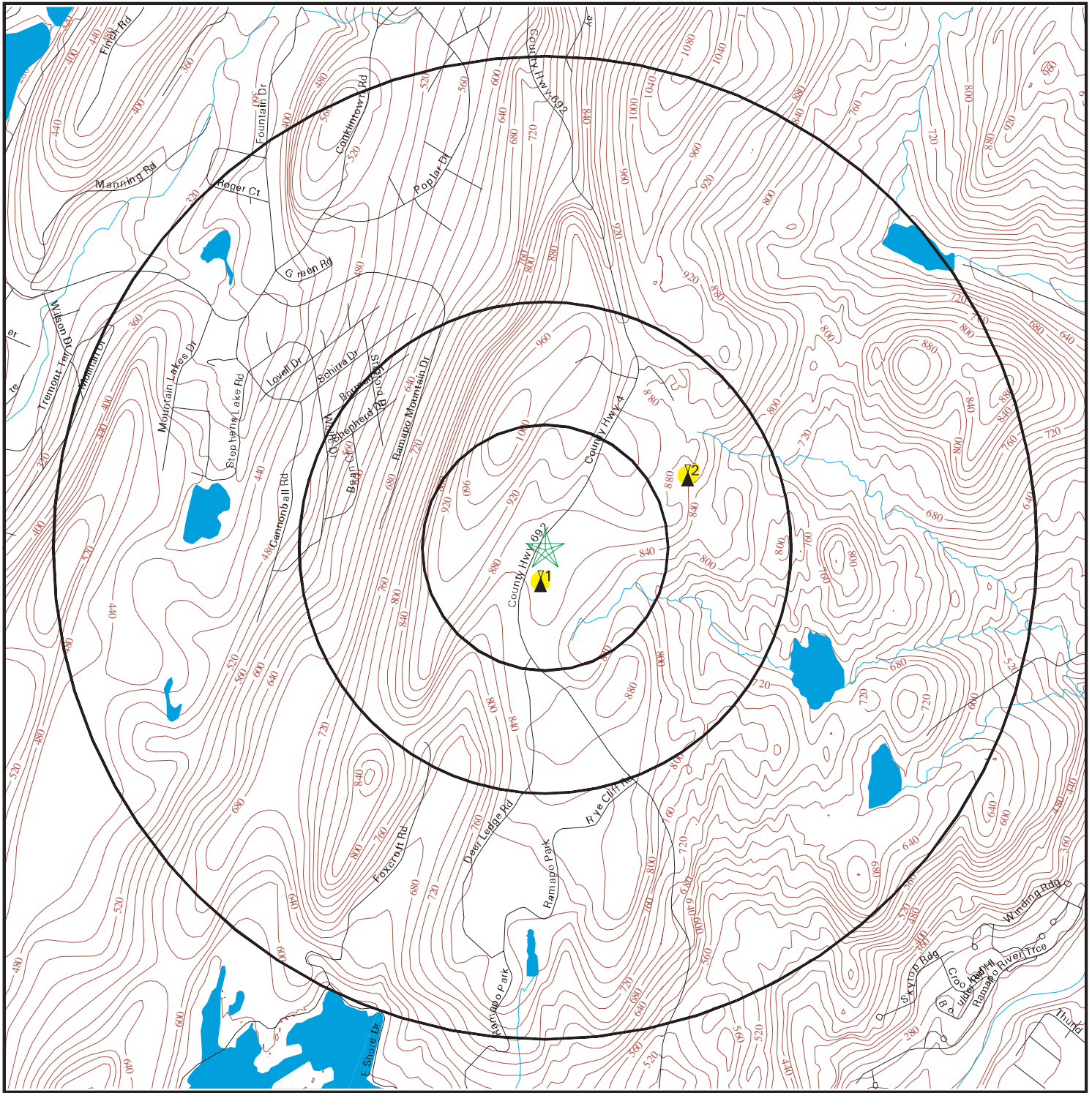
CLASS	RB--ROCK BOTTOM	UB--UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	US--UNCONSOLIDATED SHORE	ML--MOSS- LICHEN	EM--EMERGENT	SS--SCRUB-SHRUB	FO--FORESTED	OW-OPEN WATER/ Unknown
Bottom									
Subclass	1 Bedrock 2 Rubble 3 Mud 4 Organic	1 Cobble-Gravel 2 Sand	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6Deciduous 7 Evergreen	







## MODIFIERS

In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME				WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS
<b>Non-Tidal</b>	<b>Tidal</b>	<b>Coastal</b>	<b>Halinity</b>	<b>Inland</b>	<b>Salinity</b>	<b>pH</b>	<b>Modifiers</b>	<b>for</b>
A Temporarily Flooded	H Permanently Flooded	K Artificially Flooded	*S Temporary-Tidal	1 Hyperhaline	7 Hypersaline	<b>all Fresh Water</b>		
B Saturated	J Intermittently Flooded	L Subtidal	*R Seasonal-Tidal	2 Euhaline	8 Eusaline	a Acid	g Organic	b Beaver
C Seasonally Flooded	K Artificially Flooded	M Irregularly Exposed	*T Semipermanent -Tidal	3 Mixohaline (Brackish)	9 Mixosaline	t Circumneutral	n Mineral	d Partially Drained/Ditched
D Seasonally Flooded/ Well Drained	W Intermittently Flooded/Temporary	N Regularly Flooded	V Permanent -Tidal	4 Polyhaline	0 Fresh	i Alkaline		f Farmed
E Seasonally Flooded/ Saturated	Y Saturated/Semipermanent/ Seasonal	P Irregularly Flooded	U Unknown	5 Mesohaline				h Diked/Impounded
F Semipermanently Flooded	Z Intermittently Exposed/Permanent	*These water regimes are only used in tidally influenced, freshwater systems.			6 Oligohaline			r Artificial Substrate
G Intermittently Exposed	U Unknown			0 Fresh				s Spoil
								x Excavated

# FCC & FAA Sites Map



-  Streets
-  Contour Lines
-  County Boundary
-  Waterways
-  Water
-  Sites



SITE NAME: Wanaque Tower  
 ADDRESS: 1 Skyline Dr  
 Wanaque NJ 07465  
 LAT/LONG: 41.054319 / 74.254542

CLIENT: E2 Project Management  
 CONTACT: Kristin Tallamy  
 INQUIRY #: 5312232.1s  
 DATE: May 25, 2018

TC5312232.1s Page 45 of 56



# FCC & FAA SITES MAP FINDINGS TOWERS

Map ID  
Direction  
Distance  
Distance (ft.)

EDR ID  
Database

1  
South  
0-1/8 mi  
363

DOF161200197758  
FAA DOF

Obstacle #: 34-000039  
Obstacle Type: TOWER  
Quantity: 1  
Ft Above Ground: 265  
Ft Above Sea Level: 1125  
Verification Status: Verified  
Lighting: Unknown  
Horizontal Accuracy: Not Reported  
Vertical Accuracy: Not Reported  
Markings: Marked  
Action: Dismantle  
Action Date: 1983195

2  
ENE  
1/4-1/2 mi  
1714

ATM130000004760  
AM\_ANTENNA

Call Sign: WVNJ  
Frequency: 1160 kHz  
Service: AM  
Class: B  
Status: LIC  
File #: BL -19970130AD  
Facility ID: 68956  
Licensee: UNIVERSAL BROADCASTING OF NEW YORK, INC.

This record is for a license, and it may or may not indicate a site which has been built.

## FCC & FAA SITES MAP FINDINGS AIRPORTS

EDR ID  
Database

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No Sites Reported.

## FCC & FAA SITES MAP FINDINGS POWERLINES

EDR ID  
Database

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No Sites Reported.

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Various Federal laws and executive orders address specific environmental concerns. NEPA requires the responsible offices to integrate to the greatest practical extent the applicable procedures required by these laws and executive orders. EDR provides key contacts at agencies charged with implementing these laws and executive orders to supplement the information contained in this report.

### **NATURAL AREAS**

#### **Wilderness Areas**

##### Government Records Searched in This Report

##### FED\_LAND: Federal Lands

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks

- Forests

- Monuments

- Wildlife Sanctuaries, Preserves, Refuges

- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

##### US NWP: National Wilderness Preservation System

This map layer consists of National Wilderness Preservation System areas of 320 acres or more, in the United States, Puerto Rico, and the U.S. Virgin Islands. Some established wilderness areas which are larger than 320 acres are not included in this map layer because their boundaries were not available from the owning or administering agency.

Source: U.S. Geological Survey.

Telephone: 888-275-8747

##### Federal Contacts for Additional Information

##### National Park Service, Northeast Region

200 custom Street, Fifth Floor

Philadelphia, PA 19106

215-597-7013

##### USDA Forest Service, Eastern

310 West Wisconsin Avenue

Milwaukee, WI 53203

414-297-3693

##### BLM - Eastern States Office

7450 Boston Blvd.

Springfield, VA 22153

703-440-1713

##### Fish & Wildlife Service, Fish & Wildlife Region 5

Div. Of Personnel Mgmt. 300 Westgate Center Drive

Hadley, MA 01035-9589

413-253-8313

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### **Wildlife Preserves, Sanctuaries and Refuges**

#### Government Records Searched in This Report

##### **FED\_LAND: Federal Lands**

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

##### **NJ Open Space - State Owned: Open Space - State Owned**

This data set contains protected open space and recreation areas owned in fee simple interest by the State of New Jersey Department of Environmental Protection (NJDEP).

Source: Department of Environmental Protection.

Telephone: 609-777-0672

##### **NJ Open Space - County Owned: Open Space - County Owned**

This data set contains protected New Jersey open space and recreation areas that are either owned in fee simple interest by a county or are managed by a county but owned in fee by another governmental agency or nonprofit. Types of open space property in this data layer include parks, conservation areas, preserves, historic sites, recreational fields, beaches, etc.

Source: Department of Environmental Protection.

Telephone: 609-984-0500

##### **NJ Vernal Habitat: Vernal Habitat**

This data set is a product of the Landscape Project, a pro-active, ecosystem-level approach to the long-term protection of imperiled and priority species and their important habitats in New Jersey

Source: Department of Environmental Protection.

Telephone: 609-259-6962

##### **US Critical Land Habitat: US Critical Land Habitat**

When a species is proposed for listing as endangered or threatened under the Endangered Species Act, the U.S.

Fish and Wildlife Service must consider whether there are areas of habitat believed to be essential the species conservation.

Those areas may be proposed for designation as critical habitat. Critical habitat is a term defined and used in the Act.

Source: US Fish & Wildlife Services.

Telephone: 970-226-9468

##### **US ACEC: Areas of Critical Environmental Concern Designated Polygons**

The designated ACECs are "areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems of processes, or to protect life and safety from natural hazards

Source: Bureau of Land Management.

Telephone: 202-912-7352

##### **US Scenic River: National Wild and Scenic River System**

National Wild and Scenic Rivers System

Source: USGS National Atlas and the Interagency Wild and Scenic River Coordinating Council.

Telephone: 509-546-8333

##### **US Critical Water Habitat: US Critical Water Habitat**

When a species is proposed for listing as endangered or threatened under the Endangered Species Act, the U.S.

Fish and Wildlife Service must consider whether there are areas of habitat believed to be essential the species conservation.

Those areas may be proposed for designation as critical habitat. Critical habitat is a term defined and used in the Act.

Source: US Fish & Wildlife Services.

Telephone: 970-226-9468

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### US NCED: National Conservation Easement Database

NCED shows a comprehensive picture of privately owned conservation easement lands in the U.S. The NCED will allow better strategic planning for conservation and development by merging data on land protection with biodiversity and resources, improving ecological and economic plans and investments.

Source: U.S Endowment for Forestry and Communities.

Telephone: 202-621-1647

### Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 5  
Div. Of Personnel Mgmt. 300 Westgate Center Drive  
Hadley, MA 01035-9589  
413-253-8313

### State Contacts for Additional Information

Dept. of Environmental Protection 609-292-9410

### **Wild and scenic rivers**

#### Government Records Searched in This Report

##### FED\_LAND: Federal Lands

Source: USGS

Telephone: 703-648-5094

Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.

- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

### Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 5  
Div. Of Personnel Mgmt. 300 Westgate Center Drive  
Hadley, MA 01035-9589  
413-253-8313

### **Endangered Species**

#### Government Records Searched in This Report

##### NJ Natural Heritage Priority Sites: Natural Heritage Priority Sites

The Natural Heritage Priority Sites Coverage was created to identify critically important areas to conserve biological diversity, with particular emphasis on rare plant species and ecological communities.

Source: Department of Environmental Protection.

Telephone: 609-777-0672

##### Federal Endangered Species by County: Threatened and Endangered Species Listing

Endangered, Threatened, Emergency Listing (Endangered), Emergency Listing (Threatened), Experimental Population (Essential), Experimental Population (Non-Essential), Similarity of Appearance (Endangered), Similarity of Appearance (Threatened).

Source: US Fish and Wildlife Services.

Telephone: 800-344-9453

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 5  
Div. Of Personnel Mgmt. 300 Westgate Center Drive  
Hadley, MA 01035-9589  
413-253-8313

### State Contacts for Additional Information

Natural Heritage Program, Office of Lands Management 609-984-1339

## LANDMARKS, HISTORICAL, AND ARCHEOLOGICAL SITES

### **Historic Places**

#### Government Records Searched in This Report

##### National Register of Historic Places:

The National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. These contribute to an understanding of the historical and cultural foundations of the nation.

The National Register includes:

- All prehistoric and historic units of the National Park System;
- National Historic Landmarks, which are properties recognized by the Secretary of the Interior as possessing national significance; and
- Properties significant in American, state, or local prehistory and history that have been nominated by State Historic Preservation Officers, federal agencies, and others, and have been approved for listing by the National Park Service.

Date of Government Version: 07/19/2015

##### NJ Archaeological Sites: New Jersey and National Register of Historic Places

Archaeological Sites are locations of prehistoric or historic occupation or activity possessing archaeological value. This dataset includes a vector grid of approximately 1/2 mile cells indicating the presence of Archaeological Districts or Sites

Source: Department of Environmental Protection.

Telephone: 609-984-0176

##### NJ Historic Districts: New Jersey and National Register of Historic Places

Historic Districts possess a significant concentration, linkage, or continuity of buildings, sites, structures, or objects united historically or aesthetically by plan or physical development. This dataset includes districts that are National Historic Landmarks, Local Historic Districts, and Historic Districts on or determined eligible for the National Register

Source: Department of Environmental Protection.

Telephone: 609-984-0176

##### NJ Historic Properties: New Jersey and National Register of Historic Places

A listing of buildings, sites, structures or objects that are evaluated as historically significant. These include National Historic Landmarks, National Historic Places, designated Local Landmarks, and sites that have been determined eligible for inclusion in the registers.

Source: Department of Environmental Protection.

Telephone: 609-984-0176

##### Potomac Heritage National Scenic Trail: Potomac Heritage National Scenic Trail

Source: Potomac Heritage NST Office.

Telephone: 304-535-4014

##### Natchez Trace National Scenic Trail: Natchez Trace National Scenic Trail

Source: Natchez Trace Parkway.

Telephone: 800-305-7417

##### US Trails: US Trails

This dataset contains a baseline inventory and condition assessment of all non-motorized trails on U.S. Fish and Wildlife Service lands as part of the National Trails Inventory Program conducted by the US Dept. of Transportation, Federal Highway Administration, Federal Lands Highway Division.

Source: U.S. Fish and Wildlife.

Telephone: 703-358-2205

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### Indian Reservations: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Source: USGS.

Telephone: 202-208-3710

### Federal Contacts for Additional Information

Park Service; Advisory Council on Historic Preservation

1849 C Street NW

Washington, DC 20240

Phone: (202) 208-6843

### State Contacts for Additional Information

Dept. of Environmental Protection 609-292-2885

### **Indian Religious Sites**

#### Government Records Searched in This Report

##### Indian Reservations:

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Source: USGS

Phone: 888-275-8747

Date of Government Version: 12/31/2005

### Federal Contacts for Additional Information

Department of the Interior- Bureau of Indian Affairs

Office of Public Affairs

1849 C Street, NW

Washington, DC 20240-0001

Office: 202-208-3711

Fax: 202-501-1516

### National Association of Tribal Historic Preservation Officers

1411 K Street NW, Suite 700

Washington, DC 20005

Phone: 202-628-8476

Fax: 202-628-2241

### State Contacts for Additional Information

A listing of local Tribal Leaders and Bureau of Indian Affairs Representatives can be found at:

<http://www.doi.gov/bia/areas/agency.html>



## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### Scenic Trails

#### Government Records Searched in This Report

APPAL\_TRAIL: Appalachian National Scenic Trail

Source: Appalachian Trail Conservancy and National Park Service Appalachian Trail Park Office

Telephone: (304) 535-6278

Appalachian Trail centerline.

#### State Contacts for Additional Information

Appalachian Trail Conference

799 Washington Street P.O. Box 807

Harpers Ferry, WV 25425-0807

(304) 535-6331

### FLOOD PLAIN, WETLANDS AND COASTAL ZONE

#### Flood Plain Management

##### Government Records Searched in This Report

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Phone: 877-336-2627

Date of Government Version: 2003, 2015

##### Federal Contacts for Additional Information

Federal Emergency Management Agency 877-3362-627

##### State Contacts for Additional Information

Office of Emergency Management 609-538-6050

#### Wetlands Protection

##### Government Records Searched in This Report

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010, and 2015 from the U.S. Fish and Wildlife Service.

Source: U.S. Fish and Wildlife Service.

Phone: 608-238-9333

Date of Government Version: 05/28/2015

##### State Wetlands Data: Wetlands Inventory

Source: Department of Environmental Protection

Telephone: 609-984-2243

##### Federal Contacts for Additional Information

Fish & Wildlife Service 813-570-5412

##### State Contacts for Additional Information

Dept. of Environmental Protection 609-292-9410

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### **Coastal Zone Management**

#### Government Records Searched in This Report

##### **CAMA Management Areas**

Dept. of Env., Health & Natural Resources  
919-733-2293

#### Federal Contacts for Additional Information

##### **Office of Ocean and Coastal Resource Management**

N/ORM, SSMC4  
1305 East-West Highway  
Silver Spring, Maryland 20910  
301-713-3102

#### State Contacts for Additional Information

Dept. of Env. Protection, Office of Land & Water Planning 609-292-1875

#### Government Records Searched in This Report

##### **NJ Coastline**

Dept. of Env. Protection  
609-292-1875

### **FCC & FAA SITES MAP**

For NEPA actions that come under the authority of the FCC, the FCC requires evaluation of Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

#### Government Records Searched in This Report

##### **Cellular**

##### **Federal Communications Commission**

445 12th Street, SW  
Washington, DC 20554  
888-225-5322

##### **Antenna Structure Registration**

##### **Federal Communications Commission**

445 12th Street, SW  
Washington, DC 20554  
888-225-5322

##### **AM Antenna**

##### **Federal Communications Commission**

445 12th Street, SW  
Washington, DC 20554  
888-225-5322

##### **FM Antenna**

##### **Federal Communications Commission**

445 12th Street, SW  
Washington, DC 20554  
888-225-5322

##### **FAA Digital Obstacle File**

##### **Federal Aviation Administration (FAA)**

1305 East-West Highway, Station 5631  
Silver Spring, MD 20910-3281  
Telephone: 301-713-2817

Describes known obstacles of interest to aviation users in the US. Used by the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration to manage the National Airspace System.

## KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

### **Airport Landing Facilities**

Federal Aviation Administration

Telephone (800) 457-6656

Private and public use landing facilities.

### **Electric Power Transmission Line Data**

PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

### **Excessive Radio Frequency Emission**

For NEPA actions that come under the authority of the FCC, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the determination of whether the particular facility, operation or transmitter would cause human exposure to levels of radio frequency in excess of certain limits.

### Federal Contacts for Additional Information

Office of Engineering and Technology

Federal Communications Commission

445 12th Street SW

Washington, DC 20554

Phone: 202-418-2470

### **OTHER CONTACT SOURCES**

### **STREET AND ADDRESS INFORMATION**

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**ATTACHMENT C**  
**AGENCY LETTERS**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

New Jersey Field Office  
4 East Jimmie Leeds Road, Suite 4  
Galloway, New Jersey 08205  
Tel: 609/646-9310  
<http://www.fws.gov/northeast/njfieldoffice>



IN REPLY REFER TO:  
**18-CPA-0230**

JUN 07 2018

Kristin Tallamy, Environmental Scientist  
E2 Project Management, LLC  
87 Hibernia Avenue  
Rockaway, New Jersey 07866  
[kristin.tallamy@e2pm.com](mailto:kristin.tallamy@e2pm.com)

**Reference: Wanaque Communication Tower, 1 Skyline Drive, Borough of Wanaque, Passaic County, New Jersey**

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced proposed project pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) ensuring the protection of federally listed endangered and threatened species.

A known occurrence or potential habitat for the following federally listed or candidate species is located on or near the project impact area. However, the Service concurs that the proposed project is not likely to adversely affect federally listed or candidate species for the reasons listed below.

Species	Basis for Determination
Indiana bat ( <i>Myotis sodalis</i> ) (threatened)	Discountable effects – no trees will be removed
Northern long-eared bat ( <i>Myotis septentrionalis</i> ) (threatened)	Unsuitable habitat
Small whorled pogonia ( <i>Isotria medeoloides</i> ) (threatened)	Unsuitable habitat

Except for the above-mentioned species, no other federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the proposed project's impact area. Therefore, no further consultation pursuant to the ESA is required. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

**The Service recommends that the applicant abide by the April 2018 recommended best practices on lighting for towers taller than 199 feet, which available for review at: <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/communication-towers.php>.**

Please refer to this office's web site at <http://www.fws.gov/northeast/njfieldoffice/Endangered/> for further information including federally listed and candidate species lists, procedures for requesting ESA review, the National Bald Eagle Management Guidelines, and contacts for obtaining information from the New Jersey Natural Heritage and Endangered and Nongame Species Programs regarding State-listed and other species of concern.

Reviewing Biologist:

Carlo Popolizio

Authorizing Supervisor:

Ron Popowski



<i>USFWS NJ Field Office Submission Package</i>	
<b>Site Name:</b>	Wanaque Tower
<b>Site Type:</b>	300-foot Self-Support Lattice Tower
<b>Site Address:</b>	1 Skyline Drive, Wanaque, Passaic County, NJ (Block 250, Lot 1)
<b>Latitude / Longitude (NAD83):</b>	N 41° 03' 15.0" and W 74° 15' 15.6"

1. **Date:** May 22, 2018
2. **Lead agency or applicant:** E2 Project Management LLC (87 Hibernia Avenue, Rockaway, NJ 07866)
3. **Requesting agency or individual:**
  - a. Name: Kristin Tallamy
  - b. Title: Environmental Scientist
  - c. Phone: 973-534-8980
  - d. Email: kristin.tallamy@e2pm.com
4. **Project name(s):** Wanaque Tower
5. **County, Township, Block and Lot numbers:**

Located at 1 Skyline Drive, Borough of Wanaque, Passaic County, New Jersey (Block 250, Lot 1), owned by Subcarrier Communications.

6. **Location of the project in decimal degrees:**

The approximate latitude and longitude is N41.0541667°, W-074.2543333°

7. **Will a State Freshwater Wetland Permit be required?**

No. According to the NJDEP's GIS databases, a large area of wetlands is mapped as being located just off the northeastern corner of the subject property. However, as noted in Question #9, at their closest point, delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, Final Site Plans do indicate the proposed 8-foot tall chain-link fence is proposed to be installed along a section of the limits of the 150-foot transition area. Because the delineated wetland is located in excess of 150 feet from the location of the proposed project, no part of the project is located within a wetland transition area and as such, will not directly adversely impact same. Because the project impacts less than one acre of overall land disturbance and proposes less than 0.25-acres of new impervious surface, it is not classified as a "major project" and can thus be assumed to create no indirect impacts to surface water resources/water quality. As such, a permit will not be required.

8. **Provide a list of any other non-Federal authorizations being sought:**

- NJDEP Division of Watershed Management Highlands Exemption No. 4.
- Hudson-Essex-Passaic Soil Conservation District SESCP Certification
- Construction (Building) Permits.
- Passaic County Planning Board Site Plan Application



**9. Project description and a description of the natural characteristics of the property and surrounding area:**

Project Description: Subcarrier Communications plans to remove and replace an existing wireless communication tower located at the referenced address above. Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of **300 feet** above ground level (agl) on concrete pier foundations to replace the existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Eight-foot tall chain-link fence is proposed to be installed around a part of the site with a gate at the existing driveway. Utility conduit will be routed underground in an existing trench to an existing utility pole located adjacent to Skyline Drive and access to the facility will be via the existing gravel drive. A copy of the May 2018 Zoning Drawings is attached for your convenience. *Note: proposed project involves construction of 300-ft tower; therefore, not meeting the USFWS criteria for categorical determination of "not likely to adversely affect" federally listed species in New Jersey, or have any significant impacts on migratory birds or other federal trust wildlife resources. A copy of the May 2018 Zoning Drawings is attached for your convenience.*

Natural Characteristics of Property and surrounding area: The site property is approximately 1.396 acres in size (per survey). It is accessed from Skyline Drive via an existing gravel driveway and currently improved with the existing 110-foot tall guyed lattice tower and two wireless equipment shelters (to be removed and replaced). Two small wood-frame sheds are located to the south/southwest, off-site on the adjacent parcel (Lot 2), owned by the State of New Jersey. Cannonball Trail currently traverses the east/east-central section of the subject property. The subject property is effectively surrounded by upland forest interspersed with forested wetlands.

There are no surface water resources located within at least 300 feet of the propose project; therefore, surface waters nor their associate riparian buffers will not be adversely affected by the proposed project.

According to the NJDEP's GIS databases, a large area of wetlands is mapped as being located just off the northeastern corner of the subject property. More accurately, as part of the proposed project, wetlands located on and/or proximate to the subject property were delineated, survey-located, and mapped by VS Land Data on October 6, 2016. A relatively large area of wetlands was delineated as occupying the northeast corner of the subject property and extending off-site to the east/southeast. At their closest point, the delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, as shown on the Final Site Plans, the 8-foot tall chain-link fence is proposed to be installed along a section of the limits of the 150-foot transition area.

The site is zoned as Water Resource Conservation (WRC). Refer to attached site photographs, site location map and topographic map for reference.

**10. If tree clearing is being proposed and IPaC has returned a result of Indiana bat, please indicate whether clearing of trees  $\geq$  5 inches in diameter at breast height will be seasonally restricted. If so, provide the appropriate time-of-year restriction as described on page 4 of the Project Screening Chart.**

Although Indiana Bat was identified by IPaC, no tree clearing is proposed for this project. Net gain in impervious coverage is less than 0.25 acres – no new impervious coverage is proposed. Project is wholly-located on areas overlain with gravel.

**11. Does the project comply with the northern long-eared bat 4(d) rule?**

Yes; Although NLEB was identified by IPaC, no tree clearing is proposed for this project; therefore complying with the 4(d) rule. No streamline form was prepared for this project.

**12. Proposed conservation measures to avoid impacts to federally listed species identified in your IPaC report:**



E2PM expects the project will result in minimal adverse impact to general wildlife resources as well as threatened and endangered species pursuant to the following:

- Access to the proposed project will be via the existing gravel driveway. No new road construction is required;
- The project is proposed to be located on and close to existing on-site improvements (existing graveled area and existing equipment shelters). The area on which the project is proposed to be constructed is cleared of all vegetation. No suitable wildlife habitat is proposed to be impacted

Based on these conclusions, no proposed conservation measures are considered at this time.

**13. Assessment of impacts to federally listed threatened and endangered species from proposed project activities, and your preliminary determination of whether each federally listed species is or is not likely to be adversely affected.**

The proposed project meets/will meet all of the USFWS October 2016 "Communication Tower and Antenna Consultation in New Jersey requirements (<https://www.fws.gov/northeast/njfieldoffice/pdf/celltower.pdf>) except for the height and lighting requirements reaching 300-feet. USFWS indicates that the recommendation to have a tower less than 200 feet is for the protection of migratory bird and not any federally-listed species. As such, this formal consultation pursuant to Section 7 of the Endangered Species Act is being submitted to the USFWS for review and comment.

**14. Indicate if the Service's recommendations to protect other wildlife resources will be implemented.**

Although it is illustrated that the proposed project would have no adverse effect on wildlife resources, the potential for venomous snakes to be present on the property, particularly during the construction process, represents a hazard to both contractors as well as the snakes themselves. As such, the following mitigative measure has been recommended:

- If construction or site preparation-related activities will occur during the snakes' active period (April 1 - October 31), one State-approved primary venomous snake monitor should be required to clear the area of any and all reptiles prior to the day's activities. Once cleared, that monitor should be on-call to revisit the site, capture, and relocate any snake observed by the contractor(s) throughout the day. If the work is to be conducted during the snakes' inactive period (November 1 - March 31), no snake monitor will be required on site

Note: Site photographs, Maps and USFWS IPaC list for the proposed action area is attached to this document.



**Figure: 1**

**Description:** Entrance off of Skyline Drive to the site.



**Figure: 2**

**Description:** View of the site from Skyline Drive facing E-SE. Existing 110 tower and equipment sheds present (to be removed)



**Figure: 3**

**Description:** Existing 110 tower and equipment sheds present (to be removed)



**Figure: 4**

**Description:** View of existing gravel access drive surrounded by lower lying wooded areas.





**Figure: 5**

**Description:** Backside of existing equipment sheds within the property.



**Figure: 6**

**Description:** Wooded areas with wetland areas further to the east.

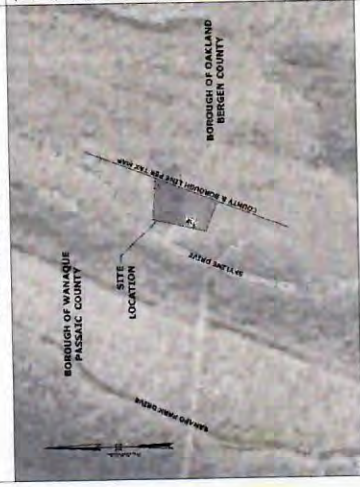




# SUBCARRIER COMMUNICATIONS INC WIRELESS COMMUNICATION FACILITY

WANAQUE TOWER  
1 SKYLINE DRIVE,  
BOROUGH OF WANAQUE,  
PASSAIC COUNTY, NJ 07465  
BLOCK 250, LOT 1

## LOCATION MAP



## LIST OF DRAWINGS

- T-1 TITLE SHEET
- T-2 TAX/ZONING MAP & 200 PROPERTY OWNER LIST
- SP-1 OVERALL SITE PLAN
- SP-2 ENLARGED SITE PLAN PHASE 1 & 2
- E-1 ELEVATIONS PLAN
- A-1 VISUALIT GLOBAL ANTENNA MOUNTING SECTIONS AND EQUIPMENT DETAILS
- A-2 NEW LINE NETWORKS ANTENNA MOUNTING SECTIONS AND EQUIPMENT DETAILS
- A-3 SPRINT ANTENNA MOUNTING SECTIONS AND EQUIPMENT SPECIFICATIONS
- C-1 CONSTRUCTION DETAILS
- C-2 SOIL EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN, NOTES AND DETAILS

## GENERAL NOTES

- THE LOCATION OF PROPOSED TOWER SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE PASSAIC COUNTY PLANNING BOARD AND MAY NEED TO BE RELOCATED.
- THE PROPOSED TOWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWNSHIP ORDINANCES AND THE TOWNSHIP ENGINEER'S REQUIREMENTS. THE TOWER SHALL BE CONSTRUCTED ON THE TOWNSHIP TRACTS FOR THE TOWNSHIP ENGINEER'S REVIEW AND APPROVAL.
- POTABLE WATER AND SANITARY SEWER SERVICES ARE NOT REQUIRED OR PROPOSED FOR THE NEW FACILITY.
- ONLY TASKS IDENTIFIED AS REQUIRED ARE REQUIRED.

## BULK REQUIREMENTS

ZONE: WRC - WATER RESOURCE CONSERVATION		PROPOSED USE: TELECOMMUNICATION TOWER	
ORDINANCE		EXISTING	
MINIMUM LOT AREA	NA	1.15 ACRES (79,740 SQ FT)	NC
MINIMUM LOT WIDTH	300 FT	125.50 FT	NC
MINIMUM LOT DEPTH	NA	NA	NC
MINIMUM FRONT YARD	NA	NA	NC
MINIMUM SIDE	NA	NA	NC
MINIMUM REAR	NA	NA	NC
MINIMUM LOT DEPTH	NA	NA	NC
BUILDING HEIGHT	35 FT	NA	NC
BUILDING FOOTPRINT DISTURBED LAND AREA	NA	6,350 SQ FT (40,438 SQ FT)	NC
TOWER HEIGHT	120 FT	120 FT	NC
EQUIPMENT FOOTPRINT AREA	NA	250 SQ FT	NC
TABLE KEY	NA	NOT APPLICABLE	TABLE KEY
NA	NO CHANGE	TABLE KEY	TABLE KEY
NC	NO CHANGE	TABLE KEY	TABLE KEY

## CO APPLICANT INFORMATION

CO-APPLICANT: VIGILANT GLOBAL  
1380 REBELLE DRIVE, SUITE 1700  
MONTREAL (QUEBEC), H3G 2W4  
CONTACT: info@vigilantglobal.com  
514-941-4140

CO-APPLICANT: SPRINTCOM INC.,  
A KANSAS CORPORATION  
3591 SPRINT PARKWAY  
OVERLAND PARK, KS 66251-2650  
CONTACT: ALEX MOSS  
201-290-4580

CO-APPLICANT: NEW LINE NETWORKS, LLC  
600 WEST CHICKASAW STREET  
DALLAS, TEXAS 75201  
CONTACT: CHRIS REPP  
201-290-4580

## PROJECT DATA

PROJECT: WANAQUE TOWER  
LOCATION: 1 SKYLINE DRIVE, WANAQUE, PASSAIC COUNTY, NJ 07465  
LOT: 1  
BLOCK: 250  
ZONE: WRC - WATER RESOURCE CONSERVATION  
PROPERTY OWNER: SUBCARRIER COMMUNICATIONS INC  
139 WHITE OAK LANE  
OLD BRIDGE, NEW JERSEY 08857  
CONTACT: LISA OLESKY  
732-607-2828 (EXT. 139)  
APPLICANT: SUBCARRIER COMMUNICATIONS INC  
139 WHITE OAK LANE  
OLD BRIDGE, NEW JERSEY 08857  
CONTACT: LISA OLESKY  
732-607-2828 (EXT. 139)

## TOWNSHIP CERTIFICATION

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_  
CHAIRMAN \_\_\_\_\_  
SECRETARY \_\_\_\_\_  
TOWNSHIP ENGINEER \_\_\_\_\_

## SCHEDULE OF REVISIONS

NO.	DATE	DESCRIPTION
1	01/15/15	ISSUED FOR PERMITS
2	01/15/15	ISSUED FOR PERMITS
3	01/15/15	ISSUED FOR PERMITS
4	01/15/15	ISSUED FOR PERMITS
5	01/15/15	ISSUED FOR PERMITS
6	01/15/15	ISSUED FOR PERMITS
7	01/15/15	ISSUED FOR PERMITS
8	01/15/15	ISSUED FOR PERMITS
9	01/15/15	ISSUED FOR PERMITS
10	01/15/15	ISSUED FOR PERMITS



TITLE SHEET  
WANAQUE TOWER  
1 SKYLINE DRIVE, WANAQUE  
PASSAIC COUNTY, NJ 07465  
BLOCK: 250 LOT: 1  
SHEET NO. 1 OF 10  
DATE: 01/15/15  
PROJECT: WANAQUE TOWER  
DRAWN BY: J. MOSS  
CHECKED BY: J. MOSS  
APPROVED BY: J. MOSS





## **Migratory Bird Treaty Act Conservation Opportunities**

### **Revisions to Federal Aviation Administration Obstruction Marking and Lighting Advisory Circular**

#### **Background**

Almost 7 million birds, predominantly night-migrating songbirds, die annually as a result of collisions with lit communication towers in the United States. Songbirds, seabirds, and other migratory birds can be attracted to or disoriented by tower obstruction warning lighting systems that include non-flashing lights, especially during inclement weather. The Federal Aviation Administration (FAA) issues guidelines for appropriate pilot warning lighting designs for structures deemed aviation hazards (i.e., typically any structure >199ft above ground level [AGL]). In December 2015, the FAA released a revised [Obstruction Marking and Lighting Advisory Circular AC 70/7460-1L](#) and [additional materials](#) related to the new circular.

#### **The revised advisory circular prescribes:**

- Effective immediately, all new towers >350 feet AGL may only use flashing obstruction lighting
- Effective 15 September 2016, all towers between 151 and 350 feet AGL will employ only flashing L-810 side lights, after which all new towers >150 feet AGL may only use flashing obstruction lights
- Aircraft Detection Lighting Systems (ADLS) may be used on all towers – ADLS are sensor-based lighting systems that automatically activate the obstruction lights upon the radar detection of aircraft approaching the obstruction. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of obstruction lights.

#### **Why were these changes made?**

Research has demonstrated that eliminating non-flashing lights on towers may reduce migratory bird collisions by as much as 70 percent. The lighting and marking standards were revised to reduce impacts on migratory bird populations and minimize light impacts on adjacent communities. However, these changes also reduce construction and operational energy costs for tower owners.

With the implementation of the new circular, the FAA, Federal Communications Commission (FCC), and the US Fish and Wildlife Service encourage owners of existing registered structures to eliminate the use of non-flashing L-810 side lights as soon as possible. For many communications towers, making this change does not require climbing the tower, and can be accomplished simply by extinguishing the non-flashing lights. Prior to changing the lighting on any registered structure, the tower owner must request a new No Hazard Determination under the new circular from the FAA, and then must file Form 854 with the FCC to amend its antenna structure registration to reflect the new lighting.

#### **What role does the USFWS play in this?**

- Outreach to the owners of existing towers is critical (especially towers >350ft AGL). Spread the word to owners regarding new standards to reduce non-flashing lighting, bird collisions, maintenance, and energy costs. Contact the FCC for a database of tower locations, descriptions, and owner contacts.
- Post information about communication tower hazards on webpages - for example: <http://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>

#### **Where to get more information and assistance?**

Dr. Eric L. Kershner – FWS, Division of Migratory Bird Management; [eric\\_kershner@fws.gov](mailto:eric_kershner@fws.gov), 703-358-2376  
Dr. Joelle Gehring – Federal Communication Commission; [Joelle.Gehring@fcc.gov](mailto:Joelle.Gehring@fcc.gov), 202-270-4435

## Kristin Tallamy

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**From:** ron\_popowski@fws.gov on behalf of NJFO Project Review, FW5  
<njfo\_projectreview@fws.gov>  
**Sent:** Friday, May 25, 2018 9:44 AM  
**To:** Kristin Tallamy  
**Subject:** Re: [EXTERNAL] Wanaque Tower - Full USFWS Consultation Submission  
**Attachments:** image002.jpg

Received and we will do our best to provide you response within 30 days.

Thanks,

~~~~~  
U.S. Fish and Wildlife Service  
New Jersey Field Office  
Project Review Mailbox  
[NJFO\\_ProjectReview@fws.gov](mailto:NJFO_ProjectReview@fws.gov)

On Tue, May 22, 2018 at 10:57 AM, Kristin Tallamy <[kristin.tallamy@e2pm.com](mailto:kristin.tallamy@e2pm.com)> wrote:

Good morning, hope this finds you well.

I am sending to you all the information we have on a new project that will be taking place in Wanaque, NJ. Please let me know that you received this email and that you have all the information you need to do a project review. Thanks in advance for all your efforts regarding this consultation. Have a good day.



Kristin Tallamy

**E2 Project Management LLC**

87 Hibernia Avenue

Rockaway, NJ 07866

Tel. (973) 534-8980

Fax. (973) 299-5059

[kristin.tallamy@e2pm.com](mailto:kristin.tallamy@e2pm.com)

[www.e2pm.com](http://www.e2pm.com)

## Kristin Tallamy

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**From:** Kristin Tallamy <kristin.tallamy@e2pm.com>  
**Sent:** Tuesday, May 22, 2018 10:57 AM  
**To:** NJFO\_ProjectReview@fws.gov  
**Subject:** Wanaque Tower - Full USFWS Consultation Submission  
**Attachments:** Full USFWS Submission - Wanaque Tower (May22, 2018).pdf; image002.jpg

Good morning, hope this finds you well.

I am sending to you all the information we have on a new project that will be taking place in Wanaque, NJ. Please let me know that you received this email and that you have all the information you need to do a project review. Thanks in advance for all your efforts regarding this consultation. Have a good day.



Kristin Tallamy  
**E2 Project Management LLC**  
87 Hibernia Avenue  
Rockaway, NJ 07866  
Tel. (973) 534-8980  
Fax. (973) 299-5059  
[kristin.tallamy@e2pm.com](mailto:kristin.tallamy@e2pm.com)  
[www.e2pm.com](http://www.e2pm.com)



| <i>USFWS NJ Field Office Submission Package</i> |                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------|
| <b>Site Name:</b>                               | Wanaque Tower                                                      |
| <b>Site Type:</b>                               | 300-foot Self-Support Lattice Tower                                |
| <b>Site Address:</b>                            | 1 Skyline Drive, Wanaque, Passaic County, NJ<br>(Block 250, Lot 1) |
| <b>Latitude / Longitude (NAD83):</b>            | N 41° 03' 15.0" and W 74° 15' 15.6"                                |

1. **Date:** May 22, 2018
2. **Lead agency or applicant:** E2 Project Management LLC (87 Hibernia Avenue, Rockaway, NJ 07866)
3. **Requesting agency or individual:**
  - a. Name: Kristin Tallamy
  - b. Title: Environmental Scientist
  - c. Phone: 973-534-8980
  - d. Email: kristin.tallamy@e2pm.com
4. **Project name(s):** Wanaque Tower
5. **County, Township, Block and Lot numbers:**

Located at 1 Skyline Drive, Borough of Wanaque, Passaic County, New Jersey (Block 250, Lot 1), owned by Subcarrier Communications.

6. **Location of the project in decimal degrees:**

The approximate latitude and longitude is N41.0541667°, W-074.2543333°

7. **Will a State Freshwater Wetland Permit be required?**

No. According to the NJDEP's GIS databases, a large area of wetlands is mapped as being located just off the northeastern corner of the subject property. However, as noted in Question #9, at their closest point, delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, Final Site Plans do indicate the proposed 8-foot tall chain-link fence is proposed to be installed along a section of the limits of the 150-foot transition area. Because the delineated wetland is located in excess of 150 feet from the location of the proposed project, no part of the project is located within a wetland transition area and as such, will not directly adversely impact same. Because the project impacts less than one acre of overall land disturbance and proposes less than 0.25-acres of new impervious surface, it is not classified as a "major project" and can thus be assumed to create no indirect impacts to surface water resources/water quality. As such, a permit will not be required.

8. **Provide a list of any other non-Federal authorizations being sought:**

- NJDEP Division of Watershed Management Highlands Exemption No. 4.
- Hudson-Essex-Passaic Soil Conservation District SESCO Certification
- Construction (Building) Permits.
- Passaic County Planning Board Site Plan Application

**9. Project description and a description of the natural characteristics of the property and surrounding area:**

**Project Description:** Subcarrier Communications plans to remove and replace an existing wireless communication tower located at the referenced address above. Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace the existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Eight-foot tall chain-link fence is proposed to be installed around a part of the site with a gate at the existing driveway. Utility conduit will be routed underground in an existing trench to an existing utility pole located adjacent to Skyline Drive and access to the facility will be via the existing gravel drive. A copy of the May 2018 Zoning Drawings is attached for your convenience. *Note: proposed project involves construction of 300-ft tower; therefore, not meeting the USFWS criteria for categorical determination of "not likely to adversely affect" federally listed species in New Jersey, or have any significant impacts on migratory birds or other federal trust wildlife resources.* A copy of the May 2018 Zoning Drawings is attached for your convenience.

**Natural Characteristics of Property and surrounding area:** The site property is approximately 1.396 acres in size (per survey). It is accessed from Skyline Drive via an existing gravel driveway and currently improved with the existing 110-foot tall guyed lattice tower and two wireless equipment shelters (to be removed and replaced). Two small wood-frame sheds are located to the south/southwest, off-site on the adjacent parcel (Lot 2), owned by the State of New Jersey. Cannonball Trail currently traverses the east/east-central section of the subject property. The subject property is effectively surrounded by upland forest interspersed with forested wetlands.

There are no surface water resources located within at least 300 feet of the propose project; therefore, surface waters nor their associate riparian buffers will not be adversely affected by the proposed project.

According to the NJDEP's GIS databases, a large area of wetlands is mapped as being located just off the northeastern corner of the subject property. More accurately, as part of the proposed project, wetlands located on and/or proximate to the subject property were delineated, survey-located, and mapped by VS Land Data on October 6, 2016. A relatively large area of wetlands was delineated as occupying the northeast corner of the subject property and extending off-site to the east/southeast. At their closest point, the delineated wetlands are located in excess of 150 feet from the location of the proposed project; however, as shown on the Final Site Plans, the 8-foot tall chain-link fence is proposed to be installed along a section of the limits of the 150-foot transition area.

The site is zoned as Water Resource Conservation (WRC). Refer to attached site photographs, site location map and topographic map for reference.

**10. If tree clearing is being proposed and IPaC has returned a result of Indiana bat, please indicate whether clearing of trees  $\geq$  5 inches in diameter at breast height will be seasonally restricted. If so, provide the appropriate time-of-year restriction as described on page 4 of the Project Screening Chart.**

Although Indiana Bat was identified by IPaC, no tree clearing is proposed for this project. Net gain in impervious coverage is less than 0.25 acres – no new impervious coverage is proposed. Project is wholly-located on areas overlain with gravel.

**11. Does the project comply with the northern long-eared bat 4(d) rule?**

Yes; Although NLEB was identified by IPaC, no tree clearing is proposed for this project; therefore complying with the 4(d) rule. No streamline form was prepared for this project.

**12. Proposed conservation measures to avoid impacts to federally listed species identified in your IPaC report:**

E2PM expects the project will result in minimal adverse impact to general wildlife resources as well as threatened and endangered species pursuant to the following:

- Access to the proposed project will be via the existing gravel driveway. No new road construction is required;
- The project is proposed to be located on and close to existing on-site improvements (existing graveled area and existing equipment shelters). The area on which the project is proposed to be constructed is cleared of all vegetation. No suitable wildlife habitat is proposed to be impacted

Based on these conclusions, no proposed conservation measures are considered at this time.

**13. Assessment of impacts to federally listed threatened and endangered species from proposed project activities, and your preliminary determination of whether each federally listed species is or is not likely to be adversely affected.**

The proposed project meets/will meet all of the USFWS October 2016 "Communication Tower and Antenna Consultation in New Jersey requirements (<https://www.fws.gov/northeast/njfieldoffice/pdf/celltower.pdf>) except for the height and lighting requirements reaching 300-feet. USFWS indicates that the recommendation to have a tower less than 200 feet is for the protection of migratory bird and not any federally-listed species. As such, this formal consultation pursuant to Section 7 of the Endangered Species Act is being submitted to the USFWS for review and comment.

**14. Indicate if the Service's recommendations to protect other wildlife resources will be implemented.**

Although it is illustrated that the proposed project would have no adverse effect on wildlife resources, the potential for venomous snakes to be present on the property, particularly during the construction process, represents a hazard to both contractors as well as the snakes themselves. As such, the following mitigative measure has been recommended:

- If construction or site preparation-related activities will occur during the snakes' active period (April 1 - October 31), one State-approved primary venomous snake monitor should be required to clear the area of any and all reptiles prior to the day's activities. Once cleared, that monitor should be on-call to revisit the site, capture, and relocate any snake observed by the contractor(s) throughout the day. If the work is to be conducted during the snakes' inactive period (November 1 - March 31), no snake monitor will be required on site

Note: Site photographs, Maps and USFWS IPaC list for the proposed action area is attached to this document.



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New Jersey Ecological Services Field Office  
4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

Phone: (609) 646-9310 Fax: (609) 646-0352

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



In Reply Refer To:  
Consultation Code: 05E2NJ00-2018-SLI-1109  
Event Code: 05E2NJ00-2018-E-03430  
Project Name: Wanaque Tower

September 12, 2018

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: <http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected

through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably foreseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New Jersey Ecological Services Field Office**

4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

(609) 646-9310

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## Project Summary

Consultation Code: 05E2NJ00-2018-SLI-1109

Event Code: 05E2NJ00-2018-E-03430

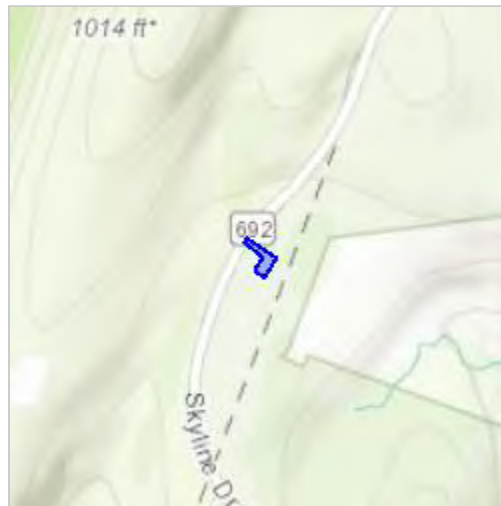
Project Name: Wanaque Tower

Project Type: COMMUNICATIONS TOWER

**Project Description:** Remove and replace an existing wireless communication tower located at the referenced address . Project would include install of one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace the existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Eight-foot tall chain-link fence is proposed to be installed around a part of the site with a gate at the existing driveway. Utility conduit will be routed underground in an existing trench to an existing utility pole located adjacent to Skyline Drive and access to the facility will be via the existing gravel drive.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.054327006329494N74.25424130963471W>



Counties: Bergen, NJ | Passaic, NJ

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME                                                                                                                                                                                                                                                       | STATUS     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Indiana Bat <i>Myotis sodalis</i><br>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a> | Endangered |
| Northern Long-eared Bat <i>Myotis septentrionalis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>                           | Threatened |

## Flowering Plants

| NAME                                                                                                                                                                                                                        | STATUS     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Small Whorled Pogonia <i>Isotria medeoloides</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1890">https://ecos.fws.gov/ecp/species/1890</a> | Threatened |

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

REFUGE INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birds and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME                                                                                                                                                                                                                                                                                                                                                                  | BREEDING SEASON         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Bald Eagle <i>Haliaeetus leucocephalus</i></b><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a> | Breeds Sep 1 to Aug 31  |
| <b>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i></b><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>                                                                                                      | Breeds May 15 to Oct 10 |

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| NAME                                                                                                                                                                                                                                                                                                                                                             | BREEDING SEASON         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Black-capped Chickadee</b> <i>Poecile atricapillus praticus</i><br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA                                                                                                                                                                    | Breeds Apr 10 to Jul 31 |
| <b>Bobolink</b> <i>Dolichonyx oryzivorus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                             | Breeds May 20 to Jul 31 |
| <b>Canada Warbler</b> <i>Cardellina canadensis</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                       | Breeds May 20 to Aug 10 |
| <b>Golden Eagle</b> <i>Aquila chrysaetos</i><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a> | Breeds elsewhere        |
| <b>Golden-winged Warbler</b> <i>Vermivora chrysoptera</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/8745">https://ecos.fws.gov/ecp/species/8745</a>                                                                                                   | Breeds May 1 to Jul 20  |
| <b>Prairie Warbler</b> <i>Dendroica discolor</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                         | Breeds May 1 to Jul 31  |
| <b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                           | Breeds May 10 to Sep 10 |
| <b>Rusty Blackbird</b> <i>Euphagus carolinus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                         | Breeds elsewhere        |
| <b>Wood Thrush</b> <i>Hylocichla mustelina</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                           | Breeds May 10 to Aug 31 |
| <b>Yellow-bellied Sapsucker</b> <i>sphyrapicus varius</i><br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br><a href="https://ecos.fws.gov/ecp/species/8792">https://ecos.fws.gov/ecp/species/8792</a>                                                                                | Breeds May 10 to Jul 15 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

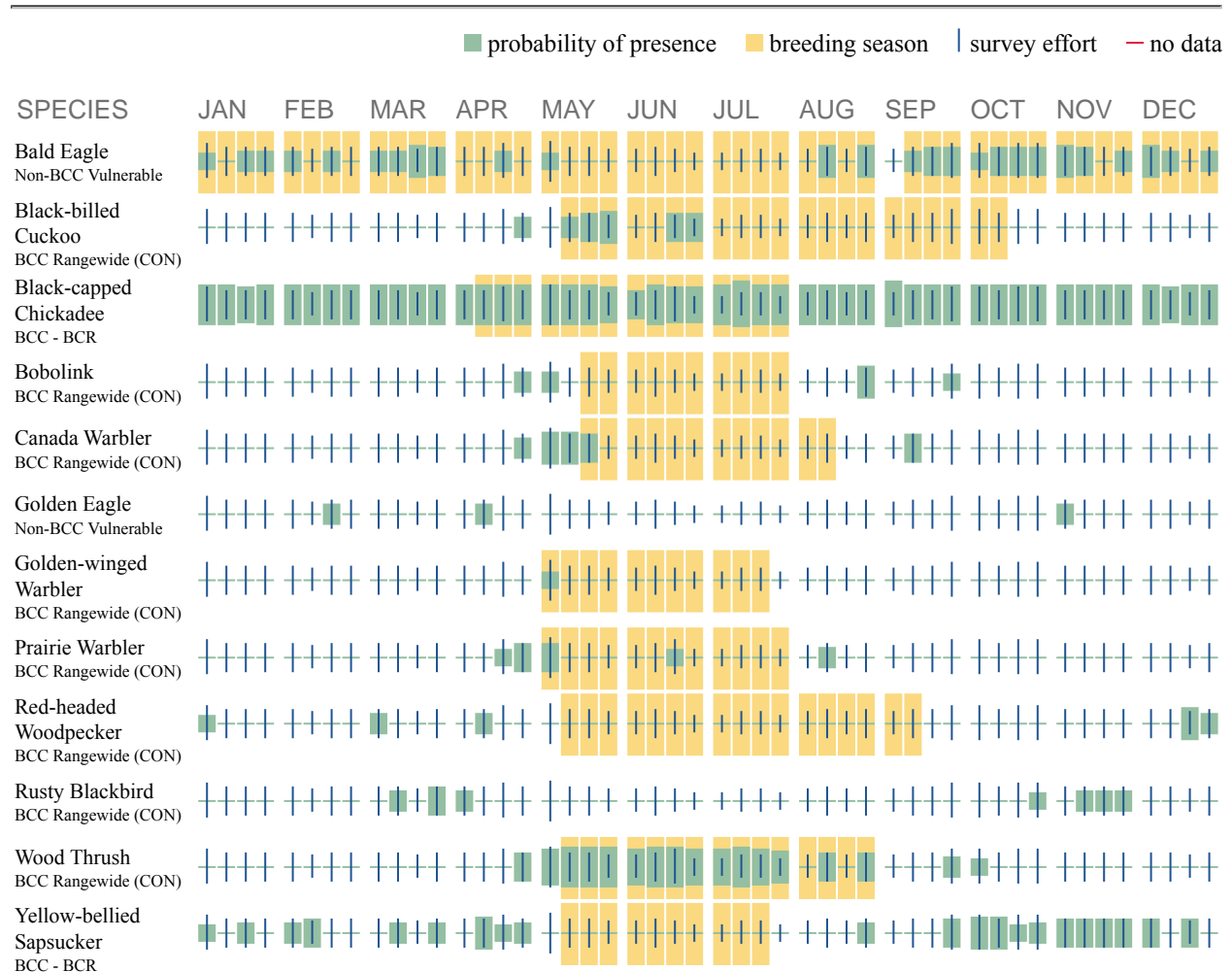
### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

---

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

## Migratory Birds FAQ

### **Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

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### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

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### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

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If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

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The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC

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# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New Jersey Ecological Services Field Office  
4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

Phone: (609) 646-9310 Fax: (609) 646-0352

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



In Reply Refer To:

May 21, 2018

Consultation Code: 05E2NJ00-2018-SLI-1109

Event Code: 05E2NJ00-2018-E-02340

Project Name: Wanaque Tower

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: <http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected

through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably foreseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New Jersey Ecological Services Field Office**

4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

(609) 646-9310

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## Project Summary

Consultation Code: 05E2NJ00-2018-SLI-1109

Event Code: 05E2NJ00-2018-E-02340

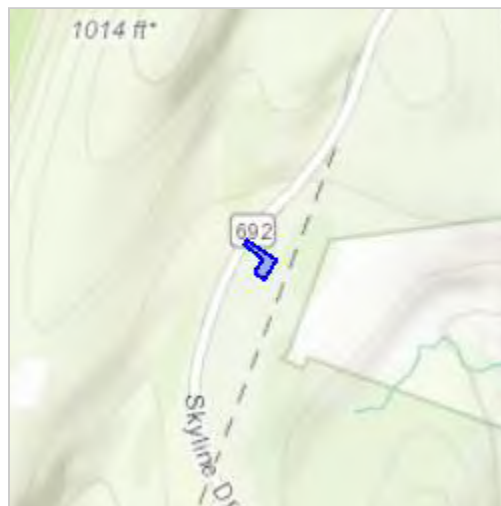
Project Name: Wanaque Tower

Project Type: COMMUNICATIONS TOWER

**Project Description:** Remove and replace an existing wireless communication tower located at the referenced address . Project would include install of one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace the existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Eight-foot tall chain-link fence is proposed to be installed around a part of the site with a gate at the existing driveway. Utility conduit will be routed underground in an existing trench to an existing utility pole located adjacent to Skyline Drive and access to the facility will be via the existing gravel drive.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.054327006329494N74.25424130963471W>



Counties: Bergen, NJ | Passaic, NJ

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME                                                                                                                                                                                                                                                       | STATUS     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Indiana Bat <i>Myotis sodalis</i><br>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a> | Endangered |
| Northern Long-eared Bat <i>Myotis septentrionalis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>                           | Threatened |

## Flowering Plants

| NAME                                                                                                                                                                                                                        | STATUS     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Small Whorled Pogonia <i>Isotria medeoloides</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1890">https://ecos.fws.gov/ecp/species/1890</a> | Threatened |

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

REFUGE INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birds and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME                                                                                                                                                                                                                                                                     | BREEDING SEASON         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Bald Eagle <i>Haliaeetus leucocephalus</i></b><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Aug 31  |
| <b>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i></b><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>         | Breeds May 15 to Oct 10 |

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| NAME                                                                                                                                                                                                                                                                                                                                                             | BREEDING SEASON         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Black-capped Chickadee</b> <i>Poecile atricapillus praticus</i><br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA                                                                                                                                                                    | Breeds Apr 10 to Jul 31 |
| <b>Bobolink</b> <i>Dolichonyx oryzivorus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                             | Breeds May 20 to Jul 31 |
| <b>Canada Warbler</b> <i>Cardellina canadensis</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                       | Breeds May 20 to Aug 10 |
| <b>Golden Eagle</b> <i>Aquila chrysaetos</i><br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a> | Breeds elsewhere        |
| <b>Golden-winged Warbler</b> <i>Vermivora chrysoptera</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/8745">https://ecos.fws.gov/ecp/species/8745</a>                                                                                                   | Breeds May 1 to Jul 20  |
| <b>Prairie Warbler</b> <i>Dendroica discolor</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                         | Breeds May 1 to Jul 31  |
| <b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                           | Breeds May 10 to Sep 10 |
| <b>Rusty Blackbird</b> <i>Euphagus carolinus</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                         | Breeds elsewhere        |
| <b>Wood Thrush</b> <i>Hylocichla mustelina</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.                                                                                                                                                                                                           | Breeds May 10 to Aug 31 |
| <b>Yellow-bellied Sapsucker</b> <i>sphyrapicus varius</i><br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br><a href="https://ecos.fws.gov/ecp/species/8792">https://ecos.fws.gov/ecp/species/8792</a>                                                                                | Breeds May 10 to Jul 15 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

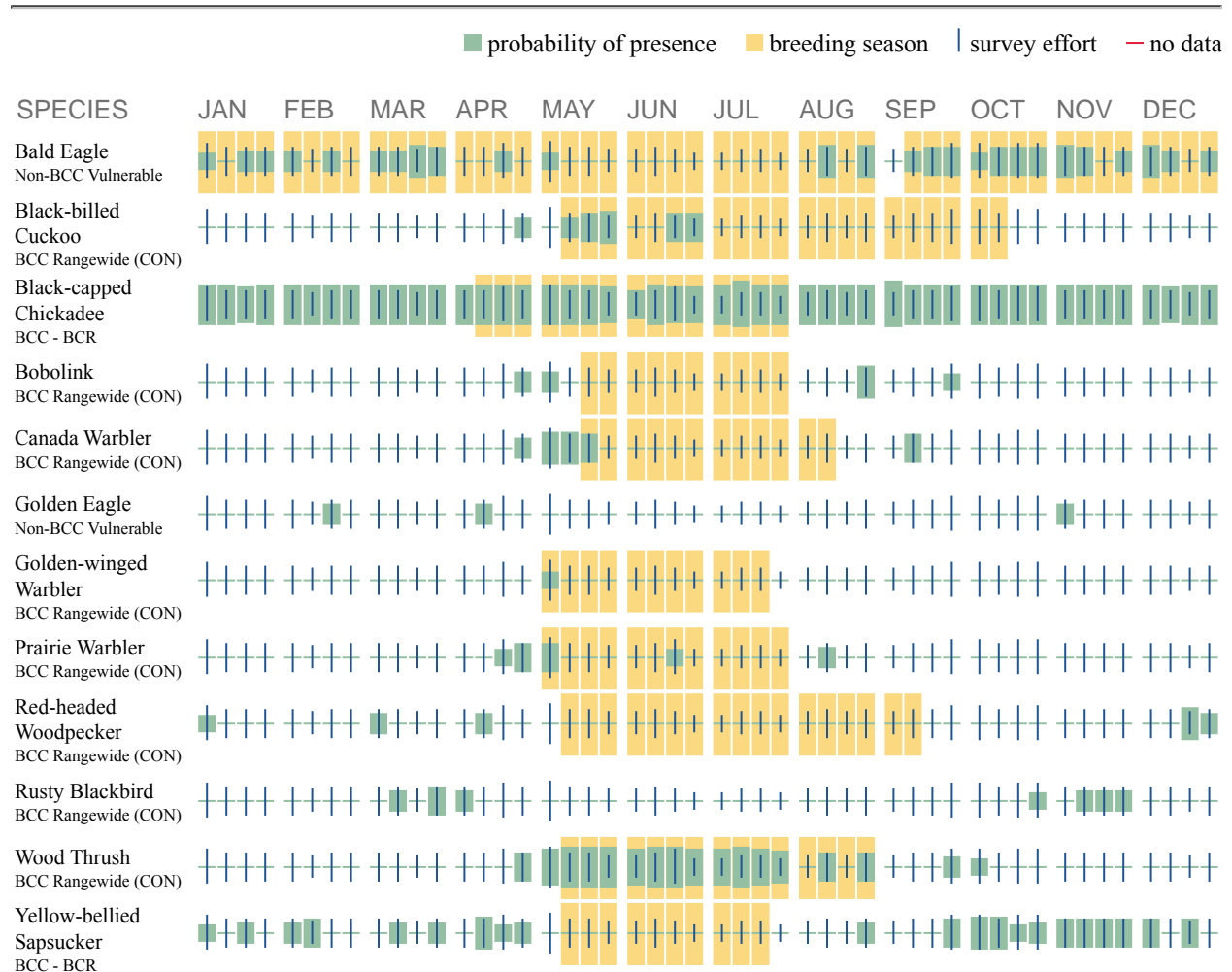
### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

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Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

## Migratory Birds FAQ

### **Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

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### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

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The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC

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# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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## **CONTENTS:**

- Page 2: Communication Tower and Antenna Consultation in New Jersey, October 2016
- Pages 3-7: U.S. Fish and Wildlife Service (USFWS) Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning, September 2013
- Page 8: Opportunities to Reduce Bird Collisions with Communications Towers While Reducing Tower Lighting Costs, December 2015
- Pages 9-14: Communication Towers and Antennas: Environmental Review Procedures in New Jersey, January 2001



## COMMUNICATION TOWER AND ANTENNA CONSULTATION IN NEW JERSEY

The U.S. Fish and Wildlife Service's (Service) New Jersey Field Office recognizes that individual project review by the Service is not required under certain conditions. The Service provides the following comments in accordance with provisions of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755; 16 U.S.C. 703-712), the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-688d), and the National Environmental Policy Act of 1969 (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

Migratory birds are a Federal trust resource and are protected under the MBTA. Communication towers may pose a hazard to migrating birds and to birds nesting in the area. Risk factors include tower height, physical design, lighting, and site location relative to migratory corridors and bird concentration areas. In addition, certain communication towers may adversely affect federally listed threatened and endangered species through direct disturbance of listed plants and animals, impacts to their habitats, and/or creation of a collision hazard for listed birds and bats.

The Service has determined that the following proposed actions are not likely to adversely affect federally listed species in New Jersey, nor have any significant impacts on migratory birds or other wildlife resources under Service jurisdiction:

- routine maintenance (*e.g.*, painting, antenna replacement) at existing tower sites or other existing tower support structures;
- repair or replacement of existing towers and/or equipment;
- co-location of new equipment or antennas on an existing structure (*e.g.*, tower, water tank, flagpole, building), where proposed activities will not require the addition of lights or guy wires to an existing structure, or increase the height of an existing structure above 200 feet; and
- construction of new towers without lights or guy wires, under 200 feet in height

### PROVIDED that:

- (1) all ground disturbance is at least 150 feet from any beach or dune;
- (2) in areas where the iPac species list<sup>1</sup> includes bog turtle, red knot, Indiana bat, dwarf wedgemussel, swamp pink, Knieskern's beaked-rush, sensitive joint-vetch, or Hirsts' panic grass: (a) any net gain in impervious surface is under 0.25 acre, AND (b) all ground disturbance is at least 150 feet from any wetland or open water (*e.g.*, river, stream, pond, lake) or is limited to existing developed areas (*e.g.*, rooftops, pavement, gravel, maintained lawn);
- (3) in areas where the iPac species list includes Indiana bat, any tree clearing is under 0.25 acre (including for access roads) and trees over 5 inches diameter at breast height will be cut between October 1 and March 31; in municipalities<sup>2</sup> with hibernation occurrence, cutting will occur between November 16 and March 31;
- (4) in areas where the iPac species list includes northern long-eared bat, the project will comply with the 4(d) rule<sup>3</sup>;
- (5) the project is consistent with the Service's National Bald Eagle Management Guidelines;<sup>4</sup>
- (6) the project is not located in a National Wildlife Refuge;<sup>5</sup>
- (7) removal of native vegetation (which provides migratory bird habitat) will not exceed 0.5 acre; and
- (8) tree clearing will be seasonally restricted from March 1 to August 31 OR, if clearing will occur during that season, all trees will be inspected no more than 24 hours prior to cutting to ensure no active nests of any migratory bird<sup>6</sup> are present.

**Do not contact this office for review of projects that meet the above criteria.** This document may be used as the Service's concurrence with an ESA determination of "not likely to adversely affect" federally listed species for projects in New Jersey that meet the above criteria.

<sup>1</sup> Information, Planning, and Conservation System, <http://ecos.fws.gov/ipac/>

<sup>2</sup> See the list of bat municipalities at <http://www.fws.gov/northeast/njfieldoffice/Endangered/>

<sup>3</sup> Information on 4(d) rule compliance is available at <http://www.fws.gov/Midwest/endangered/mammals/nleb/>

<sup>4</sup> <http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>

<sup>5</sup> Refuge boundary mapping is available at [http://www.fws.gov/gis/data/national/index.html#NWRS\\_BOUNDARY](http://www.fws.gov/gis/data/national/index.html#NWRS_BOUNDARY)

<sup>6</sup> <http://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php>

***2013 U.S. Fish and Wildlife Service (USFWS) Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning –***

**Suggestions Based on Previous USFWS Recommendations to FCC Regarding WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on Migratory Birds" (2007), Docket No. 08-61, FCC's Antenna Structure Registration Program (2011), Service 2012 Wind Energy Guidelines, and Service 2013 Eagle Conservation Plan Guidance**

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[Comm Tower 2013 Revised Guidance-to FCC-AMM.docx]

1. Collocation of the communications equipment on an existing communication tower or other structure (e.g., billboard, water and transmission tower, distribution pole, or building mount) is strongly recommended. Depending on tower load factors and communication needs, from 6 to 10 providers should collocate on an existing tower or structure provided that frequencies do not overlap/"bleed" or where frequency length or broadcast distance requires higher towers. New towers should be designed structurally and electronically to accommodate the applicant's antenna, and antennas of at least 2 additional users – ideally 6 to 10 additional users, if possible – unless the design would require the addition of lights and/or guy wires to an otherwise unlit and/or unguyed tower. This recommendation is intended to reduce the number of towers needed in the future.

2. If collocation is not feasible and a new tower or towers are to be constructed, it is strongly recommended that the new tower(s) should be not more than 199 feet above ground level (AGL), and that construction techniques should not require guy wires. Such towers should be unlighted if Federal Aviation Administration (FAA) regulations and lighting standards (FAA 2007, Patterson 2012, FAA 2013 lighting circular anticipated update) permit. Additionally, the Federal Communications Commission (FCC) through recent rulemaking now requires that new towers  $\geq$  450 ft AGL contain no red-steady lights. FCC also recommends that new towers 350-450 ft AGL also contain no red-steady lights, and they will eventually recommend that new towers  $<$  350 ft AGL convert non-flashing lights to flash with existing flashing lights. LED lights are being suggested as replacements for all new construction and for retrofits, with the intent of future synchronizing the flashes. Given these dynamics, the Service recommends using lattice tower or monopole structures for all towers  $<$  200 ft AGL and for taller towers where feasible. The Service considers the less than 200 ft AGL option the "gold standard" and suggests that this

is the environmentally preferred industry standard for tower placement, construction and operation – i.e., towers that are unlit, unguyed, monopole or lattice, and less than 200 ft AGL.

3. If constructing multiple towers, the cumulative impacts of all the towers to migratory birds – especially to Birds of Conservation Concern (FWS 2008) and threatened and endangered species, as well as the impacts of each individual tower, should be considered during the development of a project.

4. The topography of the proposed tower site and surrounding habitat should be clearly noted, especially in regard to surrounding hills, mountains, mountain passes, ridge lines, rivers, lakes, wetlands, and other habitat types used by raptors, Birds of Conservation Concern, and state and federally listed species, and other birds of concern. Active raptor nests, especially those of Bald and Golden Eagles, should be noted, including known or suspected distances from proposed tower sites to nest locations. Nest site locations for Golden Eagles may vary between years, and unoccupied, inactive nests and nest sites may be re-occupied over multiple years. The Service's 2013 Eagle Conservation Plan Guidance, Module 1, Land-based Wind Energy, Version 2, available on our website, is a useful document (USFWS 2013).

5. If at all possible, new towers should be sited within existing "antenna farms" (i.e., clusters of towers), in degraded areas (e.g., strip mines or other heavily industrialized areas), in commercial agricultural lands, in Superfund sites, or other areas where bird habitat is poor or marginal. Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state of federal refuges, staging areas, rookeries, and Important Bird Areas), in known migratory, daily movement flyways, areas of breeding concentration, in habitat of threatened or endangered species, or key habitats for Birds of Conservation Concern (FWS 2008). Disturbance can result in effects to bird populations which may cumulatively affect their survival. The Service has recommended some disturbance-free buffers, e.g., 0.5 mi around raptor nests during the nesting season, and 1-mi disturbance free buffers for Ferruginous Hawks and Bald Eagles during nesting season in Wyoming (FWS WY Ecological Services Field Office, referenced in Manville 2007:23). The effects of towers on "prairie grouse," "sage grouse," and grassland and shrub-steppe bird species should also be considered since tall structures have been shown to result in abandonment of nest site areas and leks, especially for "prairie grouse" (Manville 2004). The issue of buffers is currently under review, especially for Bald and Golden Eagles. Additionally, towers should not be sited in areas with a high incidence of fog, mist, and low cloud ceilings.

6. If taller (> 199 ft AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white strobe or red strobe lights (red preferable since it is generally less displeasing to the human eye at night), or red flashing incandescent lights should be used at night, and these should be the minimum number, minimum intensity (< 2,000 candela), and minimum number of flashes per minute (i.e., longest duration between flashes/"dark phase") allowable by the FAA. The use of solid (non-flashing) warning lights at night should be avoided (Patterson 2012, Gehring et al. 2009) – see recommendation #2 above. Current research indicates that solid red lights attract night-migrating birds at a much higher rate than flashing lights (Gehring et al. 2009, Manville 2007, 2009). Recent research

indicates that use of white strobe, red strobe, or red flashing lights alone provides significant reductions in bird fatalities (Patterson 2012, Gehring et al. 2009).

7. Tower designs using guy wires for support, which are proposed to be located in known raptor or waterbird concentrations areas, daily movement routes, major diurnal migratory bird movement routes, staging areas, or stopover sites, should have daytime visual markers or bird deterrent devices installed on the wires to prevent collisions by these diurnally moving species. The efficacy of bird deterrents on guy wires to alert night migrating species has yet to be scientifically validated. For guidance on markers, see Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines -- State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC, and Sacramento, CA. 207 pp, and APLIC. 2012. *Reducing Avian Collisions with Power Lines -- the State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, DC. 159 pp. Also see [www.aplic.org](http://www.aplic.org), [www.energy.ca.gov](http://www.energy.ca.gov), or call 202-508-5000.

8. Towers and appendant facilities should be designed, sited, and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Several shorter, un-guyed towers are preferable to one, tall guyed, lighted tower. Road access and fencing should be minimized to reduce or prevent habitat fragmentation, disturbance, and the creation of barriers, and to reduce above ground obstacles to birds in flight.

9. If, prior to tower design, siting and construction, if it has been determined that a significant number of breeding, feeding and roosting birds, especially of Birds of Conservation Concern (FWS 2008), state or federally-listed bird species, and eagles are known to habitually use the proposed tower construction area, relocation to an alternate site is highly recommended. If this is not an option, seasonal restrictions on construction are advised in order to avoid disturbance, site and nest abandonment, especially during breeding, rearing and other periods of high bird activity.

10. Security lighting for on-ground facilities, equipment and infrastructure should be motion- or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination, but still allow safe nighttime access to the site (USFWS 2012, Manville 2011).

11. Representatives from the USFWS or researchers from the Research Subcommittee of the Communication Tower Working Group should be allowed access to the site to evaluate bird use; conduct dead-bird searches; place above ground net catchments below the towers (Manville 2002); and to perform studies using radar, Global Position System, infrared, thermal imagery, and acoustical monitoring, as necessary. This will allow for assessment and verification of bird movements, site use, avoidance, and mortality. The goal is to acquire information on the impacts of various tower types, sizes, configurations and lighting protocols.

12. Towers no longer in use, not re-licensed by the FCC for use, or determined to be obsolete should be removed from the site within 12 months of cessation of use, preferably sooner.

13. In order to obtain information on the usefulness of these guidelines in preventing bird strikes and better understanding impacts from habitat fragmentation, please advise USFWS personnel of the final location and specifications of the proposed tower, and which measures recommended in these guidelines were implemented. If any of these recommended measures cannot be implemented, please explain why they are not feasible. This will further advise USFWS in identifying any recurring problems with the implementation of the guidelines, which may necessitate future modifications.

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U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA. 85 pp. <http://www.fws.gov/migratorybirds/>>

U.S. Fish and Wildlife Service. 2012. U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines. March, 82 pp.

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Federal Communications Commission  
Washington, D.C. 20554

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**Opportunities to Reduce Bird Collisions with Communications Towers  
While Reducing Tower Lighting Costs**

On December 4, 2015, the Federal Aviation Administration (FAA) revised its advisory circular that prescribes tower lighting to eliminate the use of L-810 steady-burning side lights on towers taller than 350 ft. Above Ground Level (AGL). See [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_70\\_7460-1L .pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L.pdf). While the FAA made this change to reduce the number of migratory bird collisions (by as much as 70%), it also reduces construction and maintenance costs to tower owners. Implementing this type of lighting on towers that received an FAA Study prior to the release of the new advisory circular can be achieved through a simple application process with the FAA and the Federal Communications Commission (FCC).

The FAA and FCC recognize that:

- Birds are attracted to non-flashing red lights, such as L-810 side-marker lights; and
- Birds are much less attracted to flashing lights on towers, such as L-864 and L-865 lights.

A “lighting deviation” can be used to extinguish or eliminate L-810 steady-burning side lights from an existing registered tower, and typically the FAA quickly approves such a request. The following steps are necessary:

1. File a Marking and Lighting study electronically with the FAA (<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>) requesting the elimination or omission of steady-burning lights (L-810) with Form 7460-1, Notice of Proposed Construction or Alteration. Designate structure type: “Deviation from Red Obstruction Light Standards.”
2. Once the FAA has approved the request and assigned a FAA Study Number, file Form 854 with the FCC via the Antenna Registration System (ASR). Please select “MD – Modification” and choose the appropriate FAA Lighting Style.<sup>1</sup> The FCC will typically approve the application and modify the registration within 24 hours.
3. Once the lighting change for a tower has been granted by the FCC via ASR, the steady-burning, side-marker, L-810 tower lights can be extinguished. This is typically accomplished in the tower transmission building and does not ordinarily require climbing the tower. Per the FAA requirements, flashing red lights should flash at 30 FPM (+/- 3 FPM).

The elimination of continuously burning security lights under towers will also minimize bird attraction to the site and reduce energy costs. Many tower operators use down-shielded, motion sensor-triggered security lighting, which promotes tower safety and reduces the possibility of attracting migratory birds.

<sup>1</sup> If the FAA grants a lighting deviation referencing an advisory circular other than 70/7460-1L, select “3. Other” and describe the lighting in the field provided. If the FAA issues a new Study referencing 70/7460-1L, select the lighting style that corresponds to the lighting in the FAA Study.



## COMMUNICATION TOWERS AND ANTENNAS: ENVIRONMENTAL REVIEW PROCEDURES IN NEW JERSEY



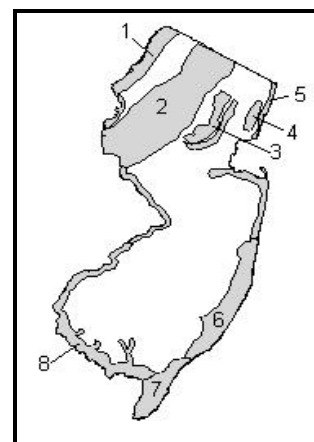
### INTRODUCTION

Wireless communication towers and antennas in New Jersey have greatly increased in number in recent years. Cumulatively, communication towers have a potentially significant impact on wildlife, especially migratory birds. All communication towers and antennas requiring authorization from the Federal Communications Commission (FCC) are subject to the environmental review procedures required by Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) and by the National Environmental Policy Act (83 Stat. 852; 42 U.S.C. 4321 *et seq.*) (NEPA). The U.S. Fish and Wildlife Service (Service) routinely reviews proposed communication projects and provides recommendations to project proponents and the FCC to avoid adverse impacts to federally listed endangered and threatened species, migratory birds, and other wildlife.

This paper provides information on: potential impacts to fish, wildlife, and other resources from communication towers; concerns regarding tower siting near Wilderness Areas and National Wildlife Refuges; and required environmental review procedures for wireless communication facilities. Recommendations to avoid adverse impacts to wildlife through tower siting and design are also included. Sources of additional information and a Tower Site Evaluation Form are also provided. The form is a tool developed by the Service to assist project proponents, planners, natural resource managers, and others in making tower siting decisions. Information and recommendations contained in this paper reflect the September 14, 2000 Service Interim Guidelines for Recommendations On Communications Tower Siting, Construction, Operation, and Decommissioning.

### MIGRATORY BIRDS

All native migratory birds (e.g., waterfowl, shorebirds, passerines, hawks, owls, vultures, falcons) are afforded protection under the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 703-712). Migratory birds are a federal trust resource responsibility, and the Service considers migratory bird concentration areas environmentally significant. Bird concentration areas include: traditional migratory flight corridors (e.g., ridges, shorelines, river valleys); rookeries and other bird breeding areas; stopover, staging or resting areas (e.g., land bounding large bodies of water, wetlands, forests, and natural grasslands); wildlife preserves (e.g., National Wildlife Refuges; State Parks, Forests, Wildlife Management Areas, and Natural Areas; private sanctuaries); and seasonal flight paths (e.g., between feeding and nesting or roosting areas). Some critical bird migration corridors in New Jersey (Figure 1) include: (1) Appalachian ridges and valleys; (2) the Highlands; (3) central Passaic wetlands; (4) the New York/New Jersey Harbor Estuary area, including the Hackensack Meadowlands; (5) the Palisades; (6) Atlantic Coast beaches, bays, and barrier islands; (7) the Cape May Peninsula; and (8) the Delaware Bayshore. In addition, the Service maintains five National Wildlife Refuges in New Jersey; further information is provided below.



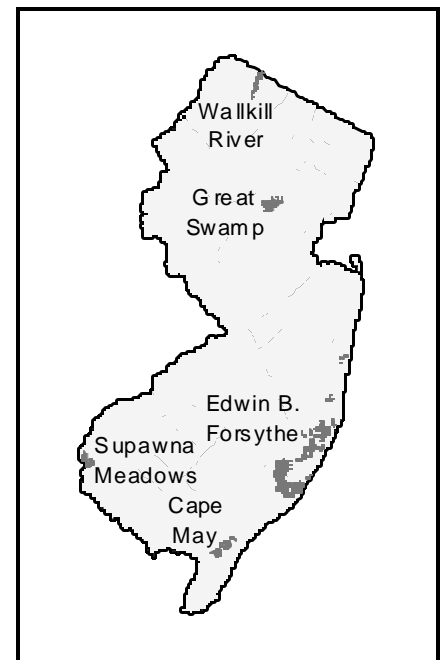
**Figure 1.** Critical Migratory Bird Areas (Dunne, 1989).



Communication towers pose a collision hazard to birds in flight, especially some 350 species of night-migrating birds. Cumulatively, communication towers kill an estimated four to five million birds per year nationwide (Manville, 2000). The risk of bird collisions is related to tower height, design, lighting, and location relative to migratory bird concentration areas. Most documented bird kills at communication towers involve tall, lighted structures, and birds migrating at night during inclement weather. During these events, birds attracted by the lights congregate and circle around the tower, with mortality resulting from collisions with guy wires, other birds, and the ground, or from exhaustion. However, occurrences of bird collision mortality at communication towers have also been documented during daytime and fair-weather conditions.

## NATIONAL WILDLIFE REFUGES

The Service administers a national system of wildlife refuges. A key purpose of the National Wildlife Refuge (NWR) System is to protect and maintain habitat for migratory birds and other wildlife. Five NWRs have been established within the State of New Jersey, each with a role in protecting the diversity of the Nation's flora and fauna and the natural habitats upon which native species depend. The five NWRs in New Jersey are (Figure 2): Wallkill River, Great Swamp, Edwin B. Forsythe, Supawna Meadows, and Cape May. The National Wildlife Refuge System Improvement Act of 1997 (105 Stat. 57; 16 U.S.C. 668dd-668ee, as amended) provides guidelines and directives for administration and management of all areas in the refuge system. Any proposal to construct a commercial communication tower or antenna facility within a NWR would require a compatibility determination (65 FR 62457-62483; 50 CFR 25, 26 and 29) before a Special Use Permit would be granted from the Service's Division of Refuges and Wildlife.



**Figure 2.** National Wildlife Refuges

## WILDERNESS AREAS

Wilderness is a designation made by Congress pursuant to the Wilderness Act (78 Stat. 890; 16 U.S.C. 1131-1136), which established the National Wilderness Preservation System. The Act defines wilderness as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain; an area of underdeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation and which is protected and managed to preserve its natural conditions." Permanent structures, including communication towers and antenna facilities, are prohibited in federally designated wilderness areas. In New Jersey, federally designated wilderness areas are included within the Great Swamp and Edwin B. Forsythe NWRs. These areas are given the added designation of "wilderness" to preserve their natural values.

## **ENVIRONMENTAL REVIEW PROCEDURES**

### **Endangered Species Act**

Threatened and endangered species and their habitats are afforded protection under the ESA pursuant to Section 7(a)(2), which requires every federal agency in consultation with the Service to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. Consultation with the Service pursuant to Section 7(a)(2) of the ESA must be carried out for all projects licensed or otherwise authorized by a federal agency, including the FCC, prior to project implementation for any project that may affect a federally listed species. The FCC complies with this provision of the ESA through its rules implementing NEPA (47 CFR 1.1301 to 1.1319).

Regulations implementing the ESA (50 CFR Part 402.14) specify that a federal agency shall make no irreversible or irretrievable commitment of resources that would prevent formulating or implementing any reasonable and prudent alternatives for an action. This prohibition is in force until the requirements of Section 7(a)(2) are satisfied.

### **National Environmental Policy Act**

The FCC requires all license applicants for antenna facilities and structures, including towers, to review their proposed actions for environmental consequences. Regulations implementing NEPA with regard to actions of the FCC are presented under 47 CFR Sections 1.1301 to 1.1319. These rules place responsibility on each applicant to investigate all of the potential environmental effects of antenna facility construction.

Section 1.1307(a) lists eight categories of projects that may significantly affect the environment. Among these are facilities to be located in officially designated wilderness areas or wildlife preserves, facilities that may affect federally listed threatened or endangered species or designated critical habitats, facilities to be located in a flood plain, and facilities whose construction will involve significant change in surface features such as wetland fill, deforestation or water diversion. Proposed antenna facilities that do not fall under any of the eight categories listed at 1.1307(a) are “categorically excluded” from further environmental processing. However, if a proposed antenna facility falls under one or more of the listed categories, Section 1.1308(a) requires the applicant to prepare an Environmental Assessment (EA). Preparation of an EA may also be required for facilities otherwise categorically excluded, if an interested party petitions the FCC with environmental concerns (Section 1.1307(c)), or if the FCC determines on its own that the project may have a significant environmental impact (Section 1.1307(d)). The applicant is responsible for determining whether the proposed facility meets any of the conditions that require an EA. This environmental screening is normally accomplished through the preparation of a “Categorical Exclusion” document. The Categorical Exclusion document (or, if required, the EA) must be prepared prior to project implementation.

Any required EAs must address alternative sites or facilities (Section 1.1311(a)(4)); zoning issues (Section 1.1311(a)(2)); and determinations of any local, State, and federal authorities regarding environmental effects (Section 1.1311(a)(2)). In addition, the EA must deal specifically with any feature of the site that has special environmental significance (e.g., wilderness areas, wildlife preserves, natural migration paths for birds and other wildlife). The EA must also detail any substantial change in the character of the land utilized (e.g., deforestation, water diversion, wetland fill, or other extensive change of surface features). In the case of wilderness areas, wildlife preserves, or other like areas, the EA must discuss the effect of any continuing pattern of human intrusion into the area (e.g., necessitated by the operation and maintenance of the facilities) (Section 1.1311(b)).

## **Role of the Service in Communication Project Review**

### Endangered Species

As noted above, federal regulations implementing NEPA require FCC applicants to prepare an EA for a proposed communication tower or antenna that may adversely affect a federally listed species. Therefore, prior to applying for FCC authorization, communication project proponents routinely submit project information to the Service for review, pursuant to Section 7 of the ESA, to determine whether project implementation is likely to adversely affect any federally listed species.

If a listed species is present in the vicinity of the project site, the Service works with the project proponent through the informal consultation process to gather additional information, conduct surveys, or modify the project to avoid adverse impacts to the species. If, after these steps, project implementation is still likely to adversely affect a listed species, the Service will recommend that the project proponent prepare a Biological Assessment (BA) pursuant to Section 7(c) of the ESA. A proposed project that may affect a federally listed species also requires preparation of an EA pursuant to NEPA regulations (47 CFR 1.1307(a)). The BA may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA, and the results of a BA may be incorporated into an EA or an into Environmental Impact Statement. The satisfaction of the requirements of other statutes, however, does not in itself relieve a federal agency of its obligation to comply with the BA procedures of the ESA. The BA should contain information concerning listed or proposed species that may be present in the action area, and an analysis of any potential effects of the proposed action on such species. The Services reviews the BA to determine if formal consultation pursuant to Section 7 of the ESA is required.

### Migratory Birds

Migratory birds are a federal trust resource, protected under the Migratory Bird Treaty Act. Since communication towers and other tall structures represent a potential collision hazard to migrating birds, the Service's New Jersey Field Office (NJFO) routinely considers the design of new

communication towers, and their locations relative to migratory corridors and bird concentration areas, concurrent with endangered species reviews. If a proposed tower represents a significant hazard to migratory birds (e.g., towers taller than 199 feet with lights and/or guy wires in or near a bird concentration area), the Service recommends that the applicant address migratory bird concerns in an EA.

## **State and Local Review**

In addition to the above-mentioned federal laws, communication towers and antennas are also subject to State laws, regulations, and environmental review procedures. Some relevant New Jersey State laws include:

- Freshwater Wetlands Protection Act (N.J.S.A. 13:9B *et seq.*) requires permits for certain activities in wetlands.
- Endangered and Nongame Species Conservation Act of 1973, as amended (N.J.S.A. 23:2A *et seq.*) prohibits taking, possessing, transporting, exporting, processing, selling, or shipping State-listed wildlife species. “Take” is defined by the law as harassing, hunting, capturing, or killing, or attempting to do so.
- Regulations implementing the Pinelands Protection Act (N.J.A.C. 7:50-5.4 *et seq.*) require authorization from the New Jersey Pinelands Commission for most structures to be located within the Pinelands National Reserve exceeding 35 feet in height.
- Coastal Area Facility Review Act (N.J.S.A. 13:19) regulates most development near coastal waters in the southern part of the State, and the Waterfront Development Law (N.J.S.A. 12:5) regulates activities in and near tidal waters.

Local ordinances, including zoning rules, also apply to communication towers and antennas. The Telecommunications Act of 1996 (Act) specifically preserves the authority of State and local governments over decisions regarding the placement, construction, and modification of personal wireless service facilities, with some exceptions. According to the Act, State and local governments may not unreasonably discriminate among providers of functionally equivalent services, and must act upon a request for authorization to place, construct, or modify personal wireless service facilities within a reasonable time. In addition, as long as proposed wireless communication facilities comply with FCC regulations regarding radio frequency (RF) emissions, the Act expressly preempts State and local governments from regulating the placement or construction of these facilities on the basis of the environmental effects of RF emissions. With these restrictions and in accordance with other applicable laws, State and local governments may exercise discretion in siting and authorizing new communication towers and antennas.

## LITERATURE CITED

Avian Power Line Interaction Committee. 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C. 78 pp.

\_\_\_\_\_. 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C. 128 pp.

Dunne, P., Editor. 1989. New Jersey at the Crossroads of Migration. New Jersey Audubon Society. Bernardsville, New Jersey. 75 pp.

Manville, A.M., II. 2000. The ABCs of avoiding bird collisions at communication towers: the next steps. Proceedings of the Avian Interactions Workshop, December 2, 1999, Charleston, South Carolina. Electric Power Research Institute. 15 pp.

## FURTHER INFORMATION

Federal Communications Commission, Wireless Telecommunication Branch - Siting Issues  
<http://www.fcc.gov/wtb/siting/>

Federal Communications Commission Telecommunications Act of 1996  
<http://www.fcc.gov/telecom.html>

Ogden, L.J.E. 1996. Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds. World Wildlife Fund Canada and the Fatal Light Awareness Program. Toronto, Ontario, Canada. 46 pp.

Towerkill.com  
<http://www.towerkill.com>

U.S. Fish and Wildlife Service Endangered Species Home Page  
<http://endangered.fws.gov/>

U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Bird Issues  
<http://migratorybirds.fws.gov/issues/tblcont.html>

U.S. Fish and Wildlife Service  
New Jersey Field Office  
927 North Main Street, Building D  
Pleasantville, New Jersey 08232

Phone: (609) 646-9310 Facsimile: (609) 646-0352 E-mail: [njfieldoffice@fws.gov](mailto:njfieldoffice@fws.gov)

New Jersey Municipalities with Hibernation or Maternity Occurrence of Indiana Bat or Northern Long-eared Bat.

Municipalities with documented northern long-eared bat roost trees and municipalities that have or are within .25 miles from a known hibernaculum are listed in **red text**. (\*= recently updated, \*\*= newly added municipality)

| COUNTY     | Municipality             | Indiana Bat | Northern Long-eared Bat      |
|------------|--------------------------|-------------|------------------------------|
| ATLANTIC   | Absecon City             |             | Maternity                    |
| ATLANTIC   | Egg Harbor Township*     |             | Maternity/Known Roost Trees  |
| ATLANTIC   | Galloway Township        |             | Maternity                    |
| ATLANTIC   | Hamilton Township        |             | Maternity                    |
| ATLANTIC   | Hammonton Town           |             | Maternity                    |
| ATLANTIC   | Pleasantville City       |             | Maternity                    |
| ATLANTIC   | Port Republic City       |             | Maternity                    |
| BERGEN     | Fair Lawn Borough        |             | Maternity                    |
| BERGEN     | Franklin Lakes Borough   |             | Maternity                    |
| BERGEN     | Glen Rock Borough        |             | Maternity                    |
| BERGEN     | Mahwah Township          |             | Hibernation/Maternity        |
| BERGEN     | Oakland Borough          |             | Hibernation/Maternity        |
| BERGEN     | Ridgewood Village        |             | Maternity                    |
| BERGEN     | Wyckoff Township         |             | Maternity                    |
| BURLINGTON | Bass River Township*     |             | Maternity/ Known Roost Trees |
| BURLINGTON | Evesham Township**       |             | Known Roost Trees            |
| BURLINGTON | New Hanover Township     |             | Maternity                    |
| BURLINGTON | North Hanover Township   |             | Maternity                    |
| BURLINGTON | Pemberton Township       |             | Maternity                    |
| BURLINGTON | Shamong Township         |             | Maternity/Known Roost Trees  |
| BURLINGTON | Tabernacle Township      |             | Maternity                    |
| BURLINGTON | Washington Township      |             | Maternity                    |
| BURLINGTON | Wrightstown Borough      |             | Maternity                    |
| CAMDEN     | Waterford Township       |             | Maternity                    |
| ESSEX      | Fairfield Township       | Hibernation |                              |
| ESSEX      | Livingston Township      | Maternity   | Maternity                    |
| ESSEX      | Millburn Township        | Maternity   |                              |
| HUNTERDON  | Clinton Town             |             | Hibernation                  |
| HUNTERDON  | Clinton Township         |             | Hibernation                  |
| HUNTERDON  | Delaware Township        |             | Maternity                    |
| HUNTERDON  | East Amwell Township     |             | Maternity                    |
| HUNTERDON  | Franklin Township        |             | Hibernation                  |
| HUNTERDON  | High Bridge Borough      |             | Hibernation                  |
| HUNTERDON  | Lambertville City        |             | Maternity                    |
| HUNTERDON  | Lebanon Borough          |             | Hibernation                  |
| HUNTERDON  | Raritan Township         |             | Hibernation                  |
| HUNTERDON  | Readington Township      |             | Hibernation                  |
| HUNTERDON  | Stockton Borough         |             | Maternity                    |
| HUNTERDON  | Tewksbury Township       | Maternity   | Hibernation                  |
| HUNTERDON  | Union Township           |             | Hibernation                  |
| HUNTERDON  | West Amwell Township     |             | Maternity                    |
| MERCER     | Hopewell Borough         |             | Maternity                    |
| MERCER     | Hopewell Township        |             | Maternity                    |
| MERCER     | Lawrence Township        |             | Maternity                    |
| MERCER     | Princeton Borough        |             | Maternity                    |
| MERCER     | Princeton Township       |             | Maternity                    |
| MONMOUTH   | Colts Neck Township      |             | Maternity/Known Roost Trees  |
| MONMOUTH   | Eatontown Borough        |             | Maternity                    |
| MONMOUTH   | Freehold Township        |             | Maternity                    |
| MONMOUTH   | Howell Township          |             | Maternity/Known Roost Trees  |
| MONMOUTH   | Middletown Township      |             | Maternity                    |
| MONMOUTH   | Neptune Township         |             | Maternity                    |
| MONMOUTH   | Ocean Township           |             | Maternity                    |
| MONMOUTH   | Shrewsbury Borough       |             | Maternity                    |
| MONMOUTH   | Shrewsbury Township      |             | Maternity                    |
| MONMOUTH   | Tinton Falls Borough     |             | Maternity/Known Roost Trees  |
| MONMOUTH   | Wall Township            |             | Maternity                    |
| MONMOUTH   | West Long Branch Borough |             | Maternity                    |

All municipalities returned by IPaC for these bat species but not shown on this list are potential occurrences

|         |                                |                       |                                   |
|---------|--------------------------------|-----------------------|-----------------------------------|
| MORRIS  | Boonton Town                   | Hibernation           | Hibernation                       |
| MORRIS  | Boonton Township               | Hibernation           | Hibernation/Maternity             |
| MORRIS  | Butler Borough                 | Hibernation           | Hibernation                       |
| MORRIS  | Chatham Borough                | Maternity             | Maternity                         |
| MORRIS  | Chatham Township               | Maternity             | Maternity                         |
| MORRIS  | Chester Borough                | Maternity             |                                   |
| MORRIS  | Chester Township               | Hibernation/Maternity |                                   |
| MORRIS  | Denville Township              | Hibernation/Maternity | Hibernation/Maternity             |
| MORRIS  | Dover Town                     | Hibernation           | Hibernation/Maternity             |
| MORRIS  | East Hanover Township          | Maternity             | Maternity                         |
| MORRIS  | Florham Park Borough           | Maternity             | Maternity                         |
| MORRIS  | Hanover Township               | Hibernation/Maternity | Maternity                         |
| MORRIS  | Harding Township               | Maternity             | Maternity                         |
| MORRIS  | Jefferson Township             | Hibernation/Maternity | Hibernation/Maternity             |
| MORRIS  | Kinnelon Borough               | Hibernation           | Hibernation                       |
| MORRIS  | Lincoln Park Borough           | Hibernation           | Maternity                         |
| MORRIS  | Long Hill Township             | Maternity             | Maternity                         |
| MORRIS  | Madison Borough                | Maternity             | Maternity                         |
| MORRIS  | Mendham Borough                | Maternity             | Maternity                         |
| MORRIS  | Mendham Township               | Hibernation/Maternity | Maternity                         |
| MORRIS  | Mine Hill Township             | Hibernation           | Maternity                         |
| MORRIS  | Montville Township             | Hibernation           |                                   |
| MORRIS  | Morris Plains Borough          | Hibernation/Maternity |                                   |
| MORRIS  | Morris Township                | Hibernation/Maternity | Maternity                         |
| MORRIS  | Morristown Town                | Hibernation/Maternity | Maternity                         |
| MORRIS  | Mount Arlington Borough        | Hibernation           | Maternity                         |
| MORRIS  | Mount Olive Township           | Hibernation           | Maternity                         |
| MORRIS  | Mountain Lakes Borough         | Hibernation           | Hibernation                       |
| MORRIS  | Netcong Borough                | Hibernation           | Maternity                         |
| MORRIS  | Parsippany-Troy Hills Township | Hibernation/Maternity | Maternity                         |
| MORRIS  | Pequannock Township            | Hibernation           | Maternity                         |
| MORRIS  | Randolph Township              | Hibernation           | Maternity                         |
| MORRIS  | Riverdale Borough              | Hibernation           | Hibernation/Maternity             |
| MORRIS  | Rockaway Borough               | Hibernation           | Hibernation/Maternity             |
| MORRIS  | Rockaway Township              | Hibernation/Maternity | Hibernation/Maternity/Known Roost |
| MORRIS  | Roxbury Township               | Hibernation           | Maternity                         |
| MORRIS  | Victory Gardens Borough        | Hibernation           | Maternity                         |
| MORRIS  | Washington Township            | Maternity             |                                   |
| MORRIS  | Wharton Borough                | Hibernation           | Hibernation/Maternity             |
| OCEAN   | Barneget Township              |                       | Maternity                         |
| OCEAN   | Eagleswood Township            |                       | Maternity                         |
| OCEAN   | Jackson Township               |                       | Maternity                         |
| OCEAN   | Lakehurst Borough              |                       | Maternity                         |
| OCEAN   | Little Egg Harbor Township     |                       | Maternity                         |
| OCEAN   | Long Beach Township            |                       | Maternity                         |
| OCEAN   | Manchester Township            |                       | Maternity                         |
| OCEAN   | Ocean Township                 |                       | Maternity                         |
| OCEAN   | Plumsted Township              |                       | Maternity                         |
| OCEAN   | Stafford Township              |                       | Maternity                         |
| OCEAN   | Surf City Borough              |                       | Maternity                         |
| OCEAN   | Tuckerton Borough              |                       | Maternity                         |
| PASSAIC | Bloomington Borough            | Hibernation           | Hibernation/Maternity             |
| PASSAIC | Haledon Borough                |                       | Maternity                         |
| PASSAIC | Hawthorne Borough              |                       | Maternity                         |
| PASSAIC | North Haledon Borough          |                       | Maternity                         |
| PASSAIC | Paterson City                  |                       | Maternity                         |
| PASSAIC | Pompton Lakes Borough          |                       | Hibernation/Maternity             |
| PASSAIC | Prospect Park Borough          |                       | Maternity                         |
| PASSAIC | Ringwood Borough               |                       | Hibernation/Maternity             |
| PASSAIC | Totowa Borough                 |                       | Maternity                         |
| PASSAIC | Wanaque Borough                |                       | Hibernation/Maternity             |
| PASSAIC | Wayne Township                 |                       | Maternity                         |

All municipalities returned by IPaC for these bat species but not shown on this list are potential occurrences

|          |                           |                       |                                   |
|----------|---------------------------|-----------------------|-----------------------------------|
| PASSAIC  | West Milford Township     | Hibernation           | Hibernation/Maternity/Known Roost |
| PASSAIC  | West Paterson Borough     |                       | Maternity                         |
| SALEM    | Mannington Township       |                       | Maternity                         |
| SALEM    | Pennsville Township       |                       | Maternity                         |
| SOMERSET | Bedminster Township       | Maternity             |                                   |
| SOMERSET | Bernards Township         | Maternity             | Maternity                         |
| SOMERSET | Bernardsville Borough     | Maternity             | Maternity                         |
| SOMERSET | Far Hills Borough         | Maternity             |                                   |
| SOMERSET | Franklin Township         |                       | Maternity                         |
| SOMERSET | Green Brook Township      |                       | Maternity                         |
| SOMERSET | Hillsborough Township     |                       | Maternity                         |
| SOMERSET | Manville Borough          |                       | Maternity                         |
| SOMERSET | Millstone Borough         |                       | Maternity                         |
| SOMERSET | Montgomery Township       |                       | Maternity                         |
| SOMERSET | North Plainfield Borough  |                       | Maternity                         |
| SOMERSET | Peapack-Gladstone Borough | Maternity             |                                   |
| SOMERSET | Warren Township           | Maternity             |                                   |
| SOMERSET | Watchung Borough          | Maternity             |                                   |
| SUSSEX   | Andover Township          | Hibernation/Maternity |                                   |
| SUSSEX   | Byram Township            | Hibernation           | Maternity                         |
| SUSSEX   | Franklin Borough          | Maternity             | Hibernation/Maternity             |
| SUSSEX   | Hamburg Borough           | Maternity             | Hibernation                       |
| SUSSEX   | Hampton Township          | Maternity             |                                   |
| SUSSEX   | Hardyston Township        | Hibernation/Maternity | Hibernation/Maternity             |
| SUSSEX   | Hopatcong Borough         | Hibernation           | Maternity                         |
| SUSSEX   | Lafayette Township        | Maternity             | Hibernation/Maternity             |
| SUSSEX   | Montague Township         | Maternity             | Maternity                         |
| SUSSEX   | Newton Town               | Maternity             |                                   |
| SUSSEX   | Ogdensburg Borough        | Hibernation           | Hibernation/Maternity             |
| SUSSEX   | Sparta Township           | Hibernation/Maternity | Hibernation/Maternity             |
| SUSSEX   | Stanhope Borough          | Hibernation           | Maternity                         |
| SUSSEX   | Sussex Borough            | Maternity             | Maternity                         |
| SUSSEX   | Vernon Township*          | Maternity             | Maternity/ Known Roost Trees      |
| SUSSEX   | Wantage Township          | Maternity             | Maternity                         |
| UNION    | Berkeley Heights Township | Maternity             | Maternity                         |
| UNION    | Mountainside Borough      | Maternity             |                                   |
| UNION    | New Providence Borough    | Maternity             | Maternity                         |
| UNION    | Scotch Plains Township    | Maternity             | Maternity                         |
| UNION    | Summit City               | Maternity             |                                   |
| WARREN   | Blairstown Township       |                       | Hibernation                       |
| WARREN   | Hardwick Township         |                       | Hibernation                       |
| WARREN   | Knowlton Township         |                       | Hibernation                       |

All municipalities returned by IPaC for these bat species but not shown on this list are potential occurrences



use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

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# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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State of New Jersey  
Mail Code 501-04  
Department of Environmental Protection  
Natural Heritage Data Request Form  
The New Jersey Natural Heritage Program  
DEP-Office of Natural Lands Management  
P.O. Box 420, Trenton, New Jersey 08625-0420  
(609) 984-1339  
Fax No.: (609) 984-1427



PLEASE PRINT AND SUBMIT COMPLETED FORM WITH ATTACHMENTS TO THE ADDRESS ABOVE  
(Fields shown in bold font must be completed in order for data request to be processed.)

1. Name: Christopher Lanna Agency/Company: E2PM

Address: 87 Hibernia Avenue City: Rockaway

State: NJ Zip: 07866 Daytime Phone: 973-299-5200 Ext.: 203

Cell Phone: \_\_\_\_\_ Email: chris.lanna@e2pm.com

2. Project Name: Subcarrier Wanaque Tower

Municipality(ies): Wanaque County(ies): Passaic

Block(s): 250 Lot(s): 1

N.A.D. 1983 State Plane Coordinates (feet) 6 digits only: \_\_\_\_\_ E (x): 559853 N (y): 809065

3. Project Description: Wireless Communication Upgrades

4. USGS Quad: X A copy of a USGS quad map(s) that clearly indicates the site boundary is included with this form. Specify name of USGS quad(s): Wanaque, NJ

(USGS quad maps are required, unless prior arrangements have been made to submit site boundaries in an alternate format. Responses will be delayed if site locations are not delineated in a suitable format.)

5. Flood Hazard Control Act Use: Is this request submitted as part of a Flood Hazard Area Control Act rule (N.J.A.C. 7:13) application? Yes \_\_\_\_\_ No X

6. Acknowledgement & Signature: Any material supplied by the Office of Natural Lands Management will not be published without crediting the Natural Heritage Database as the source of the material. It is understood that there will be a charge of \$70.00 per hour for the services requested. An invoice will be sent with the request response and payment should be made by check or money order payable to "Office of Natural Lands Management."

Signed Christopher Lanna Date February 19, 2018

**Time Frame for Response:**

Data requests are processed in the order in which they are received; please allow 30 days for response. If you would like to send in your data request via email, you may do so by sending it to [Natlands@dep.nj.gov](mailto:Natlands@dep.nj.gov). Due to the number of attachments, we cannot fax results. Unless you specifically request that your response be mailed or the response is unusually large, your response will be emailed to the address you provide.

**FOR OFFICE USE ONLY**

DATE RECEIVED \_\_\_\_\_

Item Code: REG \_\_\_\_\_ ST \_\_\_\_\_ RTC \_\_\_\_\_ NC \_\_\_\_\_ REGeo \_\_\_\_\_ STEO \_\_\_\_\_ RTCEO \_\_\_\_\_ NCEO \_\_\_\_\_

Hrs: \_\_\_\_\_

Project Code: \_\_\_\_\_ Inv. #: \_\_\_\_\_



## State of New Jersey

MAIL CODE 501-04

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF PARKS & FORESTRY

NEW JERSEY FOREST SERVICE

OFFICE OF NATURAL LANDS MANAGEMENT

P.O. BOX 420

TRENTON, NJ 08625-0420

Tel. (609) 984-1339 Fax (609) 984-0427

PHILIP D. MURPHY

*Governor*

SHEILA Y. OLIVER

*Lt. Governor*

CATHERINE R. McCABE

*Acting Commissioner*

March 1, 2018

Christopher Lanna  
E2 Project Management LLC  
87 Hibernia Avenue  
Rockaway, NJ 07866

Re: Subcarrier Wanaque Tower  
Block(s) - 250, Lot(s) - 1  
Wanaque Borough, Passaic County

Dear Mr. Lanna:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Natural Heritage Data Request Form into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

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

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

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

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

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from [http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes\\_2010.pdf](http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf).

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we

NHP File No. 18-4107413-13645

recommend that you visit the interactive web application at the following URL, <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at <http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>.

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

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

Sincerely,



Robert J. Cartica  
Administrator

c: NHP File No. 18-4107413-13645

***Table 1: On Site Data Request Search Results (6 Possible Reports)***

| <b><u>Report Name</u></b>                                                                                                                                                              | <b><u>Included</u></b> | <b><u>Number of Pages</u></b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------|
| 1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database | No                     | 0 pages included              |
| 2. Natural Heritage Priority Sites On Site                                                                                                                                             | No                     | 0 pages included              |
| 3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches                                                        | Yes                    | 2 page(s) included            |
| 4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3                                                                                                    | No                     | 0 pages included              |
| 5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File                                                          | No                     | 0 pages included              |
| 6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program                                                              | No                     | 0 pages included              |

|                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p align="center"><b>Rare Wildlife Species or Wildlife Habitat on the<br/>Project Site Based on Search of<br/>Landscape Project 3.3 Species Based Patches</b></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Class           | Common Name          | Scientific Name        | Feature Type          | Rank | Federal Protection Status | State Protection Status | Grank | Srank   |
|-----------------|----------------------|------------------------|-----------------------|------|---------------------------|-------------------------|-------|---------|
| <i>Aves</i>     |                      |                        |                       |      |                           |                         |       |         |
|                 | Barred Owl           | Strix varia            | Breeding Sighting     | 3    | NA                        | State Threatened        | G5    | S2B,S2N |
|                 | Barred Owl           | Strix varia            | Non-breeding Sighting | 3    | NA                        | State Threatened        | G5    | S2B,S2N |
|                 | Brown Thrasher       | Toxostoma rufum        | Breeding Sighting     | 2    | NA                        | Special Concern         | G5    | S3B,S4N |
|                 | Cooper's Hawk        | Accipiter cooperii     | Breeding Sighting     | 2    | NA                        | Special Concern         | G5    | S3B,S4N |
|                 | Hooded Warbler       | Wilsonia citrina       | Breeding Sighting     | 2    | NA                        | Special Concern         | G5    | S3B,S4N |
|                 | Red-shouldered Hawk  | Buteo lineatus         | Breeding Sighting     | 4    | NA                        | State Endangered        | G5    | S1B,S3N |
|                 | Veery                | Catharus fuscescens    | Breeding Sighting     | 2    | NA                        | Special Concern         | G5    | S3B,S4N |
|                 | Wood Thrush          | Hylocichla mustelina   | Breeding Sighting     | 2    | NA                        | Special Concern         | G4    | S3B,S4N |
|                 | Worm-eating Warbler  | Helmitheros vermivorum | Breeding Sighting     | 2    | NA                        | Special Concern         | G5    | S3B,S4N |
| <i>Insecta</i>  |                      |                        |                       |      |                           |                         |       |         |
|                 | Arrowhead Spiketail  | Cordulegaster obliqua  | Territorial Display   | 2    | NA                        | Special Concern         | G4    | S3      |
|                 | Brush-tipped Emerald | Somatochlora walshii   | Foraging              | 2    | NA                        | Special Concern         | G5    | S3      |
|                 | Gray Petaltail       | Tachopteryx thoreyi    | Occupied Habitat      | 4    | NA                        | State Endangered        | G4    | S1      |
|                 | Sable Clubtail       | Gomphus rogersi        | Foraging              | 2    | NA                        | Special Concern         | G4    | S3      |
| <i>Mammalia</i> |                      |                        |                       |      |                           |                         |       |         |

|                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p align="center"><b>Rare Wildlife Species or Wildlife Habitat on the<br/>Project Site Based on Search of<br/>Landscape Project 3.3 Species Based Patches</b></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Class           | Common Name         | Scientific Name                | Feature Type             | Rank | Federal Protection Status   | State Protection Status | Grank | Srank |
|-----------------|---------------------|--------------------------------|--------------------------|------|-----------------------------|-------------------------|-------|-------|
| <i>Reptilia</i> | Bobcat              | Lynx rufus                     | Live Individual Sighting | 4    | NA                          | State Endangered        | G5    | S2    |
|                 | Bobcat              | Lynx rufus                     | Physical evidence        | 4    | NA                          | State Endangered        | G5    | S2    |
|                 | Northern Myotis     | Myotis septentrionalis         | Active Season Sighting   | 5    | Federally Listed Threatened | NA                      | G1G2  | S1    |
|                 | Eastern Box Turtle  | Terrapene carolina carolina    | Occupied Habitat         | 2    | NA                          | Special Concern         | G5T5  | S3    |
|                 | Northern Copperhead | Agkistrodon contortrix mokasen | Occupied Habitat         | 2    | NA                          | Special Concern         | G5T5  | S3    |
|                 | Timber Rattlesnake  | Crotalus horridus horridus     | Occupied Habitat         | 4    | NA                          | State Endangered        | G4T4  | S1    |
|                 | Wood Turtle         | Glyptemys insculpta            | Occupied Habitat         | 3    | NA                          | State Threatened        | G3    | S2    |
|                 |                     |                                |                          |      |                             |                         |       |       |



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

| <b><u>Report Name</u></b>                                                                                                                                                                            | <b><u>Included</u></b> | <b><u>Number of Pages</u></b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------|
| 1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database | No                     | 0 pages included              |
| 2. Natural Heritage Priority Sites within the Immediate Vicinity                                                                                                                                     | No                     | 0 pages included              |
| 3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches                                        | Yes                    | 2 page(s) included            |
| 4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3                                                                                            | No                     | 0 pages included              |
| 5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File                                              | No                     | 0 pages included              |
| 6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program                                                  | No                     | 0 pages included              |

|                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p align="center"><b>Rare Wildlife Species or Wildlife Habitat Within the<br/>Immediate Vicinity of the Project Site Based on Search of<br/>Landscape Project 3.3 Species Based Patches</b></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Class                 | Common Name          | Scientific Name          | Feature Type             | Rank | Federal<br>Protection Status | State<br>Protection Status | Grank | Strank  |
|-----------------------|----------------------|--------------------------|--------------------------|------|------------------------------|----------------------------|-------|---------|
| <b><i>Aves</i></b>    |                      |                          |                          |      |                              |                            |       |         |
|                       | Barred Owl           | Strix varia              | Breeding Sighting        | 3    | NA                           | State Threatened           | G5    | S2B,S2N |
|                       | Barred Owl           | Strix varia              | Non-breeding<br>Sighting | 3    | NA                           | State Threatened           | G5    | S2B,S2N |
|                       | Brown Thrasher       | Toxostoma rufum          | Breeding Sighting        | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
|                       | Cooper's Hawk        | Accipiter cooperii       | Breeding Sighting        | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
|                       | Great Blue Heron     | Ardea herodias           | Foraging                 | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
|                       | Hooded Warbler       | Wilsonia citrina         | Breeding Sighting        | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
|                       | Red-shouldered Hawk  | Buteo lineatus           | Breeding Sighting        | 4    | NA                           | State<br>Endangered        | G5    | S1B,S3N |
|                       | Veery                | Catharus fuscescens      | Breeding Sighting        | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
|                       | Wood Thrush          | Hylocichla mustelina     | Breeding Sighting        | 2    | NA                           | Special Concern            | G4    | S3B,S4N |
|                       | Worm-eating Warbler  | Helminthos<br>vermivorum | Breeding Sighting        | 2    | NA                           | Special Concern            | G5    | S3B,S4N |
| <b><i>Insecta</i></b> |                      |                          |                          |      |                              |                            |       |         |
|                       | Arrowhead Spiketail  | Cordulegaster<br>obliqua | Territorial Display      | 2    | NA                           | Special Concern            | G4    | S3      |
|                       | Brush-tipped Emerald | Somatochlora<br>walshii  | Foraging                 | 2    | NA                           | Special Concern            | G5    | S3      |
|                       | Gray Petaltail       | Tachopteryx thoreyi      | Occupied Habitat         | 4    | NA                           | State<br>Endangered        | G4    | S1      |
|                       | Sable Clubtail       | Gomphus rogersi          | Foraging                 | 2    | NA                           | Special Concern            | G4    | S3      |

|                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p align="center"><b>Rare Wildlife Species or Wildlife Habitat Within the<br/>Immediate Vicinity of the Project Site Based on Search of<br/>Landscape Project 3.3 Species Based Patches</b></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Class           | Common Name          | Scientific Name                | Feature Type             | Rank | Federal Protection Status   | State Protection Status | Grank | Srank |
|-----------------|----------------------|--------------------------------|--------------------------|------|-----------------------------|-------------------------|-------|-------|
| <i>Mammalia</i> | Williamson's Emerald | Somatochlora williamsoni       | Foraging                 | 2    | NA                          | Special Concern         | G5    | S3    |
|                 | Bobcat               | Lynx rufus                     | Live Individual Sighting | 4    | NA                          | State Endangered        | G5    | S2    |
|                 | Bobcat               | Lynx rufus                     | Physical evidence        | 4    | NA                          | State Endangered        | G5    | S2    |
|                 | Northern Myotis      | Myotis septentrionalis         | Active Season Sighting   | 5    | Federally Listed Threatened | NA                      | G1G2  | S1    |
|                 | Northern Myotis      | Myotis septentrionalis         | Hibernaculum             | 5    | Federally Listed Threatened | NA                      | G1G2  | S1    |
| <i>Reptilia</i> | Eastern Box Turtle   | Terrapene carolina carolina    | Occupied Habitat         | 2    | NA                          | Special Concern         | G5T5  | S3    |
|                 | Northern Copperhead  | Agkistrodon contortrix mokasen | Occupied Habitat         | 2    | NA                          | Special Concern         | G5T5  | S3    |
|                 | Timber Rattlesnake   | Crotalus horridus horridus     | Occupied Habitat         | 4    | NA                          | State Endangered        | G4T4  | S1    |
|                 | Wood Turtle          | Glyptemys insculpta            | Occupied Habitat         | 3    | NA                          | State Threatened        | G3    | S2    |

## **Marianne Walsh**

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**From:** towernotifyinfo@fcc.gov  
**Sent:** Thursday, June 07, 2018 5:15 AM  
**To:** marianne.walsh@e2pm.com  
**Subject:** Section 106 Notification of Expiration of SHPO/THPO Review Period- Email ID # 2934164

This is to notify you that the SHPO/THPO review period has expired for the following filing:  
Date of Action: 06/07/2018

File Number: 0008159379  
TCNS Number: 168574  
Purpose: New Tower Submission Packet  
Notification Date: 7AM EST 04/04/2018  
Applicant: Subcarrier Communications  
Consultant: The History Team A Division of E 2 Project Management LLC  
Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No  
Site Name: Wanaque Tower  
Site Address: 1 Skyline Drive  
Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.  
Site Coordinates: 41-3-15.0 N, 74-15-15.6 W  
City: Wanaque  
County: PASSAIC  
State: NJ  
Lead SHPO/THPO: NJ Historic Preservation Office

**NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE**  
Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.

## Section 106 Notification of SHPO/THPO Request for Information- Email ID #2872410

After consulting with Mr. Vincent Maresca, III of the New Jersey Historic Preservation Officer (NJHPO) on May 4, 2018, E2PM is responding to the comments provided regarding the proposed new tower submission packet HPO-E2018-043. E2PM has reviewed the 1833 Thomas Gordon A *Map of the State of New Jersey*, and the NJDEP Geo-Web for information with regard to potential iron mines and reviewed site photographs to address concerns regarding Native American site sensitivity. NJDEP Geo-Web indicates the potential for scattered rock outcrops with the APE-direct effects. However, no outcrops suitable for either lithic source material or that may serve as a rock shelter are visible within or adjacent to the APE-direct effects. The APE-direct effects consists of a sloped area greater than 15-percent slope which has been artificially made into a flat and level terrace through cut and fill processes associated with the construction of the existing tower which will be replaced by this project. As a result, the APE-direct effects is considered disturbed and therefore its potential for intact archaeological resources is either nullified or greatly diminished. Regarding the potential for historic mines, a review of Gordon's 1833 map reveals that mines were located in and around the area, but none are specifically located within the APE-direct effects. NJDEP Geo-Web's abandoned mine and quarry layers support this assertion as no mines or quarries are depicted within the APE-direct effects. **Based upon the available information, the APE-direct effects is not considered sensitive for either historic-period or prehistoric archaeological resources.**

## **Marianne Walsh**

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**From:** towernotifyinfo@fcc.gov  
**Sent:** Friday, May 04, 2018 4:15 PM  
**To:** marianne.walsh@e2pm.com  
**Subject:** Section 106 Notification of New Document- Email ID #2873659

This is to notify you that a new document has been added to the following filing:  
Document Source: The History Team A Division of E 2 Project Management LLC  
Document Date: 05/04/2018  
Document Type: Response to SHPO/THPO Request for Information  
Document Description: Request for Information Response

File Number: 0008159379  
TCNS Number: 168574  
Purpose: New Tower Submission Packet  
Notification Date: 7AM EST 04/04/2018  
Applicant: Subcarrier Communications  
Consultant: The History Team A Division of E 2 Project Management LLC  
Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No  
Site Name: Wanaque Tower  
Site Address: 1 Skyline Drive  
Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.  
Site Coordinates: 41-3-15.0 N, 74-15-15.6 W  
City: Wanaque  
County: PASSAIC  
State: NJ  
Lead SHPO/THPO: NJ Historic Preservation Office

**NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE**  
Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.

## Marianne Walsh

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**From:** towernotifyinfo@fcc.gov  
**Sent:** Thursday, May 03, 2018 10:15 AM  
**To:** marianne.walsh@e2pm.com  
**Subject:** Section 106 Notification of SHPO/THPO Request for Information- Email ID #2872410

This is to notify you that the Lead SHPO/THPO has requested additional information on the following filing:

Source: NJ Historic Preservation Office

Date of Action: 05/03/2018

Comment Text: HPO-E2018-043 (VM)

The Ramapough Lenape Nation, a non-federally recognized tribe, as a consulting party in prior Section 106 undertakings in northeastern New Jersey has identified small, level terraced locations in hilly terrain over a 15-percent slope as holding a high potential for containing Pre-Contact and historic period human burials. This assessment of the APE's topography is necessary as part of this consultation. (Rock shelters)

In addition, this part of New Jersey was the center of eighteenth and nineteenth century iron production.

Therefore, areas over 15-percent slope still need to be assessed for historic period mine-related archaeological resources. Finally, native American quarry extraction sites have been identified in hilltop settings, along with rock shelters, and shall be assessed as part of this consultation. If you have questions regarding this review, please contact Vincent Maresca at [vincent.maresca@dep.nj.gov](mailto:vincent.maresca@dep.nj.gov) or 609-633-2395. Please refer to the FCC project number in all correspondence.

File Number: 0008159379

TCNS Number: 168574

Purpose: New Tower Submission Packet

Notification Date: 7AM EST 04/04/2018

Applicant: Subcarrier Communications

Consultant: The History Team A Division of E 2 Project Management LLC

Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No

Site Name: Wanaque Tower

Site Address: 1 Skyline Drive

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.

Site Coordinates: 41-3-15.0 N, 74-15-15.6 W

City: Wanaque

County: PASSAIC

State: NJ

Lead SHPO/THPO: NJ Historic Preservation Office

Please note that you must respond to this request within 60 days or this filing will be at risk of closure. To ensure that your response to this request is accurately recorded, your response must be uploaded as a document of type 'Response to SHPO/THPO Request for Information'.

### NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE

Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from

disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.



Notification Date: **7AM EST 04/04/2018****New Tower ("NT") Submission Packet**

See instructions for

File Number: **0008159379**

public burden estimates

**General Information**

|                                                                                                                               |              |
|-------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1) (Select only one) ( <b>NE</b> )<br><b>NE</b> – New <b>UA</b> – Update of Application <b>WD</b> – Withdrawal of Application |              |
| 2) If this application is for an Update or Withdrawal, enter the file number of the pending application currently on file.    | File Number: |

**Applicant Information**

|                                                     |
|-----------------------------------------------------|
| 3) FCC Registration Number (FRN): <b>0006629497</b> |
| 4) Name: <b>Subcarrier Communications</b>           |

**Contact Name**

|                            |        |                             |            |
|----------------------------|--------|-----------------------------|------------|
| 5) First Name: <b>Lisa</b> | 6) MI: | 7) Last Name: <b>Olesky</b> | 8) Suffix: |
| 9) Title:                  |        |                             |            |

**Contact Information**

|                                                |         |                                               |                            |
|------------------------------------------------|---------|-----------------------------------------------|----------------------------|
| 10) P.O. Box:                                  | And /Or | 11) Street Address: <b>139 White Oak Lane</b> |                            |
| 12) City: <b>Old Bridge</b>                    |         | 13) State: <b>NJ</b>                          | 14) Zip Code: <b>08857</b> |
| 15) Telephone Number: <b>(732)607-2828</b>     |         | 16) Fax Number:                               |                            |
| 17) E-mail Address: <b>lisa@subcarrier.com</b> |         |                                               |                            |

**Consultant Information**

|                                                                            |
|----------------------------------------------------------------------------|
| 18) FCC Registration Number (FRN): <b>0016353856</b>                       |
| 19) Name: <b>The History Team A Division of E 2 Project Management LLC</b> |

**Principal Investigator**

|                                                  |         |                             |             |
|--------------------------------------------------|---------|-----------------------------|-------------|
| 20) First Name: <b>Marianne</b>                  | 21) MI: | 22) Last Name: <b>Walsh</b> | 23) Suffix: |
| 24) Title: <b>Senior Architectural Historian</b> |         |                             |             |

**Principal Investigator Contact Information**

|                                                    |         |                                               |                            |
|----------------------------------------------------|---------|-----------------------------------------------|----------------------------|
| 25) P.O. Box:                                      | And /Or | 26) Street Address: <b>87 Hibernia Avenue</b> |                            |
| 27) City: <b>Rockaway</b>                          |         | 28) State: <b>NJ</b>                          | 29) Zip Code: <b>07866</b> |
| 30) Telephone Number: <b>(973)299-5200</b>         |         | 31) Fax Number: <b>(973)299-5059</b>          |                            |
| 32) E-mail Address: <b>marianne.walsh@e2pm.com</b> |         |                                               |                            |

**Professional Qualification**

|                                                                                                                                                                                                                                     |                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 33) Does the Principal Investigator satisfy the Secretary of the Interior's Professional Qualification Standards?                                                                                                                   | ( <input checked="" type="checkbox"/> ) <u>Y</u> es ( ) <u>N</u> o |
| 34) Areas of Professional Qualification:<br>( ) Archaeologist<br>( <input checked="" type="checkbox"/> ) Architectural Historian<br>( <input checked="" type="checkbox"/> ) Historian<br>( ) Architect<br>( ) Other (Specify) _____ |                                                                    |

**Additional Staff**

|                                                                                                                        |                                                                    |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 35) Are there other staff involved who meet the Professional Qualification Standards of the Secretary of the Interior? | ( <input checked="" type="checkbox"/> ) <u>Y</u> es ( ) <u>N</u> o |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|

If "YES," complete the following:

|                                                                                                                                                                                                 |         |                                 |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------|-------------|
| 36) First Name: <b>Scott</b>                                                                                                                                                                    | 37) MI: | 38) Last Name: <b>Wieczorek</b> | 39) Suffix: |
| 40) Title: <b>Senior Arcaeologist</b>                                                                                                                                                           |         |                                 |             |
| 41) Areas of Professional Qualification:<br>( <input checked="" type="checkbox"/> ) Archaeologist<br>( ) Architectural Historian<br>( ) Historian<br>( ) Architect<br>( ) Other (Specify) _____ |         |                                 |             |

## Site Information

### Tower Construction Notification System

1) TCNS Notification Number: **168574**

### Site Information

2) Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: ( ) Yes ( **X** ) No

3) Site Name: **Wanaque Tower**

4) Site Address: **1 Skyline Drive**

5) Detailed Description of Project:

**300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.**

6) City: **Wanaque**

7) State: **NJ**

8) Zip Code: **07465**

9) County/Borough/Parish: **PASSAIC**

10) Nearest Crossroads: **Skyline Drive and Deer Ledge Road**

11) **NAD 83** Latitude (DD-MM-SS.S): **41-03-15.0** ( **X** ) N or ( ) S

12) **NAD 83** Longitude (DD-MM-SS.S): **074-15-15.6** ( ) E or ( **X** ) W

### Tower Information

13) Tower height above ground level (include top-mounted attachments such as lightning rods): **93.3** ( ) Feet ( **X** ) Meters

14) Tower Type (Select One):

( ) Guyed lattice tower

( **X** ) Self-supporting lattice

( ) Monopole

( ) Other (Describe):

### Project Status

15) Current Project Status (Select One):

( **X** ) Construction has not yet commenced

( ) Construction has commenced, but is not completed

Construction commenced on: \_\_\_\_\_

( ) Construction has been completed

Construction commenced on: \_\_\_\_\_

Construction completed on: \_\_\_\_\_

**Determination of Effect**

14) Direct Effects (Select One):

- ( ☒ ) No Historic Properties in Area of Potential Effects (APE)
- ( ☐ ) No Effect on Historic Properties in APE
- ( ☐ ) No Adverse Effect on Historic Properties in APE
- ( ☐ ) Adverse Effect on one or more Historic Properties in APE

15) Visual Effects (Select One):

- ( ☒ ) No Historic Properties in Area of Potential Effects (APE)
- ( ☐ ) No Effect on Historic Properties in APE
- ( ☐ ) No Adverse Effect on Historic Properties in APE
- ( ☐ ) Adverse Effect on one or more Historic Properties in APE

### Tribal/NHO Involvement

|                                                                                                                                                                                                                                                  |                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects? | ( <input checked="" type="checkbox"/> ) <u>Yes</u> (    ) <u>No</u> |
| 2a) Tribes/NHOs contacted through TCNS Notification Number: <u>168574</u> Number of Tribes/NHOs: <u>10</u>                                                                                                                                       |                                                                     |
| 2b) Tribes/NHOs contacted through an alternate system:      Number of Tribes/NHOs: <u>0</u>                                                                                                                                                      |                                                                     |

#### Tribe/NHO Contacted Through TCNS

|                                                                                     |
|-------------------------------------------------------------------------------------|
| 3) Tribe/NHO FRN:                                                                   |
| 4) Tribe/NHO Name: <b>Bad River Band of Lake Superior Tribe of Chippewa Indians</b> |

#### Contact Name

|                             |        |                            |            |
|-----------------------------|--------|----------------------------|------------|
| 5) First Name: <b>Edith</b> | 6) MI: | 7) Last Name: <b>Leoso</b> | 8) Suffix: |
| 9) Title: <b>THPO</b>       |        |                            |            |

#### Dates & Response

|                                                  |                        |
|--------------------------------------------------|------------------------|
| 10) Date Contacted <u>03/07/2018</u>             | 11) Date Replied _____ |
| ( <input checked="" type="checkbox"/> ) No Reply |                        |
| (    ) Replied/No Interest                       |                        |
| (    ) Replied/Have Interest                     |                        |
| (    ) Replied/Other                             |                        |

#### Tribe/NHO Contacted Through TCNS

|                                           |
|-------------------------------------------|
| 3) Tribe/NHO FRN:                         |
| 4) Tribe/NHO Name: <b>Delaware Nation</b> |

#### Contact Name

|                                              |        |                             |            |
|----------------------------------------------|--------|-----------------------------|------------|
| 5) First Name: <b>Kim</b>                    | 6) MI: | 7) Last Name: <b>Penrod</b> | 8) Suffix: |
| 9) Title: <b>Cultural Resources Director</b> |        |                             |            |

#### Dates & Response

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/08/2018</u>                        | 11) Date Replied <u>04/03/2018</u> |
| (    ) No Reply                                             |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/No Interest |                                    |
| (    ) Replied/Have Interest                                |                                    |
| (    ) Replied/Other                                        |                                    |

### Tribal/NHO Involvement

|                                                                                                                                                                                                                                                  |  |                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|
| 1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects? |  | ( <input checked="" type="checkbox"/> ) <u>Yes</u> (    ) <u>No</u> |
| 2a) Tribes/NHOs contacted through TCNS Notification Number: <u>168574</u>                                                                                                                                                                        |  | Number of Tribes/NHOs: <u>10</u>                                    |
| 2b) Tribes/NHOs contacted through an alternate system:                                                                                                                                                                                           |  | Number of Tribes/NHOs: <u>0</u>                                     |

#### Tribe/NHO Contacted Through TCNS

|                                                                 |
|-----------------------------------------------------------------|
| 3) Tribe/NHO FRN:                                               |
| 4) Tribe/NHO Name: <b>Delaware Tribe of Indians of Oklahoma</b> |

#### Contact Name

|                                 |                 |                                |            |
|---------------------------------|-----------------|--------------------------------|------------|
| 5) First Name: <b>Dr. Brice</b> | 6) MI: <b>M</b> | 7) Last Name: <b>Obermeyer</b> | 8) Suffix: |
| 9) Title:                       |                 |                                |            |

#### Dates & Response

|                                                       |                                    |
|-------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/07/2018</u>                  | 11) Date Replied <u>03/27/2018</u> |
| (    ) No Reply                                       |                                    |
| (    ) Replied/No Interest                            |                                    |
| (    ) Replied/Have Interest                          |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/Other |                                    |

#### Tribe/NHO Contacted Through TCNS

|                                                             |
|-------------------------------------------------------------|
| 3) Tribe/NHO FRN:                                           |
| 4) Tribe/NHO Name: <b>Eastern Shawnee Tribe of Oklahoma</b> |

#### Contact Name

|                                   |        |                             |            |
|-----------------------------------|--------|-----------------------------|------------|
| 5) First Name: <b>Travis</b>      | 6) MI: | 7) Last Name: <b>Patton</b> | 8) Suffix: |
| 9) Title: <b>TCNS Coordinator</b> |        |                             |            |

#### Dates & Response

|                                                       |                                    |
|-------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/08/2018</u>                  | 11) Date Replied <u>03/09/2018</u> |
| (    ) No Reply                                       |                                    |
| (    ) Replied/No Interest                            |                                    |
| (    ) Replied/Have Interest                          |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/Other |                                    |

### Tribal/NHO Involvement

|                                                                                                                                                                                                                                                  |  |                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------|
| 1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects? |  | ( <input checked="" type="checkbox"/> ) <u>Yes</u> ( <input type="checkbox"/> ) <u>No</u> |
| 2a) Tribes/NHOs contacted through TCNS Notification Number: <u>168574</u>                                                                                                                                                                        |  | Number of Tribes/NHOs: <u>10</u>                                                          |
| 2b) Tribes/NHOs contacted through an alternate system:                                                                                                                                                                                           |  | Number of Tribes/NHOs: <u>0</u>                                                           |

#### Tribe/NHO Contacted Through TCNS

|                                                         |
|---------------------------------------------------------|
| 3) Tribe/NHO FRN:                                       |
| 4) Tribe/NHO Name: <b>Keweenaw Bay Indian Community</b> |

#### Contact Name

|                            |        |                                |                      |
|----------------------------|--------|--------------------------------|----------------------|
| 5) First Name: <b>Gary</b> | 6) MI: | 7) Last Name: <b>Loonsfoot</b> | 8) Suffix: <b>Jr</b> |
| 9) Title: <b>THPO</b>      |        |                                |                      |

#### Dates & Response

|                                                               |                                    |
|---------------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/08/2018</u>                          | 11) Date Replied <u>03/13/2018</u> |
| ( <input type="checkbox"/> ) No Reply                         |                                    |
| ( <input type="checkbox"/> ) Replied/No Interest              |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/Have Interest |                                    |
| ( <input type="checkbox"/> ) Replied/Other                    |                                    |

#### Tribe/NHO Contacted Through TCNS

|                                                                                  |
|----------------------------------------------------------------------------------|
| 3) Tribe/NHO FRN:                                                                |
| 4) Tribe/NHO Name: <b>Lac du Flambeau Band of Lake Superior Chippewa Indians</b> |

#### Contact Name

|                               |                 |                            |            |
|-------------------------------|-----------------|----------------------------|------------|
| 5) First Name: <b>Melinda</b> | 6) MI: <b>J</b> | 7) Last Name: <b>Young</b> | 8) Suffix: |
| 9) Title: <b>THPO</b>         |                 |                            |            |

#### Dates & Response

|                                                       |                                    |
|-------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/08/2018</u>                  | 11) Date Replied <u>03/09/2018</u> |
| ( <input type="checkbox"/> ) No Reply                 |                                    |
| ( <input type="checkbox"/> ) Replied/No Interest      |                                    |
| ( <input type="checkbox"/> ) Replied/Have Interest    |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/Other |                                    |

### Tribal/NHO Involvement

|                                                                                                                                                                                                                                                  |  |                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------|
| 1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects? |  | ( <input checked="" type="checkbox"/> ) <u>Yes</u> ( <input type="checkbox"/> ) <u>No</u> |
| 2a) Tribes/NHOs contacted through TCNS Notification Number: <u>168574</u>                                                                                                                                                                        |  | Number of Tribes/NHOs: <u>10</u>                                                          |
| 2b) Tribes/NHOs contacted through an alternate system:                                                                                                                                                                                           |  | Number of Tribes/NHOs: <u>0</u>                                                           |

#### Tribe/NHO Contacted Through TCNS

|                                                     |
|-----------------------------------------------------|
| 3) Tribe/NHO FRN:                                   |
| 4) Tribe/NHO Name: <b>Narragansett Indian Tribe</b> |

#### Contact Name

|                                  |        |                           |            |
|----------------------------------|--------|---------------------------|------------|
| 5) First Name: <b>Sequahna</b>   | 6) MI: | 7) Last Name: <b>Mars</b> | 8) Suffix: |
| 9) Title: <b>Program Manager</b> |        |                           |            |

#### Dates & Response

|                                                    |                        |
|----------------------------------------------------|------------------------|
| 10) Date Contacted <u>03/08/2018</u>               | 11) Date Replied _____ |
| ( <input checked="" type="checkbox"/> ) No Reply   |                        |
| ( <input type="checkbox"/> ) Replied/No Interest   |                        |
| ( <input type="checkbox"/> ) Replied/Have Interest |                        |
| ( <input type="checkbox"/> ) Replied/Other         |                        |

#### Tribe/NHO Contacted Through TCNS

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| 3) Tribe/NHO FRN:                                                                       |
| 4) Tribe/NHO Name: <b>Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin</b> |

#### Contact Name

|                                 |        |                              |            |
|---------------------------------|--------|------------------------------|------------|
| 5) First Name: <b>Joseph</b>    | 6) MI: | 7) Last Name: <b>Montano</b> | 8) Suffix: |
| 9) Title: <b>Assistant-THPO</b> |        |                              |            |

#### Dates & Response

|                                                    |                        |
|----------------------------------------------------|------------------------|
| 10) Date Contacted <u>03/07/2018</u>               | 11) Date Replied _____ |
| ( <input checked="" type="checkbox"/> ) No Reply   |                        |
| ( <input type="checkbox"/> ) Replied/No Interest   |                        |
| ( <input type="checkbox"/> ) Replied/Have Interest |                        |
| ( <input type="checkbox"/> ) Replied/Other         |                        |



### Tribal/NHO Involvement

|                                                                                                                                                                                                                                                  |  |                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------|
| 1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects? |  | ( <input checked="" type="checkbox"/> ) <u>Y</u> es (    ) <u>N</u> o |
| 2a) Tribes/NHOs contacted through TCNS Notification Number: <u>168574</u>                                                                                                                                                                        |  | Number of Tribes/NHOs: <u>10</u>                                      |
| 2b) Tribes/NHOs contacted through an alternate system:                                                                                                                                                                                           |  | Number of Tribes/NHOs: <u>0</u>                                       |

#### Tribe/NHO Contacted Through TCNS

|                                         |
|-----------------------------------------|
| 3) Tribe/NHO FRN:                       |
| 4) Tribe/NHO Name: <b>Shawnee Tribe</b> |

#### Contact Name

|                           |        |                             |            |
|---------------------------|--------|-----------------------------|------------|
| 5) First Name: <b>Kim</b> | 6) MI: | 7) Last Name: <b>Jumper</b> | 8) Suffix: |
| 9) Title: <b>THPO</b>     |        |                             |            |

#### Dates & Response

|                                                       |                                    |
|-------------------------------------------------------|------------------------------------|
| 10) Date Contacted <u>03/08/2018</u>                  | 11) Date Replied <u>03/13/2018</u> |
| (    ) No Reply                                       |                                    |
| (    ) Replied/No Interest                            |                                    |
| (    ) Replied/Have Interest                          |                                    |
| ( <input checked="" type="checkbox"/> ) Replied/Other |                                    |

#### Tribe/NHO Contacted Through TCNS

|                                            |
|--------------------------------------------|
| 3) Tribe/NHO FRN:                          |
| 4) Tribe/NHO Name: <b>Wyandotte Nation</b> |

#### Contact Name

|                              |        |                              |            |
|------------------------------|--------|------------------------------|------------|
| 5) First Name: <b>Sherri</b> | 6) MI: | 7) Last Name: <b>Clemons</b> | 8) Suffix: |
| 9) Title: <b>THPO</b>        |        |                              |            |

#### Dates & Response

|                                                  |                        |
|--------------------------------------------------|------------------------|
| 10) Date Contacted <u>03/08/2018</u>             | 11) Date Replied _____ |
| ( <input checked="" type="checkbox"/> ) No Reply |                        |
| (    ) Replied/No Interest                       |                        |
| (    ) Replied/Have Interest                     |                        |
| (    ) Replied/Other                             |                        |

## Other Tribes/NHOs Contacted

### Tribe/NHO Information

|                                   |
|-----------------------------------|
| 1) FCC Registration Number (FRN): |
| 2) Name:                          |

### Contact Name

|                |        |               |            |
|----------------|--------|---------------|------------|
| 3) First Name: | 4) MI: | 5) Last Name: | 6) Suffix: |
| 7) Title:      |        |               |            |

### Contact Information

|                                                                                                       |            |                    |               |
|-------------------------------------------------------------------------------------------------------|------------|--------------------|---------------|
| 8) P.O. Box:                                                                                          | And<br>/Or | 9) Street Address: |               |
| 10) City:                                                                                             |            | 11) State:         | 12) Zip Code: |
| 13) Telephone Number:                                                                                 |            | 14) Fax Number:    |               |
| 15) E-mail Address:                                                                                   |            |                    |               |
| 16) Preferred means of communication:<br><br>(     ) E-mail<br><br>(     ) Letter<br><br>(     ) Both |            |                    |               |

### Dates & Response

|                               |                        |
|-------------------------------|------------------------|
| 17) Date Contacted _____      | 18) Date Replied _____ |
| (     ) No Reply              |                        |
| (     ) Replied/No Interest   |                        |
| (     ) Replied/Have Interest |                        |
| (     ) Replied/Other         |                        |

## Historic Properties

### Properties Identified

|                                                                                                                                                                                                                |                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| 1) Have any historic properties been identified within the APEs for direct and visual effect?                                                                                                                  | (    ) <u>Y</u> es ( <b>X</b> ) <u>N</u> o |
| 2) Has the identification process located archaeological materials that would be directly affected, or sites that are of cultural or religious significance to Tribes/NHOs?                                    | (    ) <u>Y</u> es ( <b>X</b> ) <u>N</u> o |
| 3) Are there more than 10 historic properties within the APEs for direct and visual effect?<br>If "Yes", you are required to attach a Cultural Resources Report in lieu of adding the Historic Property below. | (    ) <u>Y</u> es ( <b>X</b> ) <u>N</u> o |

### Historic Property

|                      |
|----------------------|
| 4) Property Name:    |
| 5) SHPO Site Number: |

### Property Address

|                            |           |              |
|----------------------------|-----------|--------------|
| 6) Street Address:         |           |              |
| 7) City:                   | 8) State: | 9) Zip Code: |
| 10) County/Borough/Parish: |           |              |

### Status & Eligibility

|                                                                                          |                                      |
|------------------------------------------------------------------------------------------|--------------------------------------|
| 11) Is this property listed on the National Register?<br><br>Source: _____               | (    ) <u>Y</u> es (    ) <u>N</u> o |
| 12) Is this property eligible for listing on the National Register?<br><br>Source: _____ | (    ) <u>Y</u> es (    ) <u>N</u> o |
| 13) Is this property a National Historic Landmark?                                       | (    ) <u>Y</u> es (    ) <u>N</u> o |

|                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14) Direct Effects (Select One):<br><br><input type="checkbox"/> No Effect on this Historic Property in APE<br><input type="checkbox"/> No Adverse Effect on this Historic Property in APE<br><input type="checkbox"/> Adverse Effect on this Historic Property in APE |
| 15) Visual Effects (Select One):<br><br><input type="checkbox"/> No Effect on this Historic Property in APE<br><input type="checkbox"/> No Adverse Effect on this Historic Property in APE<br><input type="checkbox"/> Adverse Effect on this Historic Property in APE |

## Local Government Involvement

### Local Government Agency

|                                                                    |
|--------------------------------------------------------------------|
| 1) FCC Registration Number (FRN):                                  |
| 2) Name: <b>Building and Zoning Department, Borough of Wanaque</b> |

### Contact Name

|                             |        |                               |            |
|-----------------------------|--------|-------------------------------|------------|
| 3) First Name: <b>David</b> | 4) MI: | 5) Last Name: <b>Hammerle</b> | 6) Suffix: |
| 7) Title:                   |        |                               |            |

### Contact Information

|                                                                                              |         |                                               |                            |
|----------------------------------------------------------------------------------------------|---------|-----------------------------------------------|----------------------------|
| 8) P.O. Box:                                                                                 | And /Or | 9) Street Address: <b>579 Ringwood Avenue</b> |                            |
| 10) City: <b>Wanaque</b>                                                                     |         | 11) State: <b>NJ</b>                          | 12) Zip Code: <b>07465</b> |
| 13) Telephone Number: <b>(973)839-3000</b>                                                   |         | 14) Fax Number:                               |                            |
| 15) E-mail Address: <b>Dhammerle@wanaque.gov</b>                                             |         |                                               |                            |
| 16) Preferred means of communication:<br>(    ) E-mail<br>( <b>X</b> ) Letter<br>(    ) Both |         |                                               |                            |

### Dates & Response

|                                      |                        |
|--------------------------------------|------------------------|
| 17) Date Contacted <b>03/19/2018</b> | 18) Date Replied _____ |
| ( <b>X</b> ) No Reply                |                        |
| (    ) Replied/No Interest           |                        |
| (    ) Replied/Have Interest         |                        |
| (    ) Replied/Other                 |                        |

### Additional Information

|                                                                    |
|--------------------------------------------------------------------|
| 19) Information on local government's role or interest (optional): |
|--------------------------------------------------------------------|

## Other Consulting Parties

### Other Consulting Parties Contacted

|                                                                                  |                                                                     |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) Has any other agency been contacted and invited to become a consulting party? | ( <input checked="" type="checkbox"/> ) <u>Yes</u> (    ) <u>No</u> |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------|

### Consulting Party

|                                                                              |
|------------------------------------------------------------------------------|
| 2) FCC Registration Number (FRN):                                            |
| 3) Name: <b>Passaic County Department of Cultural &amp; Historic Affairs</b> |

### Contact Name

|                             |        |                             |            |
|-----------------------------|--------|-----------------------------|------------|
| 4) First Name: <b>Kelly</b> | 5) MI: | 6) Last Name: <b>Ruffel</b> | 7) Suffix: |
| 8) Title:                   |        |                             |            |

### Contact Information

|                                                                                                                         |         |                                            |                            |  |
|-------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------|----------------------------|--|
| 9) P.O. Box:                                                                                                            | And /Or | 10) Street Address: <b>199 Totowa Road</b> |                            |  |
| 11) City: <b>Wayne</b>                                                                                                  |         | 12) State: <b>NJ</b>                       | 13) Zip Code: <b>07470</b> |  |
| 14) Telephone Number: <b>(973)696-1776</b>                                                                              |         | 15) Fax Number:                            |                            |  |
| 16) E-mail Address: <b>kellyr@passaiccountynj.org</b>                                                                   |         |                                            |                            |  |
| 17) Preferred means of communication:<br>(    ) E-mail<br>( <input checked="" type="checkbox"/> ) Letter<br>(    ) Both |         |                                            |                            |  |

### Dates & Response

|                                                  |                        |
|--------------------------------------------------|------------------------|
| 18) Date Contacted <b>03/19/2018</b>             | 19) Date Replied _____ |
| ( <input checked="" type="checkbox"/> ) No Reply |                        |
| (    ) Replied/No Interest                       |                        |
| (    ) Replied/Have Interest                     |                        |
| (    ) Replied/Other                             |                        |

### Additional Information

|                                                                           |
|---------------------------------------------------------------------------|
| 20) Information on other consulting parties' role or interest (optional): |
|---------------------------------------------------------------------------|

## Designation of SHPO/THPO

1) Designate the Lead State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) based on the location of the tower.

### SHPO/THPO

Name: **NJ Historic Preservation Office**

2) You may also designate up to three additional SHPOs/THPOs if the APEs include multiple states. If the APEs include other countries, enter the name of the National Historic Preservation Agency and any state and provincial Historic Preservation Agency.

SHPO/THPO Name: \_\_\_\_\_

SHPO/THPO Name: \_\_\_\_\_

SHPO/THPO Name: \_\_\_\_\_

### Certification

I certify that all representations on this FCC Form 620 Submission Packet and the accompanying attachments are true, correct, and complete.

#### Party Authorized to Sign

First Name: **Marianne**

MI:

Last Name: **Walsh**

Suffix:

Signature: **Marianne Walsh**

Date: **04/03/2018**

**FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.**

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**

**Attachments :**

| Type                                   | Description                                      | Date Entered |
|----------------------------------------|--------------------------------------------------|--------------|
| Area of Potential Effects              | <a href="#">APE (text)</a>                       | 04/03/2018   |
| Other                                  | <a href="#">Bibliography</a>                     | 04/03/2018   |
| Map Documents                          | <a href="#">Computer Generated Viewshed Maps</a> | 04/03/2018   |
| Historic Properties for Direct Effects | <a href="#">DE HP (text)</a>                     | 04/03/2018   |
| Photographs                            | <a href="#">DE Photos</a>                        | 04/03/2018   |
| Map Documents                          | <a href="#">Historic Maps</a>                    | 04/03/2018   |
| Local Government Involvement           | <a href="#">Local Government Involvement</a>     | 04/03/2018   |
| Tribal/NHO Involvement                 | <a href="#">NA Consultation</a>                  | 04/03/2018   |
| Map Documents                          | <a href="#">Project Area Maps</a>                | 04/03/2018   |
| Resumes/Vitae                          | <a href="#">Resumes</a>                          | 04/03/2018   |
| Historic Properties for Visual Effects | <a href="#">VE HP (text)</a>                     | 04/03/2018   |
| Photographs                            | <a href="#">VE Photos</a>                        | 04/03/2018   |
| Additional Site Information            | <a href="#">Lease Exhibits</a>                   | 04/03/2018   |
| Public Involvement                     | <a href="#">Public Involvement</a>               | 04/03/2018   |

## Areas of Potential Effect

### Direct Effect

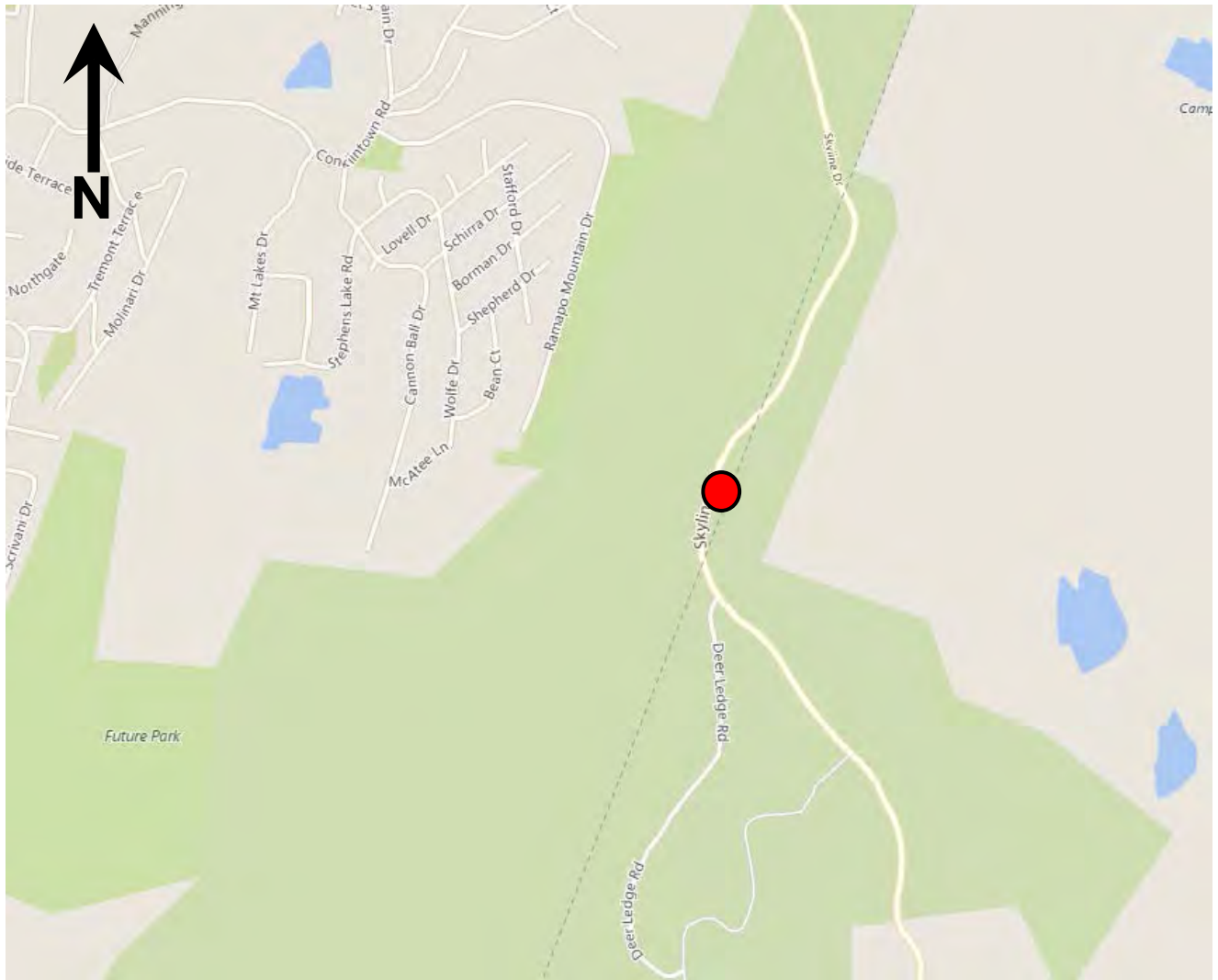
The APE for Direct Effects encompasses the area that will be directly affected by the installation of the proposed wireless telecommunications facility. Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive. The APE for Direct Effects includes Block 250, Lot 1, which is 1 Skyline Drive, Borough of Wanaque, NJ 07465. Please refer to the attached lease exhibits.

### Indirect Effect

The APE for Indirect Effects encompasses the area from which the proposed wireless telecommunications facility may be visible. A 1-mile radius APE was used based on the language contained within Section VI, Part C, 4a of the 2005 Nationwide Programmatic Agreement which recommends that "the presumed APE for visual effects for construction of new Facilities is the area from which the Tower will be visible: within a mile from the tower site if the proposed Tower is 200 feet or more in overall height".

The project site sits atop Ramapo Mountain, in Ramapo Mountain State Forest, at an elevation of 880 feet amsl. The geographic area within the APE therefore slopes away from the site in almost every direction and is heavily wooded. Skyline Drive is the only paved road in the radius, with the exception of a few residential streets within a mid-late 20<sup>th</sup> century residential development to the northwest. Please refer to the attached APE and aerial maps for illustration.





Road map of the project vicinity. Project location is indicated with a bull's eye.

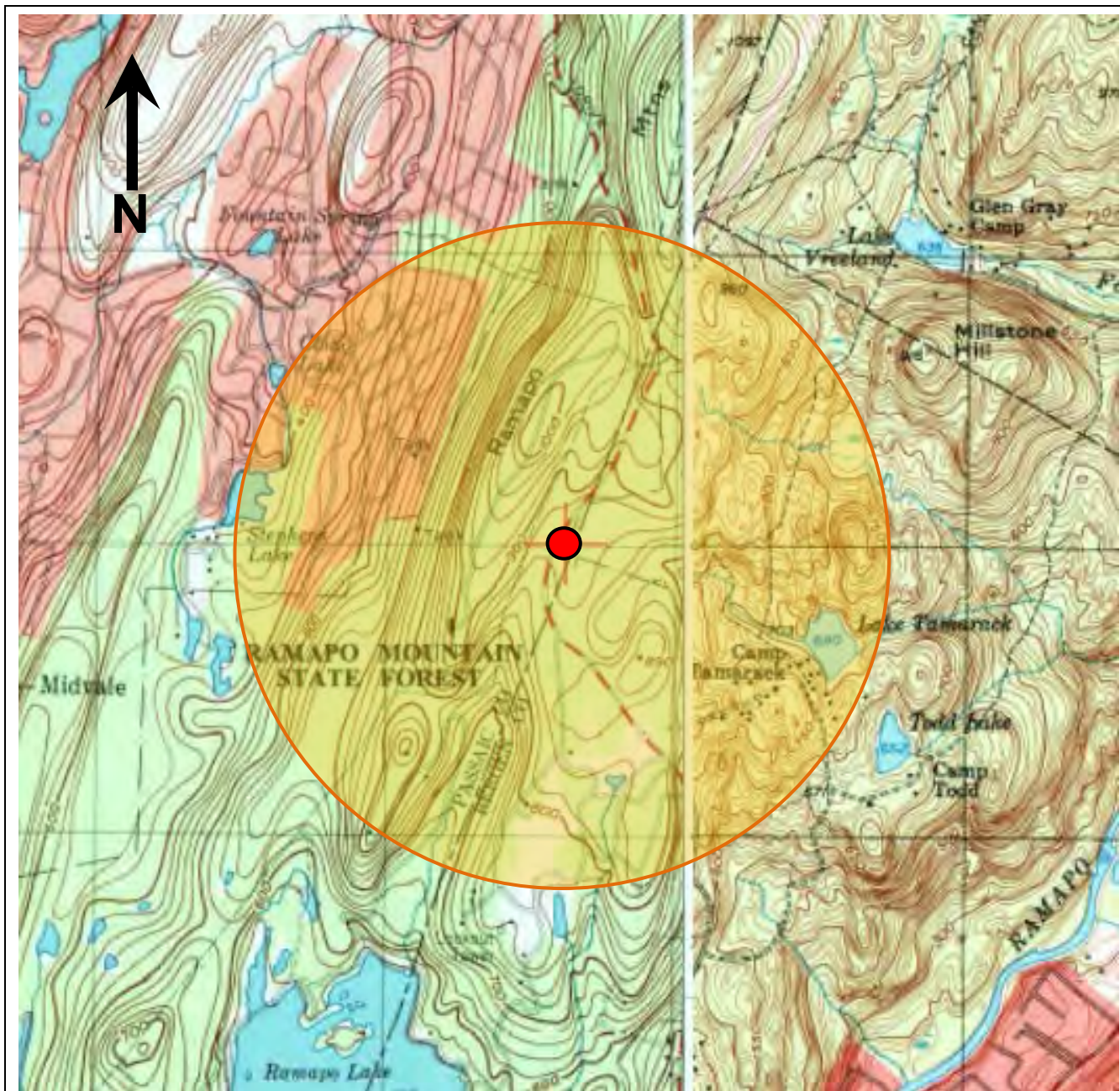


**E2 Project Management LLC**  
**87 Hibernia Avenue**  
**Rockaway, NJ 07866**

**Phone (973) 299-5200**

**Fax (973) 299-5059**

**P-17-73-01**  
**Wanaque Tower**  
 1 Skyline Drive, Wanaque  
 Passaic County, New Jersey 07465  
**Source: Microsoft Corp., Bing Maps, 2018**



1995 Ramsey and 1995 Wanaque, NJ USGS maps showing the location of the APE Direct Effects (red bull's eye), APE Indirect Effects (light orange shaded area), and location of identified resources in the APE (blue shaded areas).



**E2 Project Management LLC**  
87 Hibernia Avenue  
Rockaway, NJ 07866

Phone (973) 299-5200

Fax (973) 299-5059

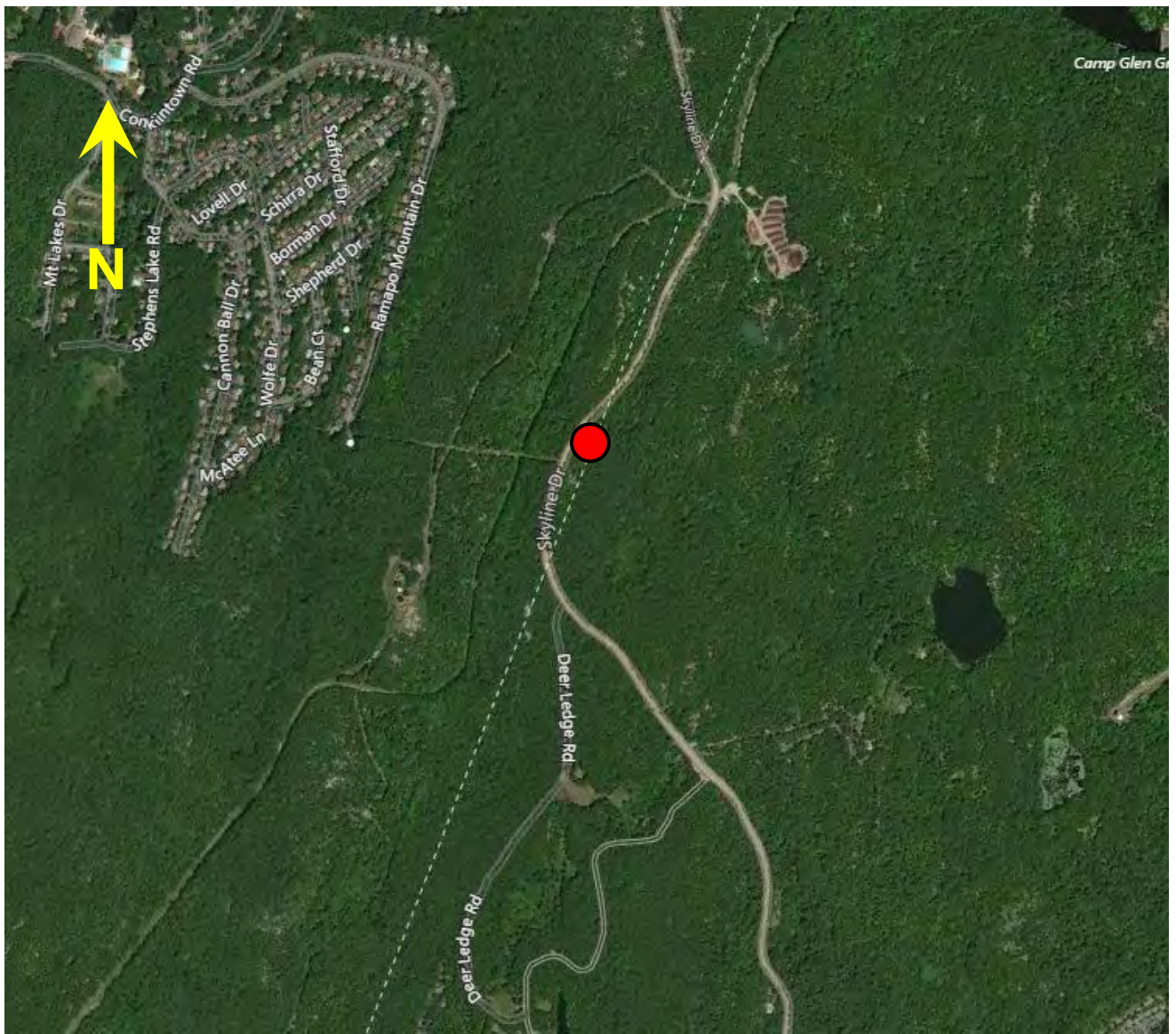
P-17-73-01

**Wanaque Tower**

1 Skyline Drive, Borough of Wanaque  
Passaic County, New Jersey 07465

**Source: USGS Ramsey, NJ and Wanaque NJ  
Quadrangles**





Aerial map of the project vicinity. Project location is indicated with the bull's eye.



**E2 Project Management LLC**  
87 Hibernia Avenue  
Rockaway, NJ 07866

Phone (973) 299-5200

Fax (973) 299-5059

P-17-73-01

**Wanaque Tower**

1 Skyline Drive, Borough of Wanaque  
Passaic County, New Jersey 07465

**Source: Microsoft Corp., Bing Maps, 2018**



**Photo Location Map:** Arrows indicate the general location, direction and number of each photograph. Most Visual Effect photos (but noted as 'VE' in the Photo Attachment) are indicated with plain numbers (e.g. 1); Direct Effect (DE) photos are labeled as such.



**E2 Project Management LLC**  
87 Hibernia Avenue  
Rockaway, NJ 07866

Phone (973) 299-5200

Fax (973) 299-5059

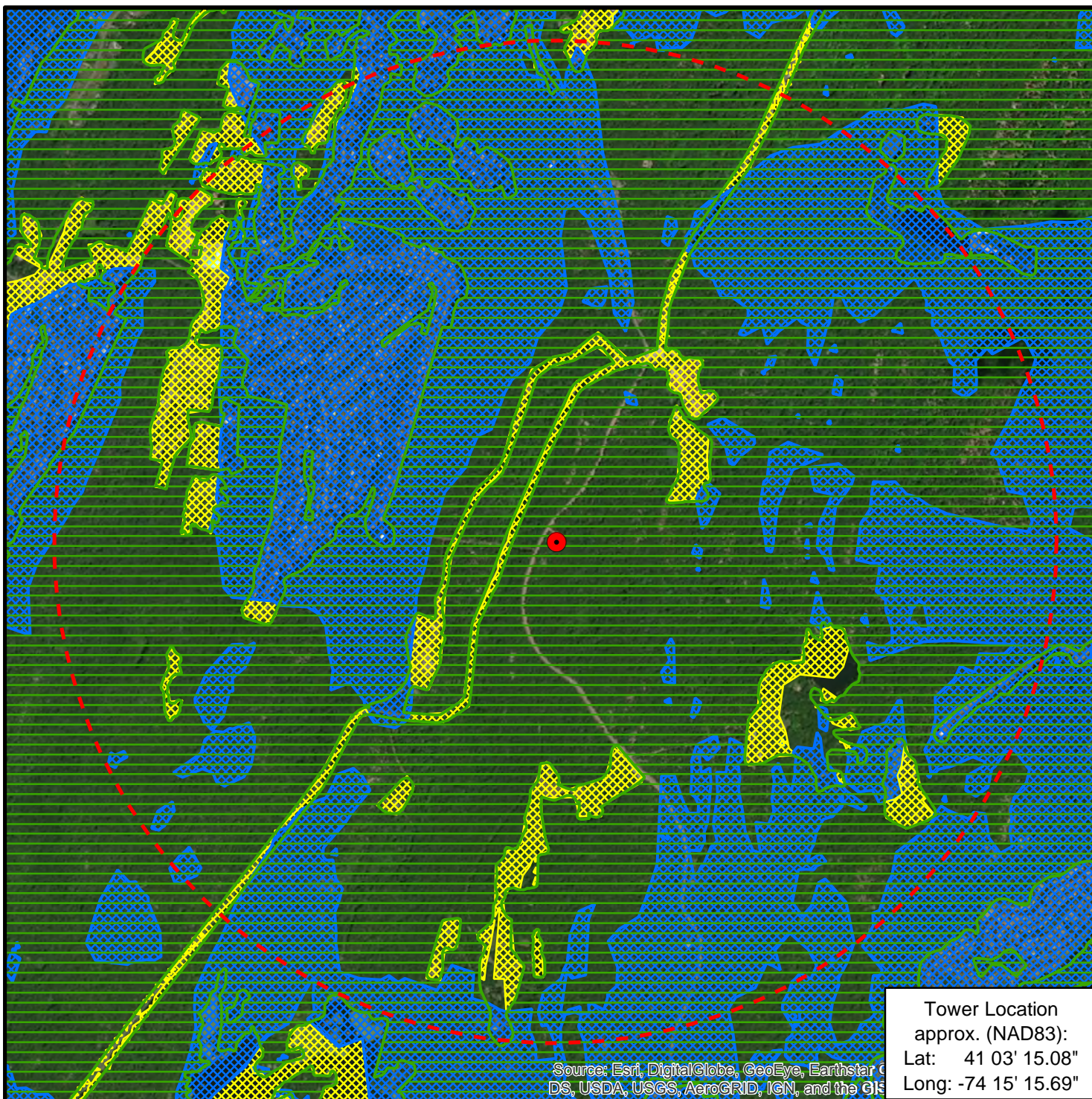
P-17-73-01

**Wanaque Tower**

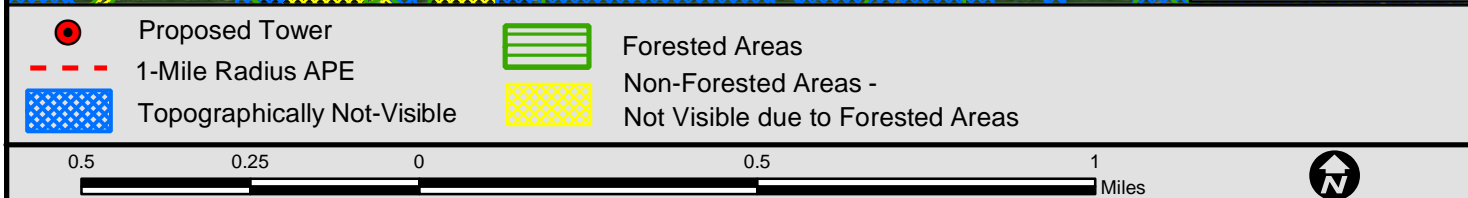
1 Skyline Drive, Borough of Wanaque  
Passaic County, New Jersey 07465

**Source: Microsoft Corp., Bing Maps, 2018**





Tower Location  
approx. (NAD83):  
Lat: 41 03' 15.08"  
Long: -74 15' 15.69"



**E2 Project Management LLC**  
75 East Main Street  
Rockaway, NJ 07866

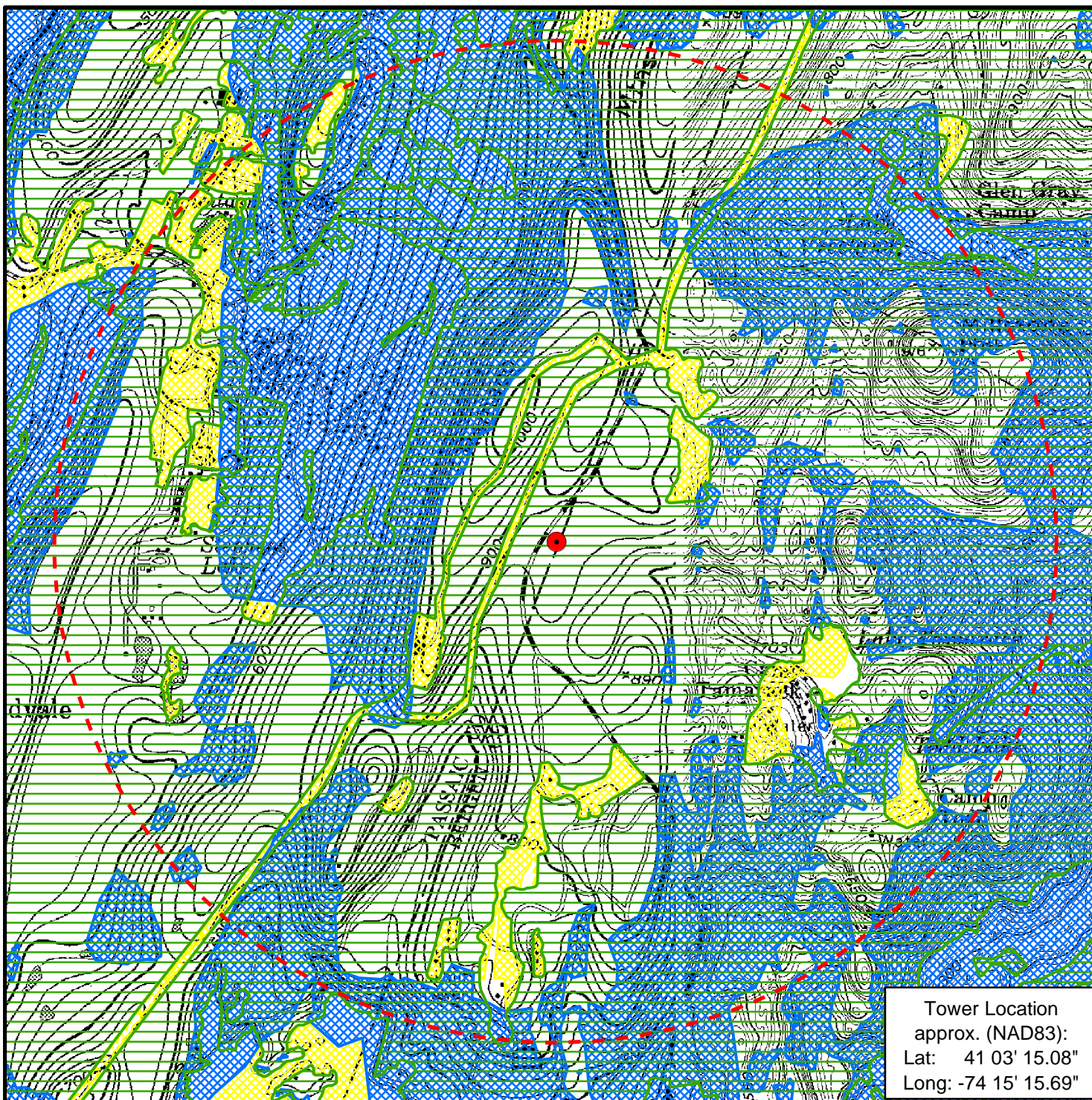
Phone (973) 625-5600 Fax (973) 625-5059

**E2PM Project Number: P-17-73-01**






1 Skyline Drive  
Wanaque, Passaic County, NJ 07465

SOURCE: THIS MAP WAS DEVELOPED USING NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA, BUT THIS SECONDARY PRODUCT HAS NOT BEEN VERIFIED BY NJDEP AND IS NOT STATE AUTHORIZED.





Tower Location  
approx. (NAD83):  
Lat: 41 03' 15.08"  
Long: -74 15' 15.69"

- |                                                                                     |                             |                                                                                     |                                                           |
|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|
|  | Proposed Tower              |  | Forested Areas                                            |
|  | 1-Mile Radius APE           |  | Non-Forested Areas -<br>Not Visible due to Forested Areas |
|  | Topographically Not-Visible |                                                                                     |                                                           |

0.5 0.25 0 0.5 1 Miles



**E2 Project Management LLC**  
75 East Main Street  
Rockaway, NJ 07866

**E2PM Project Number: P-17-73-01**

1 Skyline Drive  
Wanaque, Passaic County, NJ 07465

Phone (973) 625-5600 Fax (973) 625-5059

SOURCE: THIS MAP WAS DEVELOPED USING NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA, BUT THIS SECONDARY PRODUCT HAS NOT BEEN VERIFIED BY NJDEP AND IS NOT STATE AUTHORIZED.

## Historic Properties Identified In the APE for Direct Effects

### ***Environmental Setting***

The APE – direct effects stands at an elevation of 880 feet (268.22 meters) above sea level and is located within New Jersey's Highlands Physiographic Province. Containing nearly 980 square miles of New Jersey's geography, the Highlands Province is a northeast-southwest trending series of rounded ridges sculpted by glacial movement. Underlying the Highlands are metamorphosed igneous and sedimentary rocks of Middle Proterozoic age (1.2 billion to 900 million years old) as well as Middle Paleozoic sandstones and quartzites (Dalton 2003).

Bedrock in the vicinity of the APE consists of Hornblende Granite (Ybh). These deposits are a medium to coarse grained pinkish gray to light pinkish gray gneissoid stone composed of microcline, microperthite, quartz, oligoclase, and hornblende (NJGS 2007). Surficial deposits in the area are Netcong Till (Qwtn), which are glacial till deposits laid down during the Wisconsinan Glacial epoch (NJGS 2008). The APE – direct effects is located on a rise along the east side of Skyline Drive. The area is a maintained clearing vegetated by manicured grass. The ground slightly rises (2-6%) towards a hardwood woodline to the south and dips towards the north and east.

According to the United States Department of Agriculture National Cooperative Soil Survey, soils in the APE – direct effects are classified as Rockaway-Rock Outcrop, 8 to 15 percent slopes (RomC). Rockaway soils are glacial residuum laying atop sculpted and rounded hilltops (NRCS 2018). The typical soil profile for these units is as follows:

*A - 0 to 4 inches: very dark grayish brown gravelly sandy loam*  
*Bt1 - 4 to 9 inches: yellowish brown gravelly loam*  
*Bt2 - 9 to 22 inches: yellowish brown gravelly loam*  
*Bx - 22 to 38 inches: yellowish brown gravelly sandy loam*  
*C1 - 38 to 56 inches: light brownish gray gravelly sandy loam*  
*C2 - 56 to 72 inches: pale brown very gravelly sandy loam*

The closest stream course in the vicinity of the APE – direct effects is an unnamed drainage located more than 1000 feet (304.8 meters) to the east. Topography within the APE – direct effects is approximately 8-15 % sloped.

### ***Existing Conditions***

A close visual reconnaissance of the APE – direct effects was completed on January 11, 2018. The ground surface within the APE – direct effects consisted of an artificially-leveled area covered in trap rock and crushed gravel. No potentially significant cultural features were noted during the field examination. Grading sheds off toward the north and east while the property rises toward the south and southwest. Extant structures on the property include moveable iron containers and a small modern concrete shed enclosure erected on a concrete slab. An existing drainage cut runs alongside the access road (Plates 1 through 3).

## Historic Properties Identified In the APE for Direct Effects (con't. page 2)

### ***Known Archaeological Sites and Previous Archaeological Surveys***

A review of files at the New Jersey Historic Preservation Office (NJHPO), completed on March 6, 2018, revealed no past cultural resource surveys addressing archaeological resources performed in or adjacent to the current APE – direct effects. However, three surveys conducted more than 0.75 miles (1.21 kilometers) west of the APE – direct effects preceded the construction of proposed sewer facilities and pipelines throughout the Boroughs of Ringwood and Wanaque. None of these investigations encountered or identified any archaeological resources proximal to the APE – direct effects (Archaeological Survey Consultants 1978; Kraft 1977, 1980).

In 1978 Archaeological Survey Consultants, Inc. conducted a Phase I cultural resources survey for the proposed installation of sanitary sewers in the Borough of Ringwood. A review of available background information and field investigation failed to identify any prehistoric or historic archaeological resources within the project's area of potential effects. In addition, a review of historic structures did not identify any eligible for inclusion on the New Jersey State or National Registers of Historic Places (Archaeological Survey Consultants 1978—PAS E 69).

In 1977 Herbert C. Kraft conducted an archaeological and historical survey for the proposed installation of sanitary sewers in the Borough of Wanaque. Kraft conducted a supplemental survey to this project in 1980 that expanded into additional portions of the Borough. Both projects included a review of available background information and field investigations that identified no prehistoric or historic archaeological resources within the project's area of potential effects. In addition, a review of historic structures did not identify any eligible for inclusion on the New Jersey State or National Registers of Historic Places (Kraft 1977—PAS E 71, Kraft 1980—PAS E 71a).

A total of two (2) previously-identified archaeological sites are located within one-mile of the APE – direct effects. The closest site proximal to the APE – direct effects is 28-BE-160, located approximately 1,500 feet (457.2 meters) to the southeast in close proximity to a small perennial drainage. The remaining site, 28-BE-78, is located more than a half-mile from the APE – direct effects. Examination of the environmental preferences for the identified prehistoric sites reveals a tendency to favor flat level areas in close proximity (<500 feet / 152.4 meters) to water.

Site 28-BE-160, located approximately 1,500 (457.2 meters) feet southeast of the APE – direct effects is recorded as a multicomponent camp site situated focused around a rock shelter. Faunal analysis identified bones from numerous small and large mammals and birds within the assemblage. No indication of temporal or cultural affiliation is mentioned on the site form nor are there descriptions of artifacts recovered.

Site 28-BE-78, located approximately 3,500 feet (1,066.8 meters) southeast of the APE – direct effects, is recorded as a rock shelter site located proximal to a perennial wetland. No information is given regarding its artefactual content or temporal/cultural affiliations.



## Historic Properties Identified In the APE for Direct Effects (con't. page 3)

A review of historic and cartographic documents pertaining to the development of the APE – direct effects was conducted at the New Jersey State Library, the New Jersey State Museum, and the New Jersey Historic Preservation Office, all located in Trenton, as well as through online sources. As a result of this research, the APE – direct effects is characterized as historically undeveloped woodland. More specifically, the 1861 Hopkins *Map of Bergen and Passaic Counties, New Jersey* indicates no historic structures or farmsteads situated proximal to the APE – direct effects. The closest developed areas are located more than 1,000 feet (304.8 meters) to the west and across New Jersey State Route 284 (1861 Hopkins; DE Figure 1). Historic aerial images from 1930 show a continued lack of development near the APE – direct effects (USDA 1930; DE Figure 2). Historic aerial imagery provided by [historicaerials.com](http://historicaerials.com) (which cannot be reproduced due to copyright, but which are accessible at [www.historicaerials.com](http://www.historicaerials.com)), shows that the APE - direct effects remained undeveloped throughout much of the twentieth century until around 1966 when it appears the tower is present (NETR 2018). No further changes are noted within the APE – direct effects.

### ***Archaeological Sensitivity of the APE***

Archaeological site location predictive models indicate that Native American sites are commonly found in undisturbed areas in close proximity (within 500 feet) to sources of surface potable water with slopes less than 10-15 percent. The APE – direct effects sits on an artificially leveled portion of the downslope of a ridge with slopes of 15-35%. The soils are described as rocky outcrop and rock outcrops and boulders litter the landscape. There are no previously identified archaeological sites recorded proximal to the APE – direct effects and no nearby sources of surface potable water or standing wetlands. Based upon the environmental characteristics of the APE – direct effects, particularly the rocky soils, steep slopes, and lack of potable water sources, it is characterized as having no sensitivity for potential prehistoric activity and/or site locations. In addition, given that historic mapping indicated no previously documented historic structures within or proximal (within 300 feet) to the APE – direct effects, it is considered to have low to no sensitivity to contain previously undocumented historic archaeological resources.

### ***Summary and Conclusions***

Based upon the available information, the APE – direct effects is assessed as having low to no sensitivity to contain previously undocumented prehistoric and/or historic archaeological resources. As a result, the project will not affect any archaeological resources and no further archaeological work is recommended for the project as currently designed. Based on these findings, **there are no historic properties located within the APE - direct effects.**

**Plate:** DE.1  
**Date:** 1/23/18  
**Direction:** Southwest  
**Photographer:**  
Alexander Frisari  
**Distance from site ft/m:**  
NA  
**Description:** View of the  
APE – Direct Effects.



**Plate:** DE.2  
**Date:** 1/23/18  
**Direction:** Northeast  
**Photographer:**  
Alexander Frisari  
**Distance from site ft/m:**  
NA  
**Description:** View of the  
APE – Direct Effects.



**Plate:** DE.3

**Date:** 1/23/18

**Direction:** Southwest

**Photographer:**

Alexander Frisari

**Distance from site ft/m:**

NA

**Description:** View of the project site showing man-made drainage cut on edge of access road.



**Plate:** DE.4

**Date:** 3/14/18

**Direction:** Southeast

**Photographer:**

Marianne Walsh

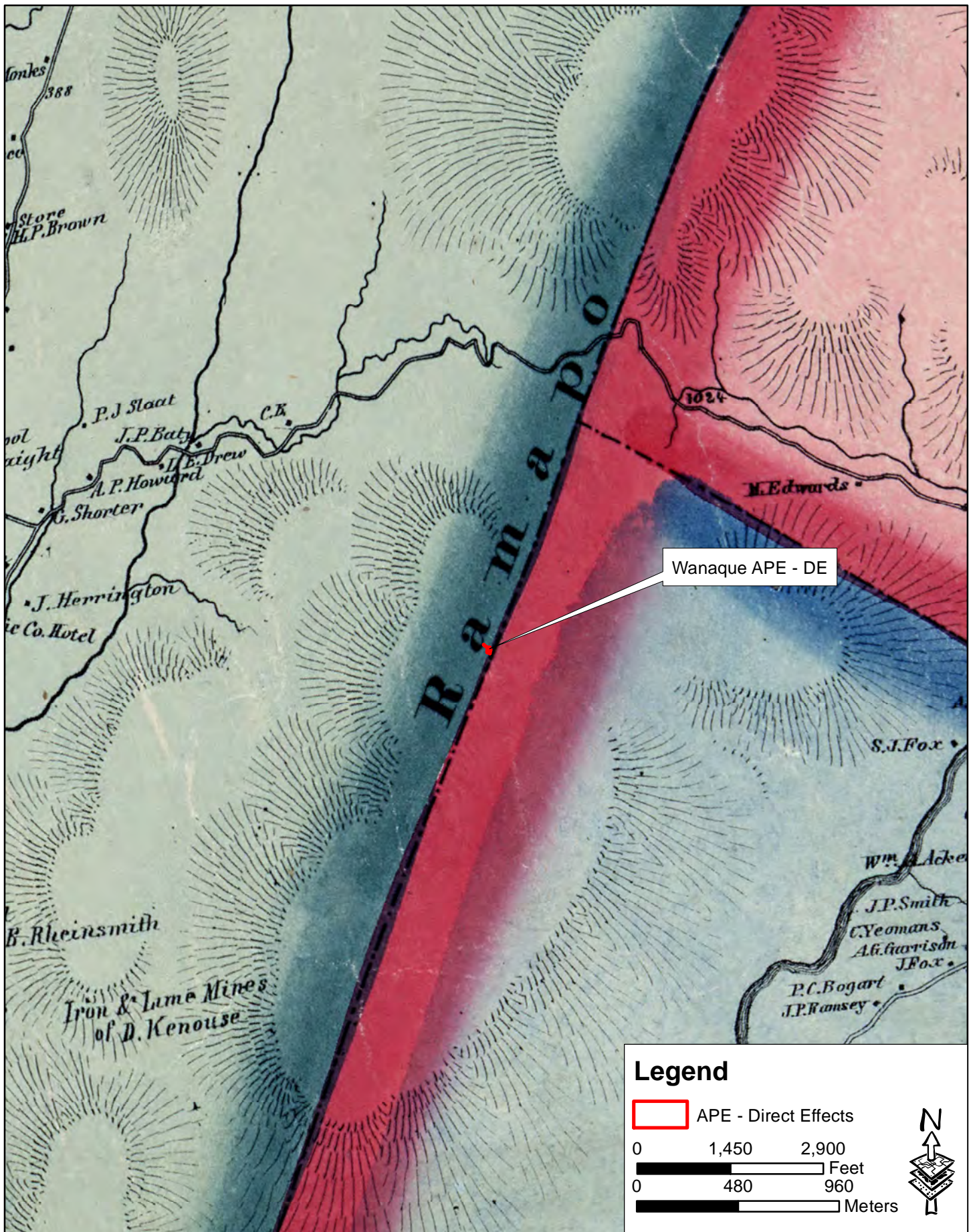
**Distance from site ft/m:**

154 / 47

**Description:** View of the project site.



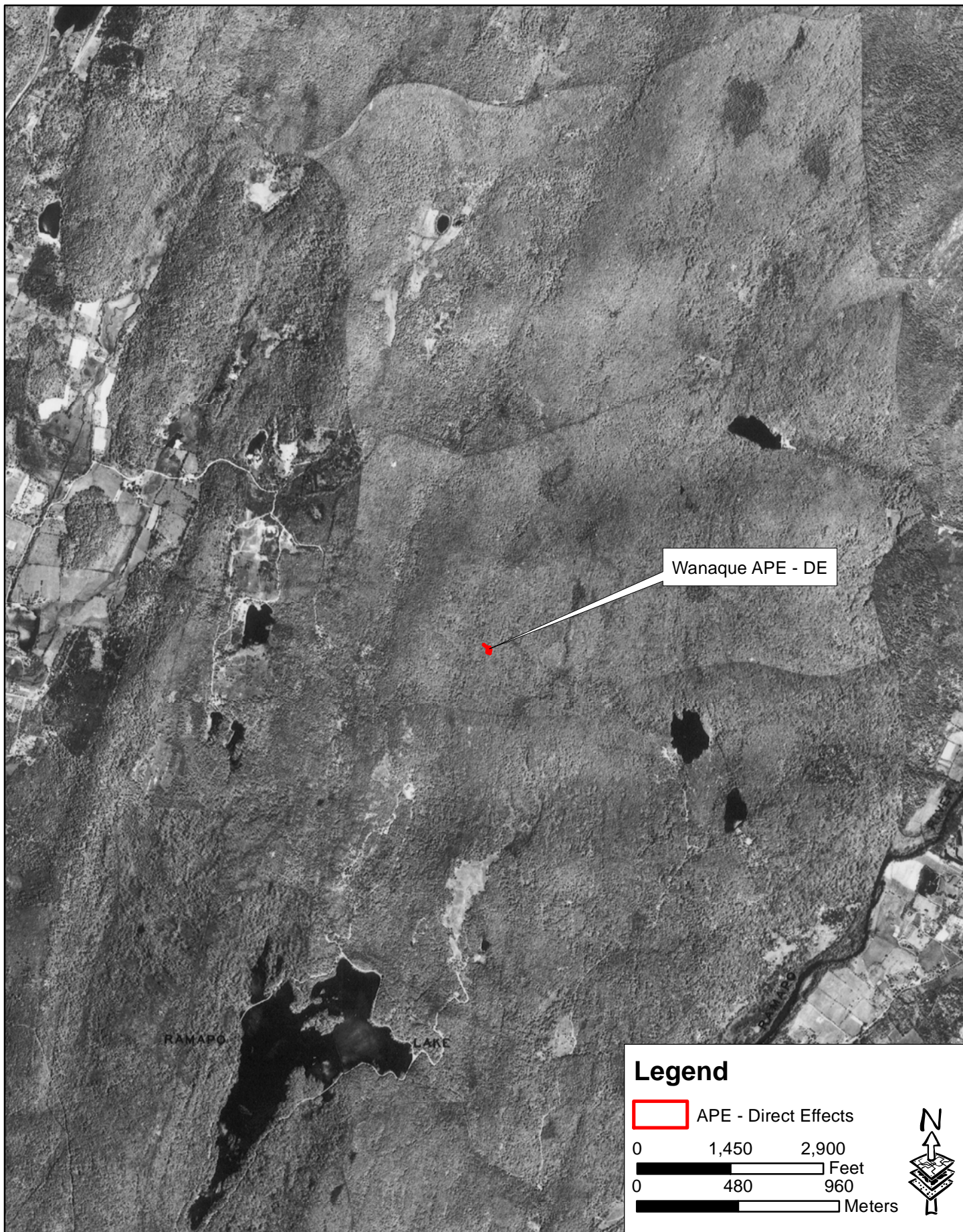




DE Figure 1: Wanaque APE- Direct Effects in 1861.

Source: Hopkins 1861





DE Figure 2: Wanaque APE- Direct Effects in 1930.

Source: USDA 1930

## Historic Properties Identified In the APE for Indirect Effects

After consulting the State and National Registers of Historic Places as well as local surveys, including the online database of the NJ Historic Preservation Office, it was determined that there are **no listed or eligible for listing in the National Register of Historic Places (NRHP) historic properties located within the APE for Indirect Effects.**



**Plate:** VE.1  
**Date:** 3/14/18  
**Direction:** Southeast  
**Photographer:**  
Marianne Walsh  
**Distance from site ft/m:**  
154 / 47  
**Description:** View of the  
project site.



**Plate:** VE.2  
**Date:** 3/14/18  
**Direction:** Southwest  
**Photographer:**  
Marianne Walsh  
**Distance from site ft/m:**  
154 / 47  
**Description:** View along  
Skyline Drive from the  
project site entrance.



**Plate:** VE.3

**Date:** 3/14/18

**Direction:** Northeast

**Photographer:**

Marianne Walsh

**Distance from site ft/m:**  
154 / 47

**Description:** View along  
Skyline Drive from the  
project site entrance.





SUBCARRIER COMMUNICATIONS INC

WIRELESS COMMUNICATION FACILITY

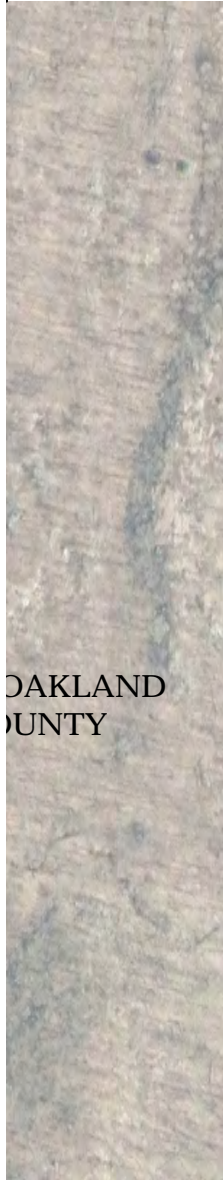

WANAQUE TOWER

1 SKYLINE DRIVE,

BOROUGH OF WANAQUE,

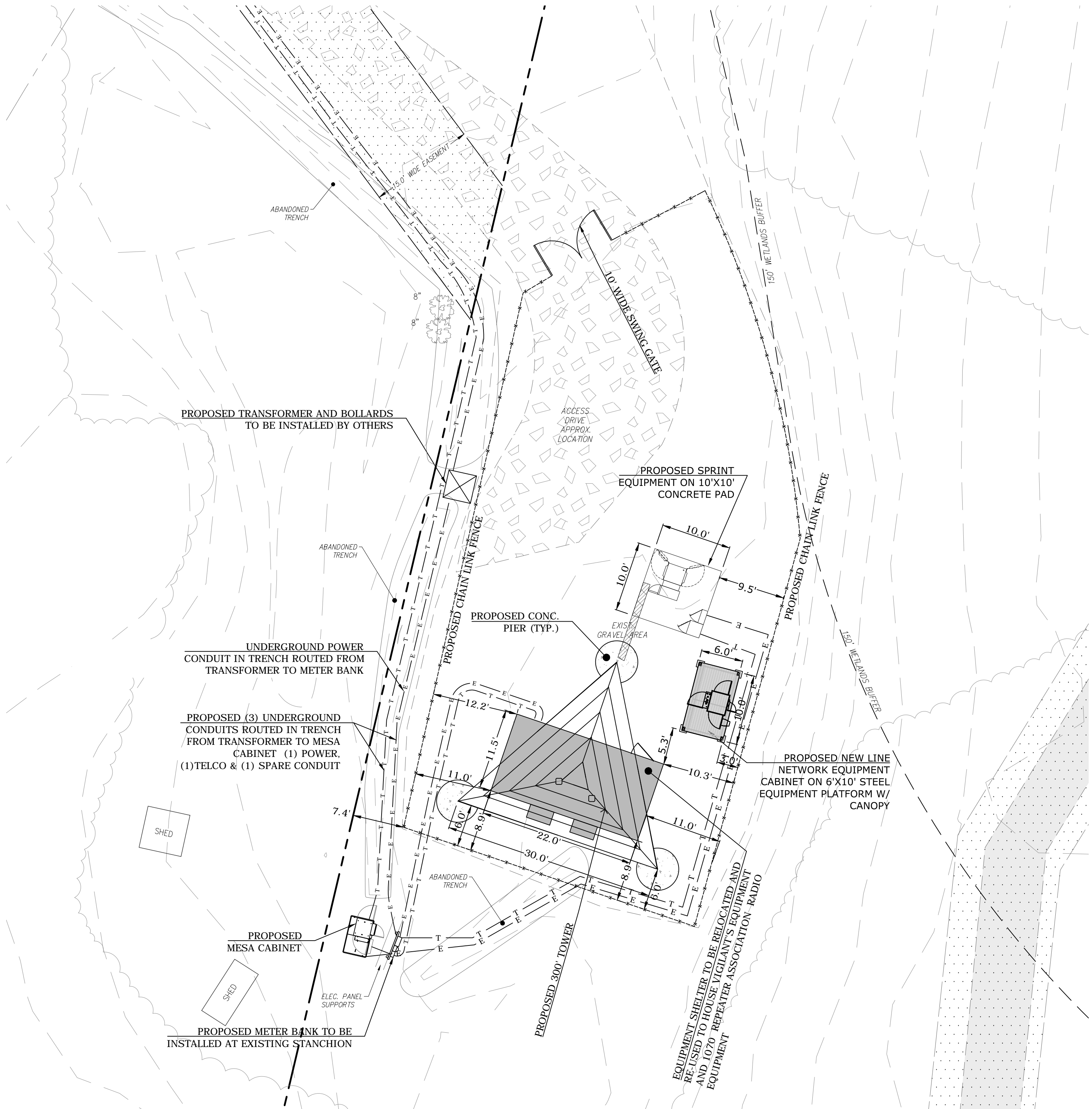
PASSAIC COUNTY, NJ 07465

BLOCK 250, LOT 1

|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               |                                                                                                                                        |                 |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|
|                                                                                                                                      | LIST OF DRAWINGS                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | BULK REQUIREMENTS                                                                  |                                                                                       |                               |                                                                                                                                        | PROJECT DATA    |                                                                                     |
|                                                                                                                                                                                                                        | T-1                                                                                  | TITLE SHEET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ZONE: WRC - WATER RESOURCE CONSERVATION<br>PROPOSED USE: TELECOMMUNICATION TOWER ⑤ |                                                                                       |                               |                                                                                                                                        | PROJECT:        | WANAQUE TOWER                                                                       |
|                                                                                                                                                                                                                        | T-2                                                                                  | TAX/ZONING MAP & 200' PROPERTY OWNER LIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                    | ORDINANCE                                                                             | EXISTING                      | PROPOSED                                                                                                                               | LOCATION:       | 1 SKYLINE DRIVE, WANAQUE,<br>PASSAIC COUNTY, NJ 07465                               |
|                                                                                                                                                                                                                        | SP-1                                                                                 | OVERALL SITE PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MINIMUM LOT AREA                                                                   | NA                                                                                    | 1.395 ACRES (60,794.70 SQ FT) | NC                                                                                                                                     | LOT:            | 1                                                                                   |
|                                                                                                                                                                                                                        | SP-2                                                                                 | ENLARGED SITE PLAN PHASE 1 & 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MINIMUM LOT WIDTH                                                                  | 300 FT                                                                                | 217.50 FT ①                   | NC                                                                                                                                     | BLOCK:          | 250                                                                                 |
|                                                                                                                                                                                                                        | E-1                                                                                  | ELEVATIONS PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MINIMUM LOT FRONTAGE                                                               | NA                                                                                    | NA                            | NC                                                                                                                                     | ZONE:           | WRC: WATER RESOURCE<br>CONSERVATION                                                 |
|                                                                                                                                                                                                                        | A-1                                                                                  | VIGILANT GLOBAL ANTENNA MOUNTING SECTIONS AND EQUIPMENT DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MINIMUM FRONT YARD                                                                 | NA                                                                                    | NA                            | NA                                                                                                                                     | PROPERTY OWNER: | SUBCARRIER COMMUNICATIONS INC<br>139 WHITE OAK LANE<br>OLD BRIDGE, NEW JERSEY 08857 |
|                                                                                                                                                                                                                        | A-2                                                                                  | NEW LINE NETWORKS ANTENNA MOUNTING SECTIONS AND EQUIPMENT PLATFORM DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MINIMUM SIDE                                                                       | NA                                                                                    | NA                            | NA                                                                                                                                     | CONTACT :       | LISA OLESKY<br>732-607-2828 (EXT. 139)                                              |
|                                                                                                                                                                                                                        | A-3                                                                                  | SPRINT ANTENNA MOUNTING SECTIONS AND EQUIPMENT SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MINIMUM REAR                                                                       | NA                                                                                    | NA                            | NA                                                                                                                                     | APPLICANT:      | SUBCARRIER COMMUNICATIONS INC<br>139 WHITE OAK LANE<br>OLD BRIDGE, NEW JERSEY 08857 |
|                                                                                                                                                                                                                        | C-1                                                                                  | CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MINIMUM LOT DEPTH                                                                  | NA                                                                                    | NA                            | NC                                                                                                                                     | CONTACT:        | LISA OLESKY<br>732-607-2828 (EXT. 139)                                              |
| SE-1                                                                                                                                                                                                                   | SOIL EROSION & SEDIMENT CONTROL AND STORMWATER<br>MANAGEMENT PLAN, NOTES AND DETAILS | BUILDING HEIGHT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 35 FT                                                                              | NA                                                                                    | NC                            | TOWNSHIP CERTIFICATION                                                                                                                 |                 |                                                                                     |
| GENERAL NOTES                                                                                                                                                                                                          |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | APPROVED THIS _____ DAY OF _____ 20____                                                                                                |                 |                                                                                     |
| 1. THE LOCATION OF PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND<br>APPROVAL OF THE RESPECTIVE UTILITY COMPANIES AND MAY NEED TO BE RELOCATED.                                                                      |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | CHAIRMAN _____                                                                                                                         |                 |                                                                                     |
| 2. THE PROPOSED FACILITY IS UNMANNED. OCCUPANCY IS LIMITED TO PERIODIC VISITS BY<br>TOWER TENANTS FOR ROUTINE MAINTENANCE AND INSPECTION APPROXIMATELY ONCE<br>OR TWICE A MONTH. THEREFORE NO NEW PARKING IS PROPOSED. |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | SECRETARY _____                                                                                                                        |                 |                                                                                     |
| 3. POTABLE WATER AND SANITARY SEWER SERVICES ARE NOT REQUIRED OR PROPOSED<br>FOR THE NEW FACILITY.                                                                                                                     |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | TOWNSHIP ENGINEER _____                                                                                                                |                 |                                                                                     |
| 4. ONLY TASK LIGHTING IS PROPOSED.                                                                                                                                                                                     |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               |                                                                                                                                        |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      | N.J. ENGINEERING CERTIFICATE OF<br>AUTHORIZATION No. 24GA28118200                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                    | I CERTIFY THAT THESE PLANS HAVE BEEN<br>PREPARED UNDER MY SUPERVISION                 |                               | TITLE SHEET                                                                                                                            |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      | E 2 PROJECT MANAGEMENT LLC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |                                                                                       |                               | DRAWING ISSUE STATUS CURRENTLY -<br>A- ISSUED FOR PRELIMINARY REVIEW<br>B- (SPECIFY) _____<br>C- (SPECIFY) _____<br>D- (SPECIFY) _____ |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      | 87 HIBERNIA AVENUE<br>ROCKAWAY, N.J. 07866<br>PHONE: (973) 299-5200<br>FAX: (973) 299-5059<br>www.E2PM.com                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                    |  |                               | SITE NAME:<br>WANAQUE TOWER                                                                                                            |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      | THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL<br>CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH<br>ACT OF 1978 AND ALL RULES AND REGULATIONS THEREOF APPROPRIATE. THIS DRAWING AND THE<br>DESIGN FEATURES OR CONSTRUCTION DISCLOSED ARE PROPRIETARY TO E2 PROJECT MANAGEMENT<br>LLC AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. SHALL<br>NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST AND SHALL BE RETURNED UPON REQUEST. |                                                                                    | JAMES C. MURAWSKI P.E. NJ24GE04738200<br>REGISTERED PROFESSIONAL ENGINEER             |                               | DRAWING NO.<br>T-1                                                                                                                     |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | SCALE: AS SHOWN                                                                                                                        |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | SHEET NO: 1 OF 10                                                                                                                      |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | PROJECT #: P-18-01-012                                                                                                                 |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | PRINT DATE: 5/16/18                                                                                                                    |                 |                                                                                     |
|                                                                                                                                                                                                                        |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                    |                                                                                       |                               | FILE: M:\PROJECTS\TELECOM\SUBCARRIER\WANAQUE\DRAWINGS\ZD-<br>FILE: WANAQUE HIGHLANDS ZD REV D.DWG                                      |                 |                                                                                     |



PER SURVEY



ENLARGED SITE

GRAPHIC SCALE



(IN FEET)  
1 inch = 10 ft.

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|  | SH       | JS      |
|  | DRAWN BY | CHK. BY |




**SUBCARRIER COMMUNICATIONS**  
www.subcarrier.com

N.J. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 24GA28118200

**E 2 PROJECT MANAGEMENT LLC**

87 HIBERNIA AVENUE  
ROCKAWAY, N.J. 07866  
PHONE: (973) 299-5200  
FAX: (973) 299-5059  
www.E2PM.com



THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPROPRIATE. THIS DRAWING AND THE DESIGN FEATURES OR CONSTRUCTION DISCLOSED ARE PROPRIETARY TO E2 PROJECT MANAGEMENT LLC AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. SHALL NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST AND SHALL BE RETURNED UPON REQUEST.

I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

JAMES C. MURAWSKI P.E. NJ24GE04738200  
REGISTERED PROFESSIONAL ENGINEER

**ENLARGED SITE PLAN  
PHASE I & 2**

SITE NAME: **WANAQUE TOWER**

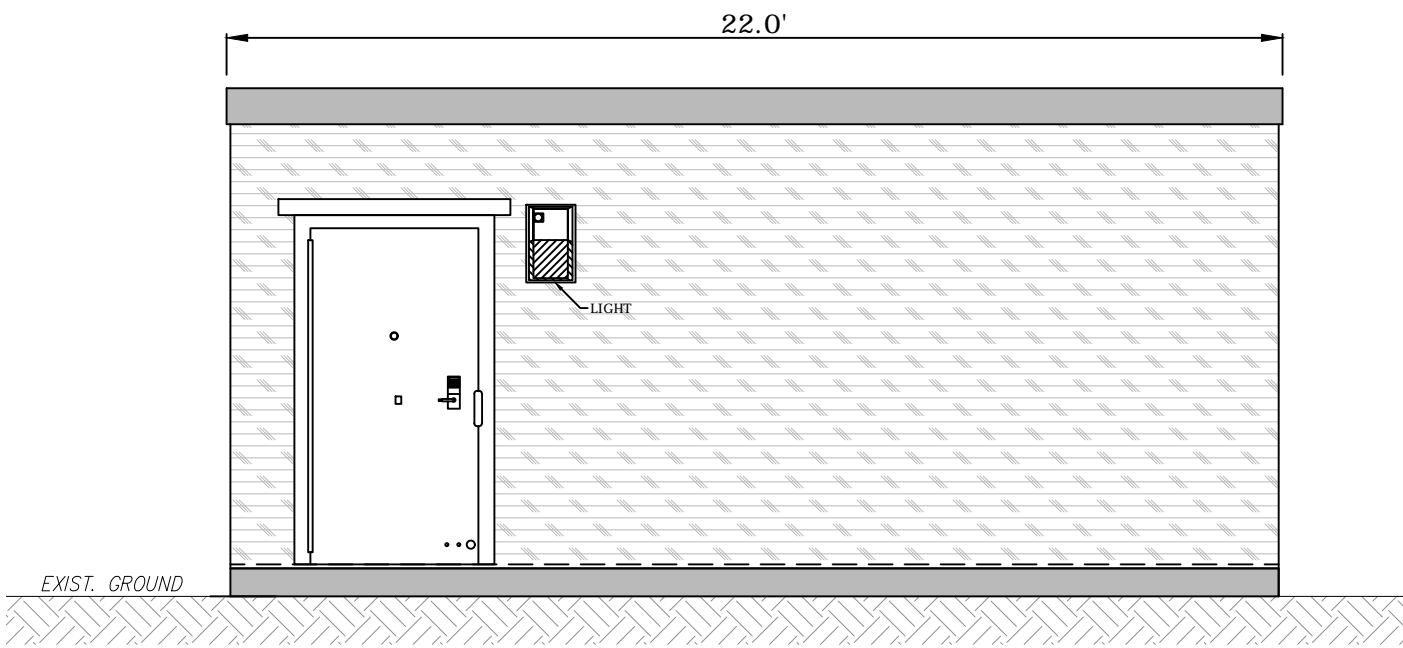
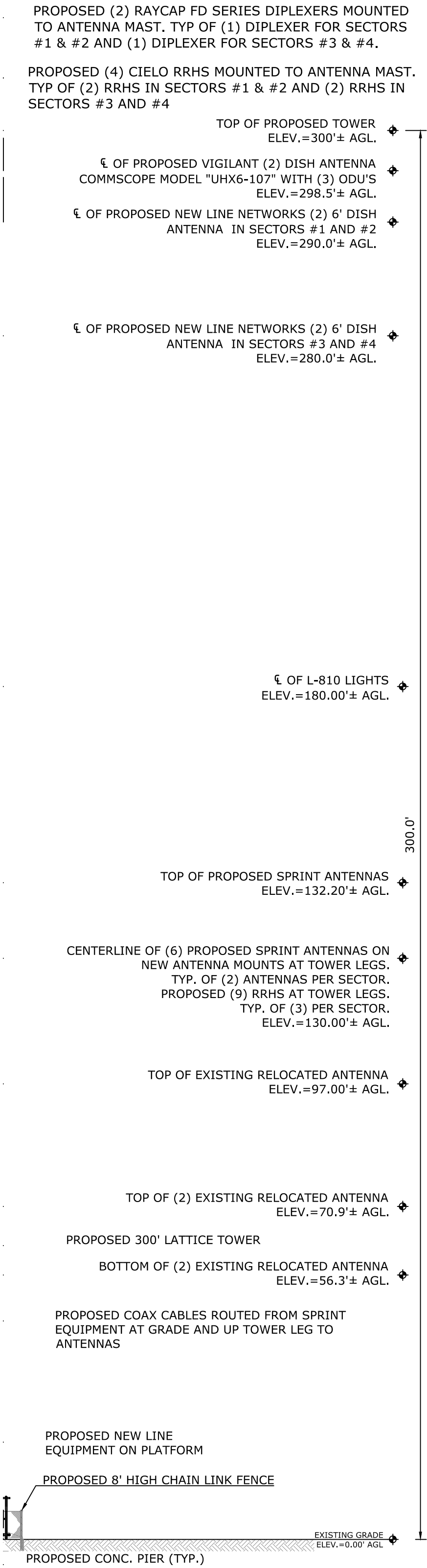
1 SKYLINE DRIVE, WANAQUE,  
PASSAIC COUNTY, NEW JERSEY 07465  
BLOCK: 250 LOT: 1

DRAWING ISSUE STATUS CURRENTLY - **D**

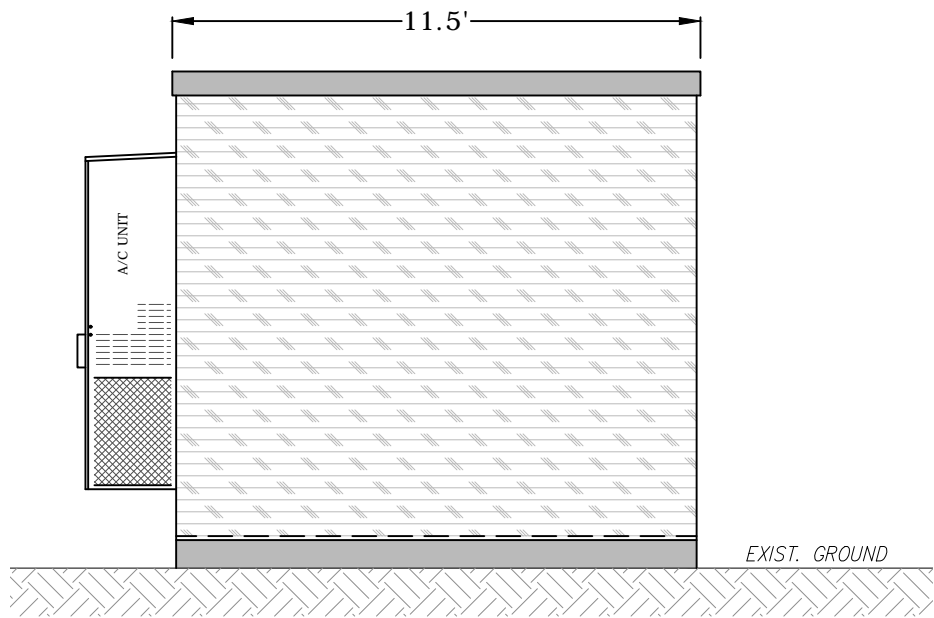
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B- (SPECIFY)  
C- (SPECIFY)  
D- (SPECIFY)

FIRST ISSUE: 2/20/18  
DRAWN BY: SH  
CHECKED BY: JS  
SCALE: AS SHOWN

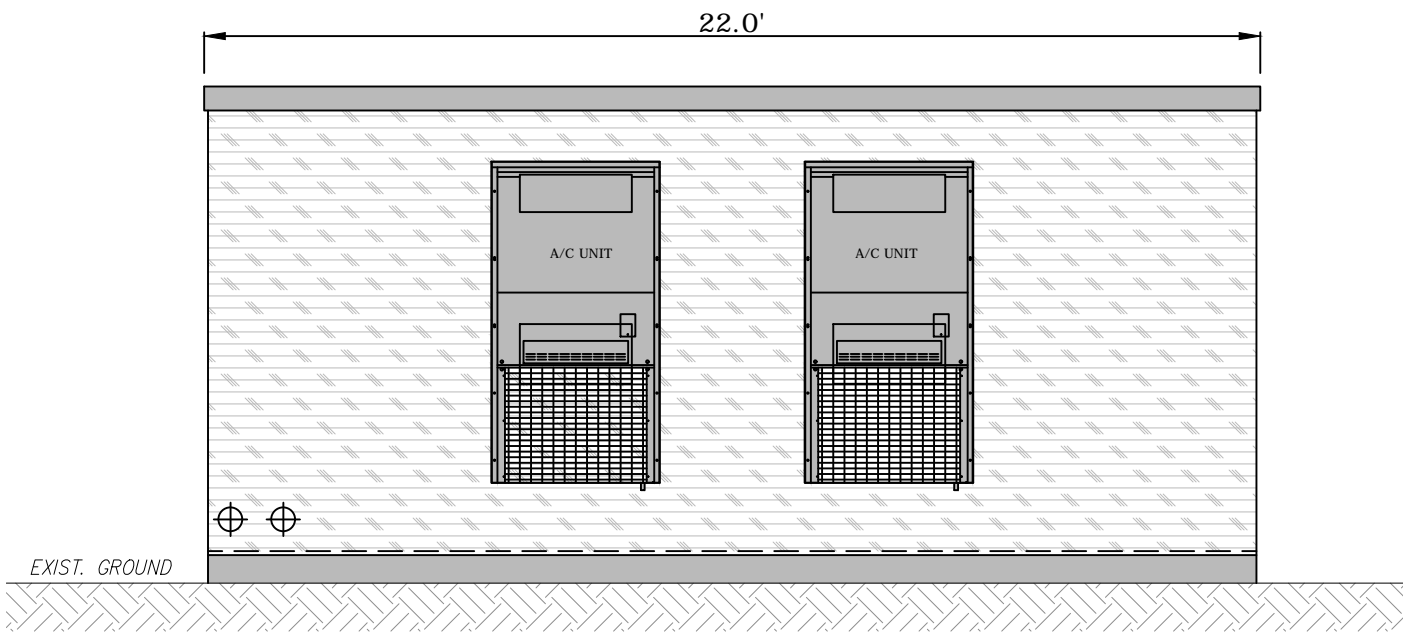
DRAWING NO. **SP-2**  
SHEET NO: 4 OF 10  
PRINT DATE: 5/16/18  
PROJECT #: P-18-01-012  
FILE: M:\PROJECTS\TELECOM\SUBCARRIER\WANAQUE\DRAWINGS\2D\ WANAQUE HIGHLANDS 2D REV D.DWG



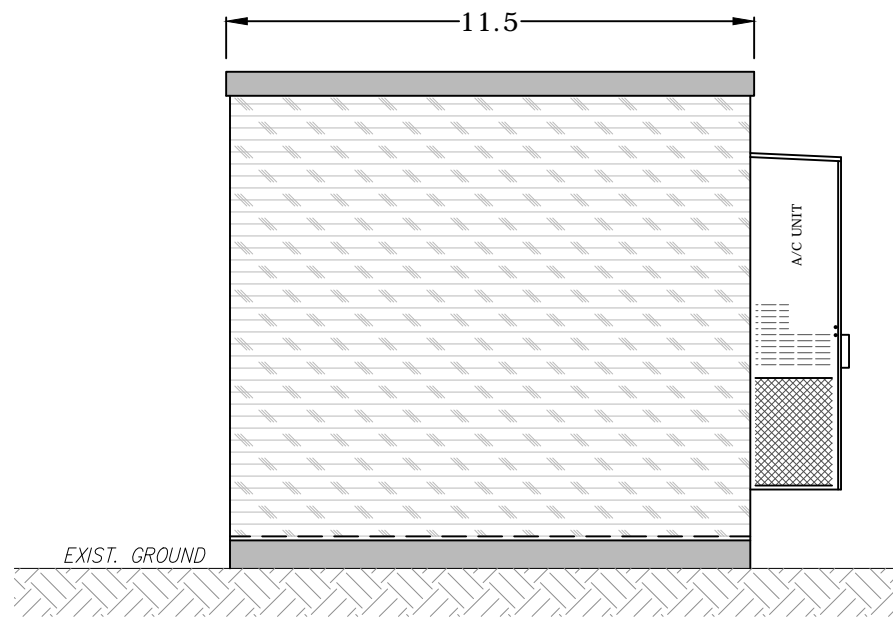
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E-1 SCALE: 3"=1'-0"



3 EAST SHELTER ELEVATION  
E-1 SCALE: 3"=1'-0"

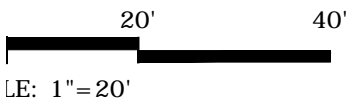


4 SOUTH SHELTER ELEVATION  
E-1 SCALE: 3"=1'-0"



5 WEST SHELTER ELEVATION  
E-1 SCALE: 3"=1'-0"

ELEVATION



|  |          |         |
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|  | SH       | JS      |
|  | DRAWN BY | CHK. BY |



N.J. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 24GA28118200  
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ROCKAWAY, N.J. 07866  
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I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

JAMES C. MURAWSKI P.E. NJ24GE04738200  
REGISTERED PROFESSIONAL ENGINEER

ELEVATIONS PLAN

SITE NAME: WANAQUE TOWER

1 SKYLINE DRIVE, WANAQUE,  
PASSAIC COUNTY, NEW JERSEY 07465  
BLOCK: 250 LOT: 1

DRAWING ISSUE STATUS CURRENTLY -  
A- ISSUED FOR PRELIMINARY REVIEW  
B- (SPECIFY)  
C- (SPECIFY)  
D- (SPECIFY)

FIRST ISSUE: 2/20/18  
DRAWN BY: SH  
CHECKED BY: JS  
SCALE: AS SHOWN  
PROJECT #: P-18-01-012  
FILE: M:\PROJECTS\TELECOM\SUBCARRIER\WANAQUE\DRAWINGS\2D  
DRAWING NO. E-1  
SHEET NO: 5 OF 10  
PRINT DATE: 5/16/18

D

## Bibliography

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### Bing.com

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### Dalton, Richard

- 2003 *Physiographic Provinces of New Jersey*. New Jersey Geological Survey, Trenton, New Jersey.

### Kraft, Herbert

- 1977 Archaeological and Historical Survey of the Proposed Sanitary Sewerage Expansion Program for the Borough of Wanaque, Passaic County, New Jersey. Report on file, New Jersey Historic Preservation Officer, Trenton, New Jersey. PAS E 71.
- 1980 Supplement to the Stage IA Survey of the Wanaque Borough Sewerage Authority Sanitary Sewerage Expansion Program in the Haskell and Midvale Areas of Wanaque Borough, Passaic County, New Jersey. Report on file, New Jersey Historic Preservation Officer, Trenton, New Jersey. PAS E 71a.

### National Environmental Title Research (NETR)

- 2018 Aerial Images. Available online at [www.historicaerials.com](http://www.historicaerials.com).

### Natural Resource Conservation Service (NRCS)

- 2018 New Jersey Soils Data, GIS Geodatabase. United States Department of Agriculture, Natural Resources Conservation Service, Washington, D.C.

### New Jersey Geological Survey (NJGS)

- 2007 Bedrock Geology GIS Data. New Jersey Department of Environmental Protection, New Jersey Geological Survey, Trenton, New Jersey.
- 2008 Surficial Geology GIS Data. New Jersey Department of Environmental Protection, New Jersey Geological Survey, Trenton, New Jersey.

### New Jersey Historic Preservation Office Files.

Including NJ DEP's NJ GeoWeb. Accessed March, 2018.

### United States Department of Agriculture (USDA)

- 1930 Aerial Images. Available at <http://geodata.state.nj.us/imagerywms/BlackWhite1930?>

### United States Geological Survey

- 1995 7.5' Quadrangle: Ramsey, NJ Quadrangle 15 Minute Series, United States Department of the Interior, USGS, Reston, VA.
- 1995 7.5' Quadrangle: Wanaque, NJ Quadrangle 15 Minute Series, United States Department of the Interior, USGS, Reston, VA.



---

**Marianne Walsh**  
**Senior Architectural Historian**

---

**YEARS OF EXPERIENCE: 19+ years**

**YEARS WITH E2 Project Management: 9 years**

**TECHNICAL SPECILITIES**

*Section 106 and NJ Register of Historic Places Act - Compliance Services; Cultural Resource Surveys*

**EDUCATION**

*University of Pennsylvania, Philadelphia, PA*  
**M.S. Historic Preservation, 1998**

*Penn State University, State College, PA*  
**B.A. Fine Art, 1992**

**PROFESSIONAL REGISTRATIONS / AFFILIATIONS / TRAINING**

- "CRM Essentials". New Jersey State Historic Preservation Office, Trenton, NJ.
- "Section 106 Essentials". Advisory Council for Historic Preservation, Washington, DC.
- "Advanced Section 106". Advisory Council for Historic Preservation, Washington, DC.
- "Historic Bridges – Identification, Analysis & Methods for Preservation". New Jersey Department of Transportation, Trenton, NJ.
- New Jersey Highlands Historical, Cultural, Archaeological & Scenic Resources Technical Advisory Committee (TAC); 2015-2016
- New Jersey Builders Association Highlands Subcommittee, 2015-2016

**QUALIFICATIONS**

For over 19 years, Ms. Walsh has provided Section 106 and NJ Register of Historic Places Act-compliance services associated with a multitude of projects including county and municipal roadway improvement projects, bridge replacement projects, and wireless communications. Services provided include completion of Section 106-required Cultural Resource Surveys for all projects with Federal or NJ state involvement. Ms. Walsh is considered meeting the Secretary of the Interior's (SOI) Standards and Guidelines for Architectural History. Ms. Walsh also served in a regulatory capacity at the NJ SHPO for seven years reviewing NJ Transit infrastructure projects. Projects included rehabilitations, restorations, Americans with Disabilities Act (ADA) improvements, new construction, sales and leases on NJ Register and National Register of Historic Places (NRHP) - listed and eligible structures, buildings, and railroad corridors.

**PROFESSIONAL HISTORY**

**E2 Project Management, LLC, Rockaway, NJ - Senior Architectural Historian - 2009 to Present**

Prepares federally mandated compliance documents for major telecommunication carriers. The work includes architectural surveys, archival research and Section 106 reviews for telecommunications projects, including preparation of 620 and 621 forms. She works closely with the NJ State Historic Preservation Office (SHPO) and with the Preservation Officer at the Federal Communications Commission (FCC). Prepares historic compliance documentation for hundreds of telecommunications projects across Northern and Central NJ and Southern NY and NYC.

**NJ State Historic Preservation Office (SHPO), Trenton, NJ - Historic Preservation Specialist – 2000 - 2007**

While at the SHPO, Ms. Walsh was the lead reviewer for all of NJ Transit's projects which required State or Federal regulatory compliance. Over two dozen stations requiring ADA (Americans with Disabilities Act) compliance were under her review including Newark's Broad Street Station, Madison Station, Morristown Station, the Newark City Subway, and South Orange Station. These projects involving historic properties often over a century old and contributing to New Jersey's significant transportation history, included ramp construction, platform and restroom alterations, lighting rehabilitation and overall site improvements among many other requirements and changes. Ms. Walsh also reviewed numerous aspects of the \$40 million Improvements Program at Newark Penn Station as it neared its completion in 2007.

As part of a project team, Ms. Walsh consulted with the Federal Transportation Administration (Region II) on several major NJ Transit multi-state planning initiatives including the Lackawanna Cut-off Commuter Rail Project and the Access to the Region's Core (Commuter Rail Tunnel under the Hudson River) Project. Coordination among the respective SHPO's was regularly undertaken. The in-state MOM (Middlesex, Ocean, Monmouth) Rail Line and the Northern Branch Light Rail planning projects required local and County-level consultation.

The improvement and rehabilitation of many NJ Transit-owned bridges and railroad corridors was an ongoing effort due to the NJT's commitment and responsibility for the safety of passengers and the protection of equipment. As with NJ Transit's passenger railroad stations, much of NJT's infrastructure dates to eras of historical significance for New Jersey transportation history. The consultation and review for necessary improvements to NJ Transit's operations very often included the coordination with NJT and consulting engineers, architects, preservation consultants and outside local interested parties, all integral to the Section 106 process.

**Cultural Resource Consulting Group Inc. (CRCG), Highland Park, NJ - *Architectural Historian 1999 - 2000***

Primary responsibility was the research, writing, and preparation of cultural resource surveys for projects requiring compliance with Section 106. The company's clients included private developers and architects, as well as municipal and county infrastructure departments; acted as Project Manager for bridge investigations and documentation. Ms. Walsh served as Project Manager for dozens of bridge-related Cultural Resource Investigations, working closely with both officials at the local and county levels and NJ SHPO staff. In addition, Ms. Walsh was a co-surveyor and co-author of the City of Bayonne Historic Sites Survey prepared for the City of Bayonne and the Bayonne Historic Preservation Commission, July 2000. Prepared as a planning tool, this reconnaissance-level survey included the entire City of Bayonne and surveyed every building, structure, object, and streetscape over 50 years or older and recommended National Register-eligibility for 535 resources.

**Cultural Heritage Research Services Inc, (CHRS), North Wales, PA - *Historian - May 1998 to April 1999***

Primary responsibility was the background research necessary for completion of regulatory compliant documentation for various clients. The firm's clients included private developers and architects as well as local road departments and PENNDOT. The Lackawanna Industrial Highway (now the Robert P. Casey) in Lackawanna County, PA, was a project which intersected a historic, coal industry gravity railroad bed in numerous places along its alignment. Was a member of the research team that prepared the educational pamphlets, maps and video as components for the project mitigation.

***PROFESSIONAL EXPERIENCE***

**HABS Documentation: Verizon Wireless, Nemeth Farm, Franklin Township, Somerset County, New Jersey:** As mitigation for the installation of a new wireless telecommunications facility on a property located within a National Register-listed historic district, Historic American Building Survey (HABS) –quality documentation was required by the SHPO. Work included architectural survey and examination of 11 structures for construction history, architectural characteristics and significance; consultation of primary and secondary sources to compile a site history; interviews with appropriate persons associated with the history of the farm; and preparation of a complete report that was filed with the State Historic Preservation Office and local repositories.

**MT-21 Bridge, Locust Avenue over Claypit Creek, Monmouth County:** The Locust Avenue Bridge was a 5-span, riveted Warren Truss bridge that spanned the Claypit Creek, located within the Navesink Village Historic District. The bridge was individually eligible for listing in the National Register of Historic Places, as well as a contributing resource within the Navesink Village HD. The firm of CRCG was retained to provide a Cultural Resource Investigation, in compliance with Section 106, by the County of Monmouth, Department of Public Works. Ms. Walsh prepared the documentation necessary to re-evaluate and confirm the historical significance of the bridge and the HD; to assess the potential effects of the proposed replacement on historic resources; and to recommend measures to mitigate adverse effects.

**Various Telecommunications Clients, Various Locations, NJ, NY:** Clients include Verizon Wireless, Sprint, T-Mobile, and MetroPCS. Responsible for providing historic preservation services in connection with hundreds of FCC-permitted sites associated with the design and construction of wireless communications facilities located throughout the State of NJ and parts of NY. Services include cultural resource surveys, historic and modern data research, site investigations and photography, and completion of FCC-required Forms 620 and 621 for review and approval by the respective SHPOs. Memoranda of Agreement (MOAs) are drafted to resolve non-concurrences with the SHPO.

**LTE Improvements, Verizon Wireless, Various Locations, NJ:** E2PM represented Verizon Wireless on numerous LTE (Long Term Evolution) sites that involved the upgrade to existing telecommunications facilities across Northern and Central New Jersey. In the Spring of 2009, was involved in negotiations with the NJ HPO in advance of the completion of almost 200 individual Verizon Wireless LTE projects, in an effort to streamline the required Section 106 review process. Through the negotiations with the HPO, architectural survey and document drafting timelines were reduced, allowing Section 106-compliant documents to be reviewed and approved in a much smaller timeframe, while maintaining the historical integrity of any cultural resources involved. Over 200 sites were completed by E2PM staff and reviewed by the HPO within a 6 month time period.

**Riverside Substation, Public Service Electric & Gas Co., Riverside Township, Burlington County, NJ:** (PSE&G) proposed the demolition of a 100-year old electrical substation building constructed circa 1914 and expanded in 1928. Conducted the necessary cultural resources studies to assist in the identification of cultural resources present within the Project's area of potential effects (APE) and to assess any potential adverse effects to National Register of Historic Places (NRHP) or New Jersey Register of Historic Places (NJRHP) listed or eligible properties.

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**Scott Wieczorek, RPA**  
**Senior Archaeologist / Project Manager**

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**YEARS OF EXPERIENCE:** 20+ years

**YEARS WITH E2 Project Management:** < 1 years

**TECHNICAL SPECIALTIES**

*Urban, industrial, historic, and prehistoric archaeology; architectural history; seriation studies*

**EDUCATION**

*Monmouth University, West Long Branch, NJ*

**M.A. History 2003**

*Monmouth University, West Long Branch, NJ*

**B.A. Anthropology 2000**

**PROFESSIONAL REGISTRATIONS / AFFILIATIONS / TRAINING**

- Register of Professional Archaeologists (RPA)
- 40 Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training (OSHA CFR 1910.120) 2016
- Section 106 Essentials 2004
- OSHA 8-Hour Supervisor 2011
- OSHA 6-Hour Trenching Competent Person 2009
- Section 106 Essentials of the National Historic Preservation Act 2007
- CPR and AED for the Community and Workplace 2010
- Basic First Aid for the Community and Workplace 2010

**QUALIFICATIONS**

Mr. Wieczorek is a registered RPA archaeologist experienced in archaeology and architectural history. He designs and conducts cultural resources investigations for projects undertaken in New York, New Jersey, Maryland, Delaware and Pennsylvania. He has served as a Principal Investigator for several major cultural resources and engineering firms on all phases of archaeological investigations, and specializes in the analysis of prehistoric, historic and industrial artifacts and sites, as well as in the analysis of historic structures. Over the course of his career, he has directed cultural resources surveys in accordance with Section 106 of the National Historic Preservation Act, the National Environmental Policy Act, among other legislative frameworks.

**PROFESSIONAL HISTORY**

**E2 Project Management, LLC, Rockaway, NJ – Cultural Resources Division Manager, 2017-Present**

Design, implementation, and management of cultural resources investigations at all levels of study: Phase IA Documentary Review and Sensitivity Assessment; Phase IB Subsurface Survey; Phase II National Register of Historic Places Eligibility Evaluation; Phase III Data Recovery/Mitigation; and Historic Architectural Surveys at project locations in New York, New Jersey, and Pennsylvania. Projects are conducted in compliance with the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), Section 106 regulations, Archaeological Resources Protection Act (ARPA), Department of the Interior Director's Order # 12, and state/local regulations (e.g. New Jersey Register of Historic Places Act Rules, New Jersey Freshwater Wetlands Permitting, New Jersey Highlands Act, Pennsylvania History Code, New Jersey Executive Order 215, New York City CEQR, New York State SEQRA), and consultation with Tribal, SHPO, and NPS representatives.

**Dewberry Engineers, Parsippany, NJ — Cultural Resources Specialist, 2013-2015**

Serve as the Historic Preservation Lead for more than 10,000 Tier II site-specific Environmental Assessments conducted under the National Environmental Policy Act (NEPA) to provide United States Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds for Hurricane Sandy victims. Process involved consultations and coordination with Federal, State and Local Agencies, generating Determinations of Eligibility for more than 10,000 single-family residential, and 300 multi-family residential properties in all five boroughs of New York City, developing GIS mapping, designing end-product mapping, training junior staff, and supervising a team of Historic Preservation professionals including Architectural Historians and Archaeologists. Served as the GIS Lead for the Environmental and Historic Preservation (EHP) team, and archaeological monitor for the post-Hurricane Sandy New Jersey Waterway Debris cleanup project. Process involved the development of GIS databases of potential historic properties, spatial analysis of proposed work with regard to Threatened and Endangered (T&E) Species and potential Historic Properties, develop GIS layers and paper maps for field and reporting use, geospatially tracking project progress based upon contractor provided shapefiles. Also served as an architectural historian and archaeologist for the New Jersey RREM

program for Environmental Assessments conducted under the National Environmental Policy Act to provide United States Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) funds for Hurricane Sandy victims.

**Richard Grubb & Associates, Inc., Cranbury, NJ — Senior Archaeologist / Principal Investigator, 2011-2012**

Designed, implemented, supervised, and/or conducted more than 30 Phase I through Phase III Archaeological Investigations in New York, New Jersey, Pennsylvania, Ohio, Delaware, and Maryland; Conducted investigations in various legislative environments for a variety of clients in diverse market sectors including Energy, Federal, Municipal, Private Industry, Telecommunications, and Transportation; Provided Geographic Information Services (GIS), historical research, documentation for historic architectural resources as well as prepared report graphics for additional projects; Developed and managed budgets, prepared proposals, coordinated with clients, and planned project field activities.

**The Louis Berger Group, Inc., Morristown, NJ — Archaeologist / Principal Investigator, 2006-2011**

Designed, implemented, supervised, and/or conducted more than 40 Phase I through Phase III Archaeological Investigations within the New York / New Jersey / Pennsylvania region; Conducted investigations have been conducted in various legislative environments for a variety of clients in diverse market sectors including Energy, Federal, Municipal, Private Industry, Telecommunications, and Transportation; Provided analysis and documentation for historic architectural resources as well as report graphics for additional projects; Provided Geographic Information Services (GIS), historical research, documentation for historic architectural resources as well as prepared report graphics for additional projects; Developed and managed budgets, prepared proposals, coordinated with clients, and planned project field activities.

**Independent Historical Consultant, 2000-2006**

Provided historical and preservation-related services to a variety of public, private, and governmental clients.

**Various CRM Firms and Archaeological Field Schools — Field Technician/Field Team Leader, 1996-2003**

Field technician and field team leader for archaeological field schools and cultural resources firms. Projects included Phase I through Phase III archaeological excavations and surveys.

**PROFESSIONAL EXPERIENCE**

**Photographic Documentation, 250 Proposed Small Cellular Communication Sites throughout New Jersey. Project Manager.** Provided project oversight, GIS mapping support, public outreach, and technical guidance for the photo-documentation of 250 small-cell telecommunication sites throughout Union, Essex, Bergen, and Hudson Counties, New Jersey. Project Ongoing.

**Phase I Archaeological Investigation, Proposed PSE&G Brunswick to Trenton 230kV Transmission Line, Middlesex and Mercer Counties, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase I cultural resources survey in support of proposed transmission line improvements in Middlesex and Mercer Counties, New Jersey. Project Ongoing.

**Phase I Archaeological Investigation, Proposed PSE&G Trenton to Burlington 230kV Transmission Line, Middlesex and Mercer Counties, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase I cultural resources survey in support of proposed transmission line improvements in Middlesex and Mercer Counties, New Jersey. Project Ongoing.

**Phase IB Archaeological Investigation, Proposed Wayne Day Care Center, Wayne, Passaic County, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase IB archaeological survey in support of NJDEP Wetlands Permit Application for a proposed new day care center in Wayne, Passaic County, New Jersey. Project Ongoing.

**Phase IA Archaeological Assessment, Proposed Wanaque Tower Replacement, Wanaque, Passaic County, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase IA archaeological assessment in support of a proposed radio tower replacement in Wanaque Borough, Passaic County, New Jersey.

**Phase IA Archaeological Assessment, Proposed Cellular Tower, Pittstown, Hunterdon County, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase IA archaeological assessment in support of a proposed new cellular tower in Pittstown, Hunterdon County, New Jersey.

**Phase IA Archaeological Assessment, Proposed Cellular Tower, Wantage, Sussex County, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a Phase IA archaeological assessment in support of a proposed new cellular tower in Wantage, Sussex County, New Jersey.

**Cultural Resources Screening, Proposed PSE&G Culvert Upgrades, Cumberland County, New Jersey. Principal Investigator-Archaeology.** Planned, coordinated and implemented a cultural resources screening in support of proposed culvert upgrades in Cumberland County, New Jersey. Project Ongoing.



**Cellular Tower Archaeological and Cultural Resource Services, NJ. Principal Investigator**, 25 Cultural Resource Screening, Phase I, and Phase II archaeological investigations in advance of construction of proposed new monopole cellular towers, including Phase I/II Archaeological Investigation, Proposed Cellular Monopole, Cherry Hill, New Jersey, and Phase I/II Archaeological Investigation, Proposed Cellular Monopole, Medford, New Jersey. Included background and site file research, and fieldwork. 2007-2008.

**Phase IB Archaeological Survey, Wehrlen Brothers Marina Improvement Project, Brick Township, Ocean County, NJ. Principal Investigator** responsible for Phase IB archaeological survey of 2.59-acre marina property proposing improvements following Hurricane Sandy. Included shovel testing and the analysis of historic artifacts within the property.

**Phase I/II Cultural Resource Investigation, Camden BRAC, Lakeland # 2 Site, Gloucester Township, Camden County, NJ. Principal Investigator**, Phase I/II archaeological investigation in advance of proposed BRAC action. Included background research and fieldwork. For the U.S. Army. 2010.

**Phase I/II Cultural Resource Investigation, Camden BRAC, Gloucester and Winslow Townships, Camden County, NJ. Principal Investigator**, Phase I/II Archaeological investigation in advance of proposed BRAC action. Included background research and fieldwork. For the U.S. Army. 2008-2009.

**Phase IA Archaeological Assessment, 77th Readiness Command, Atlantic, Bergen, Camden, Hudson, Mercer, Middlesex and Monmouth Counties, NJ. Principal Investigator**, archaeological assessment of eight United States Army Reserve Command Readiness Centers in seven New Jersey counties. Included historical and contextual background research, site file searches at the New Jersey State Museum and New Jersey Historic Preservation Office, and pedestrian reconnaissance and photo documentation of the project areas. For the U.S. Army. 2007.

**Phase I Cultural Resource Survey for Proposed Sentinel Williams/TRANSCO Pipeline Mountain View Loop, Hillsborough and Montgomery Townships, Somerset County, NJ. Project Archaeologist** cultural resource survey of 3.78-mile proposed pipeline corridor as part of FERC permitting process and Section 106 compliance. Investigation identified one Middle to Late Archaic period prehistoric site. For Williams/Transco, Houston, Texas. 2006.

**Phase III Data Recovery, PSE&G George Brown Historic Farm Site, Berkeley Heights, NJ. Principal Investigator** for the archaeological data recovery of a multi-component historic archaeological site which was to be impacted by the proposed construction of new monopole electrical transmission towers. Tasks included the full implementation and reporting of the archaeological data recovery, supervision of field personnel, conducting of background research, artifact analysis, and the preparation of report graphics.

**Project Management Contract for Superstorm Sandy Waterway Debris Removal, New Jersey Department of Environmental Protection (NJDEP), New Jersey. Archaeologist**. Responsible for providing support and review for terrestrial resources as well as supporting the Environmental and Historic Preservation (EHP) Geographic Information Systems (GIS) mapping program. Daily activities include updating project tracking maps, and generating site-specific and general EHP mapping. Additional responsibilities include managing Global Positioning Systems (GPS) data collection, processing, training and support for EHP field staff. Dewberry is responsible for supporting the NJDEP in planning and managing a state-level, regionally organized contract to remove and monitor debris from waterways, while maximizing FEMA reimbursement under the Public Assistance Program.

**RREM Contract for Superstorm Sandy Recovery, New Jersey Department of Environmental Protection (NJDEP), New Jersey. Archaeologist and Architectural Historian**. Responsible for cultural resources reviews in support of NEPA permitting for 50+ storm-damaged properties receiving HUD funding in response to Hurricane Sandy.

**Archaeological Monitoring, Essex County Riverfront Park, Newark, NJ. Principal Investigator-Industrial Archaeology**, archaeological monitoring for the installation of subsurface drainage pipes and manholes, electric light poles, and electrical conduit within a formal industrial property located along the Passaic River in Newark, New Jersey. Monitoring identified the subsurface remnants of foundations associated with various industrial buildings located within the property as well as subsurface remnants of the National Register listed Morris Canal prism which extended through the project area.

**Phase III Archaeological Data Recovery, Newark Riverfront Park, Newark, NJ. Principal Investigator-Industrial Archaeology**, for the archaeological data recovery of the National Register eligible Balbach Smelting and Refining Works site, and portions of the National Register listed Morris Canal slated to be impacted by the construction of a new City park. Tasks included the full implementation and reporting of the archaeological data recovery, supervision of field personnel, conducting of background research, artifact analysis, and the preparation of report graphics.

**Archaeological Monitoring, Combined Sewer Overflow (CSO) Sewer Upgrades, Hoboken, NJ. Principal Investigator**, archaeological monitoring for the replacement and upgrade of portions of the National Register eligible Hoboken Sewer System. Monitoring identified and documented the subsurface remnants of and construction technology pertaining to intact wooden box sewers, and oval brick sewers located through portions of Hoboken, New Jersey.

**Archaeological Monitoring, Demolition of the Gloucester City Water Works Reservoir, Camden County, NJ. Principal Investigator-Industrial Archaeology**, archaeological monitoring of circa 1873 National Register-listed resource, and identification and photo documentation of its components. For the City of Gloucester. 2009.

**Phase I/II Eligibility/Effects, County Route 571, West Windsor, Mercer County, NJ. Principal Investigator**, Phase I/II archaeological investigation in advance of proposed road improvements. Included background research and fieldwork. For the County of Mercer. 2008.

**Phase IB Cultural Resource Assessment, Burlington Sod Farm, Springfield Township, Burlington County, NJ. Principal Investigator, Historic Architecture Analyst** responsible for Phase IB archaeological assessment of 640-acre agricultural property slated to become new county fairground. Included shovel testing and the analysis of three historic vernacular farm homes on the property. For the Freeholders of Burlington County. 2008.

**Phase IA/IB Archaeological Investigation, Southern Water Pollution Control Facility Expansion Project, Stafford Township, NJ. Principal Investigator**, archaeological assessment and subsurface survey conducted as part of the permitting process for loan application submitted to the New Jersey Department of Environmental Protection Environmental Infrastructure Trust. Included historical and contextual background research, archaeological site file and historic property searches at the New Jersey State Museum and the New Jersey Historic Preservation Office, and pedestrian reconnaissance and subsurface survey. For the Ocean County Utilities Authority. 2007.

**Phase IA Cultural Resource Assessment, Burlington Sod Farm, Springfield Township, Burlington County, NJ. Project Archaeologist**, Phase IA archaeological assessment of 640-acre agricultural property slated to become new county fairground. Included historical and cartographic research and identification and analysis of past disturbances and/or prior settlement and land use. For the Freeholders of Burlington County. 2007.

**Phase III Archaeological Data Recovery, Garden State Parkway, Int. 9-11, Cape May Court House, NJ. Principal Investigator** for the archaeological data recovery of four identified prehistoric, historic, and/or multi-component archaeological sites which were to be impacted by the Proposed Garden State Parkway Interstate 9-11 Project in Cape May Court House, New Jersey. Tasks included the full implementation and reporting of the archaeological data recovery, supervision of field personnel, conducting of background research, artifact analysis, and the preparation of report graphics.

**Phase I/II Archaeological Investigations, New Jersey Turnpike Authority, Interchanges 6 to 9 Widening, Brookland Wetland Mitigation Site, Monroe Township, NJ. Principal Investigator** for the archaeological investigation of the proposed Brookland Wetland Mitigation Site to be impacted by the ongoing New Jersey Turnpike Widening program. Tasks included the full implementation and reporting of the archaeological investigation, field work and research design, supervision of field personnel, conducting of background research, artifact analysis, and the preparation of report graphics.

**Morris County Cultural and Heritage Commission. Historical Consultant**, Transcribed and edited circa 1890-1940 Weatherbook of Gentleman Farmer Charles Foster into an MS/Access database with digital photographs. 2004-2006.

**Ocean County Historical Society. Historical Consultant**, Assisted in proofreading and transcribing of federal census data on Monmouth and Ocean counties to be incorporated in a research Webpage. Gave presentation on Historic Preservation, Historic Tax Credits, and Adaptive Use. As an Intern developed an artifact management and tracking system for the Ocean County Historical Society's artifact storage room. Modified the society's accessioning system and developed artifact classification system to use in digital database. 2004.

**Ocean County Cultural and Heritage Commission. Historical Consultant**, Advised Commission on historic preservation and National Register of Historic Places nomination preparation for historic property in Forked River, New Jersey. 2004.

**Phase IA Cultural Resource Assessment, Trenton-Robbinsville Airport, Robbinsville, Mercer County, NJ. Principal Investigator** responsible for Phase IA archaeological assessment in advance of proposed improvements to the Trenton-Robbinsville Airport. Included historical and cartographic research, with identification and analysis of past disturbances and/or prior settlement and land use. 2008.

**Phase IA Cultural Resources Assessment and Phase IB Archaeological Investigation, Saddler's Run Watershed Restoration, Delaware Riverkeeper Network, Haddon Township, Camden County, NJ. Principal Investigator-Archaeology and Architectural History** for cultural resource assessment in advance of watershed restoration. Included NJHPO and NJSM site file searches, historical documentary and cartographic research in order to identify areas of archaeological sensitivity and historic properties located within the vicinity of the historic African American community of Saddlertown and Saddler's Woods. Also responsible for Phase IB archaeological assessment of several discontinuous work zones to be impacted by stream restoration project. Included shovel testing within and adjacent to an early nineteenth-century free African-American community. 2008.

**Phase I Archaeological Services, New Jersey Turnpike Authority, NJ Turnpike Interchanges 6-8A, Burlington, Mercer and Middlesex Counties, NJ. Principal Investigator**, Phase I archaeological investigations for the locations of planned wetland mitigation and detention basin sites and pipeline relocation areas associated with the proposed turnpike widening. To date, this project has resulted in the identification of more than ten historic and prehistoric archaeological sites. Background research and fieldwork. 2007-2010.

**Phase IA Sensitivity Assessment, Wetland Mitigation Site, New Jersey Turnpike Authority, Garden State Parkway Interchanges 9-11, Cape May Court House, NJ. Principal Investigator**, Phase IA archaeological investigation. Background research and fieldwork. 2010.

**Phase I Cultural Resource Survey, New Jersey Turnpike Authority, NJ Turnpike Widening of Interchanges 6 to 9, Gervasoni Farm Property, Robbinsville Township, Mercer County, NJ. Principal Investigator.** Phase I/II subsurface archaeological investigation and building material analysis for former farm. Identified one historic archaeological site, the Robbins Gervasoni Farm Site (28-Me- 374) but no significant associated archaeological deposits were encountered in project area. Under EO 215. 2009.

**Phase I Cultural Resource Survey, New Jersey Turnpike Authority, NJ Turnpike Widening from Interchanges 6 to 9, Appleby House Investigation, Chesterfield, Burlington County, NJ. Principal Investigator.** Phase IB subsurface archaeological survey and building material analysis of former toll house associated with the Bordentown and Crosswicks Turnpike between 1857 and 1901. Under EO 215. 2009.

**Phase I/II Eligibility/Effects, New Jersey Turnpike Authority, Garden State Parkway Interchanges 9-11, Cape May Court House, NJ. Principal Investigator.** Phase I/II archaeological investigation in advance of proposed improvements planned to eliminate signalized intersections. Background research and fieldwork. Five previously unrecorded prehistoric archaeological sites were recommended as eligible for the National Register of Historic Places. For the New Jersey Turnpike Authority. 2009.

**Screening Report, Route 21, Newark, New Jersey. Project Archaeologist,** cultural resource screening for improvements to Route 21 in Newark, NJ. Included historical and cartographic research, with identification and analysis of past disturbances and/or prior settlement and land use. For New Jersey Department of Transportation. 2006.

**Phase I Archaeological Assessment, United States Geological Survey, Natural Resources Conservation Service, Proposed Fish Ladder, Creskill, NJ. Principal Investigator.** Planned, coordinated and implemented a Phase I cultural resources survey in support of a proposed fish ladder in Bergen County, New Jersey.

**Phase I Archaeological Assessment, FEMA, Bridgeton Canal Repairs. Principal Investigator-Industrial Archaeology.** Planned, coordinated and implemented a Phase I cultural resources survey in support of proposed repairs to the historic Bridgeton Canal and Raceway, Bridgeton, Cumberland County, New Jersey.

**Phase I Archaeological Assessment, FEMA, Jersey City Water Supply and Sanitary Sewer Repairs. Principal Investigator.** Planned, coordinated and implemented a Phase I cultural resources survey in support of proposed repairs to the Jersey City Forced Sewer Main in Morris County.

**Phase I Archaeological Assessment, Proposed Wetland Mitigation Bank, Carlstadt, New Jersey. Principal Investigator.** Planned, coordinated and implemented a Phase I cultural resources survey in support of a proposed new wetland mitigation bank in Carlstadt, New Jersey.

**Phase I Archaeological Assessment, Forced Main Replacement, Piscataway, New Jersey. Principal Investigator.** Planned, coordinated and implemented a Phase I cultural resources survey in support of a proposed Forced sewer main in Middlesex County, New Jersey.

**Phase I Archaeological Assessment, Proposed Roadway Improvements, River Road, Garfield, New Jersey. Principal Investigator.** Planned, coordinated and implemented a Phase I cultural resources survey in support of proposed road improvements in Garfield, New Jersey.

**Historic American Engineering Record (HAER) Documentation, Route 130 Bridge over Raccoon Creek, Bridgeport, New Jersey. Principal Investigator-Architectural History.** Researched and prepared HAER documentation in support of the proposed replacement of the Route 130 Bridge over Raccoon Creek, Bridgeport, New Jersey.

**Historic American Building Survey (HABS) Documentation and National Register Nomination, Bellmawr Park, Bellmawr, New Jersey. Principal Investigator-Architectural History.** Researched and prepared HABS documentation in support of proposed Route 295 improvements in Bellmawr, New Jersey.

**National Register / New Jersey State Register Nomination and Review Defense, Maplewood Memorial Park, Maplewood, New Jersey. Principal Investigator-Architectural History.** Assisted with preparing NR/State Register nomination for Maplewood Memorial Park and defending the Nomination before the State Register Review Board.

**Archaeological Monitoring, Centerton Road Dam Replacement, Elmer, New Jersey. Principal Investigator-Industrial Archaeology.** Monitored the replacement of the Centerton Road Dam and identified the presence of a mid-nineteenth century mill and tail race on the downstream banks.

## **PAPERS AND PRESENTATIONS**

- Book Review, Closed Sea by Kent Mountford, in New Jersey History, Newark. Spring/Summer 2004.
- The Hunt for Red Oak Grove. The Scroll: Bulletin of the ocean County Historical Society. Toms River. April 2003.
- Phase I/II Archaeological Survey, merchants and Drovers Tavern (Site 28-UN-32). Contributing author with Richard Veit and Michael Gall. Report on file, New Jersey Historic Preservation Office, April 2003.

- The Ruins in the Woods: The History of the Legendary Pasadena Terra Cotta Company, Fact and Fiction. Informational brochure developed from Brendan T. Byrne State Forest. February 2003.
- Forgotten Clay Remembered in Ocean County: A Note on Current Research. Archaeological Society of New Jersey Newsletter. January 2003.
- Pasadena: A Forgotten Town that Never Was. The Scroll: Bulletin of the Ocean County Historical Society. October 2002.
- An Old Salty Tale. The Scroll: Bulletin of the Ocean County Historical Society. April 2002.
- A Seasoned History: An Archaeological and Historical Investigation of the Pennsylvania Salt Works of Toms River, NJ. Manuscript on file, Ocean County Historical Society. 2001.
- Cleaning off the Tarnish: A Historical Study of the Eustis Coach, Roxbury Massachusetts. Manuscript on file, Shirley-Eustis House Association. 2001.
- History Below: An Analysis of the Unprovenienced Collection retrieved from the Gardner Carriage House Excavation, Roxbury Massachusetts. Manuscript on file, Shirley-Eustis House Association. 2001.
- Through the Bottle Glass: A Cautionary Tale of Artifact Analysis. Archaeological Society of New Jersey Newsletter. January 2000.
- J.B. Tilton. The Scroll: Bulletin of the Ocean County Historical Society. April 1999.
- Murray Grove: A National Site Overlooked. Manuscript on file, Ocean County Historical Society. 1999.
- Of Myth and Brick: Examining the Legendary Pasadena Terra Cotta Company. Master's thesis. Department of History and Anthropology, Monmouth University. February 2003.
- Clay in the Pines: Deconstructing the Myth of the Pasadena Terra Cotta Company, Pasadena, New Jersey. Paper presented at Council for Northeast Historical Archaeology Conference in Wilmington, Delaware. October 2002.
- Conditions Assessment: Livermore Tomb, Mount Auburn Cemetery, Cambridge, Massachusetts. Paper presented to Mount Auburn Cemetery Association and Boston University Building Conservation Class. April 2001.

#### **GRANTS**

- Mini-grant from New Jersey Historical Commission to fund research and generation of National Register of Historic Places nomination for clay industry of Pasadena, New Jersey. October 2002.

AFFIDAVIT

State of New Jersey  
County of Middlesex

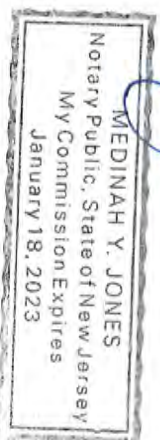
Greg Price, being duly sworn, says that (s)he is connected with **The Star Ledger**, a newspaper circulating in Atlantic, Bergen, Burlington, Cape May, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren Counties, New Jersey, and that a notice of which the annexed is a true copy was published on the following dates in said newspaper:

3/21/18

Greg Price

Sworn to before me this 27<sup>th</sup>  
day of March, 2018.

NOTARY PUBLIC



PUBLIC NOTICE

Subcarrier Communications, Inc. is proposing to construct an emergency services lattice tower that reaches an overall height of 300 feet above ground level at 1 Skyline Drive, Wanaque, Passaic County, NJ 07465. Public comments regarding potential effects from the site on historic properties may be submitted within 30 days from the date of this publication to: Marianne Walsh, E2PM, 87 Hibernia Avenue, Rockaway, NJ 07866, by email to: Marianne.walsh@e2pm.com, or phone: (973) 625-5600. Please refer to E2PM Tracking Number P-17-73-01.

3/21/18

\$31.00





# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Kelly Ruffel, Director  
Passaic County  
Department of Cultural & Historic Affairs  
Dey Mansion  
199 Totowa Road  
Wayne, NJ 07470

**Re: Federal Communications Commission Undertaking**

Site Name: Wanaque Tower  
1 Skyline Drive  
Wanaque, NJ 07465

Dear Ms. Ruffel:

Subcarrier Communications, Inc. (Subcarrier) is proposing to construct a wireless telecommunication facility at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465. Pursuant to the review process outlined in Section 106 of the National Historic Preservation Act, consultation with interested parties possessing a demonstrated interest or expertise in historic preservation is encouraged. The Passaic County Department of Cultural & Historic Affairs has been identified as such an entity. **This letter is NOT a precursor to or sent in the place of any filings or applications required under local zoning, land use, or historic preservation laws. A formal application for necessary permits and approvals, in accordance with all local laws and filing requirements, will be filed as required.**

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

E2 Project Management LLC (E2PM) has conducted background research at the NJ SHPO to identify resources previously listed in or considered eligible for listing in the National Register of Historic Places (NRHP) and resources listed in local municipal historic surveys. E2PM recently conducted a field survey of the property. Please note that we have enclosed a map with the project location identified and project drawings, to facilitate your evaluation of potential effects on historic properties.



## E2 Project Management LLC

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87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

If you are aware of any cultural resources of local interest please respond within 30 days of the date of this letter to the mailing address above, to me at (973) 625-5600 ext. 406 or at [marianne.walsh@e2pm.com](mailto:marianne.walsh@e2pm.com).

Sincerely,

A handwritten signature in cursive script that reads 'Marianne Walsh'.

Marianne Walsh  
Senior Architectural Historian  
Enclosure: Wanaque Tower Lease Exhibits, map  
Project file: E2PM # P-17-73-01





# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

David Hammerle, Zoning Officer  
Building and Zoning Department  
Borough of Wanaque  
579 Ringwood Avenue  
Wanaque, NJ 07465

Re: **Federal Communications Commission Undertaking**

Site Name: Wanaque Tower  
1 Skyline Drive  
Wanaque, NJ 07465

Dear Mr. Hammerle:

Subcarrier Communications, Inc. (Subcarrier) is proposing to construct a wireless telecommunication facility at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465. Pursuant to the review process outlined in Section 106 of the National Historic Preservation Act, consultation with a local government party possessing a demonstrated interest in the project site is required. The Borough of Wanaque has been identified as such an entity. **This letter is NOT a precursor to or sent in the place of any filings or applications required under local zoning, land use, or historic preservation laws. A formal application for necessary permits and approvals, in accordance with all local laws and filing requirements, will be filed as required.**

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

E2 Project Management LLC (E2PM) has conducted background research at the NJ SHPO to identify resources previously listed in or considered eligible for listing in the National Register of Historic Places (NRHP) and resources listed in local municipal historic surveys. E2PM recently conducted a field survey of the property. Please note that we have enclosed a map with the project location identified and project drawings, to facilitate your evaluation of potential effects on historic properties.



## E2 Project Management LLC

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87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

If you are aware of any cultural resources of local interest please respond within 30 days of the date of this letter to the mailing address above, to me at (973) 625-5600 ext. 406 or at [marianne.walsh@e2pm.com](mailto:marianne.walsh@e2pm.com).

Sincerely,

A handwritten signature in cursive script that reads 'Marianne Walsh'.

Marianne Walsh  
Senior Architectural Historian  
Enclosure: Wanaque Tower Lease Exhibits, map  
Project file: E2PM # P-17-73-01

## Marianne Walsh

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**From:** Marianne Walsh <marianne.walsh@e2pm.com>  
**Sent:** Friday, April 06, 2018 12:28 PM  
**To:** Ruffel, Kelly  
**Subject:** RE: Wanaque Tower - 1 Skyline Drive

Ms. Ruffel- I recently submitted the report to the NJ HPO. The HPO has 30 days for their review. I believe the applicant, Subcarrier Communications, will submit to the State Park Service.

Please feel free to contact me anytime next week.



*\*please note my new contact information*

Marianne Walsh  
Senior Architectural Historian  
**E2 Project Management LLC**  
75 East Main Street  
Rockaway, NJ 07866  
Tel. (973) 625-5600 ext. 406  
Fax. (973) 625-5059  
Cell (201) 753-1165  
[www.e2pm.com](http://www.e2pm.com)

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**From:** Ruffel, Kelly [<mailto:kellyr@passaiccountynj.org>]  
**Sent:** Friday, April 06, 2018 11:58 AM  
**To:** [marianne.walsh@e2pm.com](mailto:marianne.walsh@e2pm.com)  
**Subject:** Wanaque Tower - 1 Skyline Drive

Ms. Walsh –

I have been reviewing the proposed cell tower installation that was sent to me on March 19<sup>th</sup>. Although I see the property owner listing on your plans, the State Park Service nor the State Historic Preservation Office have seen this application/plans for the proposed undertaking. Have you already reached out to them for review?

Is it possible to connect early next week to discuss? I will need further information before submitting final comments.

Thank you,

**Kelly C. Ruffel**, Director  
Department of Cultural & Historic Affairs  
County of Passaic  
The Dey Mansion, 199 Totowa Road  
Wayne, New Jersey 07470  
Phone: 973-706-6640  
[kellyr@passaiccountynj.org](mailto:kellyr@passaiccountynj.org)  
Like our page [@DeyMansion](#)



*"for it is a fixed principle with me, that whatever is done should be well done."*

*G. Washington*

# SAVE THE DATE | JUNE 7 & 8 2018

## Building a Place for History

New Jersey History & Historic Preservation Conference  
Passaic County Community College | Paterson



The annual state-wide conference is an educational and networking opportunity for history and historic preservation professionals and volunteers in architecture, planning, heritage site and museum management, public history, archaeology, municipal preservation commissions, county heritage offices, developers, students, and more | **Information on sessions, speakers, and registration will be posted in February 2018 at [njpreservationconference.org](http://njpreservationconference.org)**

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**DISCLAIMER:** Any views expressed in this message are those of the individual sender, except where the sender specifies and with authority, states them to be the views of the County of Passaic. This e-mail and any attachments to it may contain confidential information and may be legally privileged.. If you are not the intended recipient, you must not review, transmit, convert to hard copy, copy, use or disseminate this e-mail or any attachment to it. If you have received this e-mail in error, please immediately notify the originator by return e-mail and delete this message. Please note that if this e-mail contains a forwarded message or is a reply to a prior message, some or all of the contents of this message or any attachments may not have been produced by this office. Although the County of Passaic attempts to sweep e-mails and attachments for viruses, it does not guarantee that either are virus free and accepts no liability for any damage sustained as a result of viruses. This message is automatically appended to each e-mail leaving the County of Passaic e-mail system.

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From: towernotifyinfo@fcc.gov  
Sent: Friday, March 09, 2018 3:04 AM  
To: marianne.walsh@e2pm.com  
Cc: tcnsweekly@fcc.gov  
Subject: NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER  
CONSTRUCTION NOTIFICATION INFORMATION - Email ID #5655058

Dear Sir or Madam:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the information you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the information that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribal Nations and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribal Nation or NHO. (NPA, Section IV.F.4).

The information you provided was forwarded to the following Tribal Nations and NHOs. If a Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Declaratory Ruling released on October 6, 2005 (FCC 05-176).

1. Cultural Resources Director Kim Penrod - Delaware Nation - 31064 State Highway 281 (PO Box: 825) Anadarko, OK - kpenrod@delawarenation.com; RMaldonado@delawarenation.com - 405-247-2448

Details: The Delaware Nation located in Anadarko, Oklahoma charges a \$1000 administrative fee for the review of ALL NEW projects.

(Change Effective 2015 with Resolution # 2015-014 ).

Send fee payable to the Delaware Nation in the form of a check or money order.

All Collocations projects for review by the Delaware Nation must pay the \$500 fee.

Please note that the Delaware Nation and the Delaware Tribe of Indians ARE NOT the same entity..

Send all correspondence for the Delaware Nation to:

The DelawareNation

ATTN: Cultural Resources/106 Department  
P.O. Box 825  
31064 State Hwy 281  
Anadarko, OK 73005.

2. Program Manager Sequahna Mars - Narragansett Indian Tribe - (PO Box: 350) Wyoming, RI - Sequahna@yahoo.com; Nithpotens@gmail.com - 401-419-2959  
Details: NITHPO respectfully requests that additional contacts following initial TCNS notification be made via e-mail to Sequahna Mars, at Sequahna@yahoo.com.

NITHPO respectfully requests a site map (digital if possible) and photographs for all projects that involve ground disturbance.

Please note that NITHPO's current review fees are as follows:

For projects in which there is to be no ground disturbance the review fee is \$500.

For ALL projects which include ground disturbance, the review fee is \$1000.

If the applicant/tower builder receives no response from the Narragansett Indian Tribe within 30 days after notification through TCNS, the Narragansett Indian Tribe has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Narragansett Indian Tribe in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

3. THPO Gary Loonsfoot Jr - Keweenaw Bay Indian Community - 16429 Beartown Road . Baraga, MI - gloonsfoot@kbic-nsn.gov - 906-353-4278

Details: The KBIC THPO reviews all projects within historic homelands for the presence of cultural resources with significance to the Anishinaabe. Your request will go through a preliminary review by our THPO/NAGPRA Technician, the review consists of relevant studies submitted by the applicant regarding cultural resources documentation, in house literature search, database search and GIS search for further information. If any cultural resources are identified during this process, the file will be turned over to the Tribal Historic Preservation Officer in order to make a determination of effects.

Information required in order to complete this process are as follows:

Project Name

Project Location

Physical Address

Latitude and Longitude

State, County, Township, Range, Section quarters Brief Project Description Existing studies for archaeological sites, and cultural resources.

As of June 11, 2014 the KBIC THPO will be charging a fee of \$500.00 per review/collocation unless the review covers more than one section of land in which case the fee is \$500.00 per section. Fees in this process cover the research and other activities required to provide you with a timely response so your project can stay on track. Please submit payment of \$500.00 for each project application submitted, checks should be made payable to KBIC THPO, 16429 Beartown Road, Baraga, Michigan 49908. Any questions can be directed to: Gary Loonsfoot Jr via email [gloonsfoot@kbic-nsn.gov](mailto:gloonsfoot@kbic-nsn.gov), or by phone: 906-353-6623 ext. 4108. (Please note that Minogheezhig Sandman-Shelifoe is no longer a contact within the KBIC-THPO office)

4. THPO Edith Leoso - Bad River Band of Lake Superior Tribe of Chippewa Indians - (PO Box: 39) Odanah, WI - [thpo@badriver-nsn.gov](mailto:thpo@badriver-nsn.gov); [THPOAsst@badriver-nsn.gov](mailto:THPOAsst@badriver-nsn.gov) - 715-682-7123  
Details: The Bad River Tribe is interested in projects with ground disturbance, only. This includes projects on previously disturbed soils.

The Bad River Tribe's fee to process requests is \$650.00 per request.

If the applicant/tower builder receives no response from the Bad River Band of Lake Superior Tribe of Chippewa Indians within 30 days after notification through TCNS, the Bad River Band of Lake Superior Tribe of Chippewa Indians has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Bad River Band of Lake Superior Tribe of Chippewa Indians in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

5. Assistant-THPO Joseph Montano - Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin - 88385 Pike Road, HWY 13 Bayfield, WI - [Joe.Montano@redcliff-nsn.gov](mailto:Joe.Montano@redcliff-nsn.gov); [Marvin.Defoe@redcliff-nsn.gov](mailto:Marvin.Defoe@redcliff-nsn.gov) - 715-779-3700 (ext: 4243)  
Details: Thank you for consulting with the Red Cliff Band of Lake Superior Chippewa. Please use our TCNS consultation website (<https://redcliff-nsn.tcnsportal.com/>), provided by TCNS Portal. There is NOT a system fee to submit projects through our site. The Red Cliff \$800 consulting fees still apply. The site provides a streamlined approach making it easier and faster to upload the requested information as well as receive responses in a timelier manner. More information can be found <https://redcliff-nsn.tcnsportal.com/Home/PoliciesAndProcedures>.

#### Account Setup

If you have not received an invite to setup an account or have not previously setup an account, request one at <https://redcliff-nsn.tcnsportal.com/Home/Signup>. You will receive an email once your account has been approved.

#### Project Submission



Once your account has been approved, submit one or more projects for review by following these steps:

1. Login to the site at <https://redcliff-nsn.tcnsportal.com/Home/Login>.
2. Click the Add Tower button in the upper left side of the screen.
3. Input the TCNS number, select the appropriate Tower Type, and click the Next button.
4. Input and upload all of the requested information. When ready to submit the project for review, proceed to the Cart.
5. From the Cart, select one or more projects to submit, and click the Submit button.

#### Additional Information

The following information is provided for your reference:

1. Policies and Procedures (<https://redcliff-nsn.tcnsportal.com/Home/PoliciesAndProcedures>)
2. Geographical Areas of Interest (<https://redcliff-nsn.tcnsportal.com/Home/CountyList>)
3. Frequently Asked Questions (<https://redcliff-nsn.tcnsportal.com/Home/FAQHelp>)
4. Section 106 Help (<https://redcliff-nsn.tcnsportal.com/Home/Section106Help>)

#### Contact Information

If you have questions concerning the consultation process, please contact our TCNS Administrator, at <https://redcliff-nsn.tcnsportal.com/Home/ContactTribalRepresentative> or (715) 779-3700 Ext 4242. If you have questions regarding the function of the site, please email [support@tcnsportal.com](mailto:support@tcnsportal.com).

6. TCNS Coordinator Travis Patton - Eastern Shawnee Tribe of Oklahoma - 70500 East 128 Road Wyandotte, OK - [tpatton@estoo.net](mailto:tpatton@estoo.net) - 918-666-2435 (ext: 1860)  
Details: The Cultural Preservation Office of the Eastern Shawnee Tribe of Oklahoma requires the following information and fees regarding all proposed FCC projects.

Please do not email documentation; it will be deleted without being opened. Mail one printed color copy of all documentation to:  
70500 E 128 Rd.  
Wyandotte, OK 74370

Please submit by US postal mail or other parcel carrier all of the following information for all FCC projects:

1. A 1-page cover letter with the following information:
  - a) TCNS number
  - b) Company name
  - c) Project name, city, county, state
  - d) Project type
  - e) UTM coordinates using WGS84 (G1150)
  - f) Total area surveyed in acres
  - g) Contact information.

2. Professional cultural/archaeological resource survey report.
3. Aerial and color USGS topographic maps locating project area within the state, county, and local area.
4. Aerial, color USGS topographic, or planimetric maps locating tower site, APE, access road, utility easement, guy wire locations surveyed, surveyed staging areas, and known archaeological/historic sites.
5. Project site plan map depicting labeled shovel test locations.
6. Shovel test log.
7. Site photographs.
8. A copy of the review letter or TCNS e-response from the State Historic Preservation Office and all other state-mandated review offices for projects involving ground disturbance.
9. Please submit a fee of \$550.00 per/TCNS project, for administration, data processing, handling, research and review. Make the check payable to the Eastern Shawnee Tribe of Oklahoma. On the memo line write all TCNS numbers. This includes new build towers, collocations, PTC poles, and projects in previously disturbed locations.
10. The Eastern Shawnee procedure document is available by email and is highly recommended for guidance. Send an email to Travis Patton at: [tpatton@estoo.net](mailto:tpatton@estoo.net).

7. THPO Sherri Clemons - Wyandotte Nation - 64700 E, Hwy 60 Wyandotte, OK - [algonquinconsultants@gmail.com](mailto:algonquinconsultants@gmail.com); [algonquin@neok.com](mailto:algonquin@neok.com) - 918-678-6344  
Details: Greetings from Wyandotte Nation.

PLEASE BE ADVISED THAT AS OF TCNS NO. 126800, ALL COLOCATIONS AND PREVIOUSLY DISTURBED TOWER LOCATIONS WILL BE \$200.

ALL RAW LAND NEW BUILD SITES REMAIN AT \$600.

EACH PTC POLE IS STILL \$100 (PER NON-EXEMPT POLE, NOT PER TCNS).

The following information is provided automatically via the TCNS web site. Additional information may be provided in a second email that we send for each tower that is logged into TCNS. However, as we have been unable to use the TCNS website reliably to send our second response email since early April 2014, this very likely will be the ONLY email that you receive until the technical issue preventing us from

using that feature has been addressed.

**NEW INFORMATION-** From this point forward, please send the required information for our review by email **ONLY**. Send the fee and a cover letter by hard copy to the Tribe, but **DO NOT** send review information by hard copy. Doing so will delay the review.

We are interested in consulting on this tower or broadband project, just as we are interested in being consulted regarding all federal undertakings in our homelands. This consultation is one of the activities required by the National Historic Preservation Act (NHPA) for such federal undertakings.

Please follow our archaeology procedures (9-9-13) and our general NHPA procedures for consultation (6-1-13), both available by e-mailing the cell tower program archaeologist, Rebecca Hawkins, at [algonquin@neok.com](mailto:algonquin@neok.com). These procedures supersede all earlier versions of our procedures. All further correspondence regarding this tower should also be directed to that email address. With questions, you may call Mr. Lamont Laird at 918-533-2212.

**AS STATED IN OUR GUIDELINES, AN ARCHAEOLOGIST MUST PERFORM THE FIELD WORK AND RELATED**

**ANALYSES.** The Wyandotte Nation will object to any tower where field work/analysis was performed after 9-9-13 and where a trained, experienced archaeologist did **NOT** conduct the field work. The National Park Service defines Essential Competencies for the field of archaeology at <http://www.nps.gov/training/npsonly/RSC/archeolo.htm>. Minimally, a "trained, experienced archaeologist" has at least a BA in Anthropology with a focus in archaeology and two solid years of field experience in the region where the field work is being performed.

The fee for all collocations and towers built in previously disturbed areas is \$100. The fee for all other towers is \$600.

Please make sure to provide your archaeologists with a copy of our procedures **PRIOR TO** the time that they do field work. If archaeology reports do not provide the information requested on the last 2 pages of our archaeology procedures, which you may use as a checklist, the report will be rejected. Please do not send reports that you know are deficient, as doing only delays the response process for your tower and those of other applicants as well.

Tizame (thank you),

Sherri Clemons, THPO  
Wyandotte Nation

kimjumper@shawnee-tribe.com - 918-542-2441

Details: THIS IS YOUR OFFICIAL NOTICE THAT THE SHAWNEE TRIBE IS INTERESTED IN CONSULTING ON

ALL PROJECTS BUILT IN OUR AREAS OF GEOGRAPHIC INTEREST.

ATTENTION, NEW INFORMATION: Our procedures were updated on 14 January 2008. Please call Kim Jumper, THPO, at 918-542-2441, so that she can send you a copy.

If your tower is a co-location, please fax us this information to let us know. We cannot always tell from the TCNS web site that a tower is a co-location. We require a written response from you to let us know that it is a co-location. If a co-location project includes some new ground disturbance (such as from an expanded compound or access road, or construction of an ancillary structure), the Shawnee Tribe treats such a project the same as any other non co-location project.

Our correct mailing/physical address is: 29 South Highway 69A. Our correct phone number is (918-542-2441) and our historic preservation fax line is (918-542-9915). THPO Kim Jumper manages all cell tower consultation.

As of 26 June 2006, all of the faxed responses of our final comments on a tower site will contain an original Shawnee Tribe signature. Each final comment fax is signed individually. Copies may be compared, for authentication, against the original in our files. If a final comment fax does not contain a signature, it is not valid. ALL FINAL COMMENTS FROM THE SHAWNEE TRIBE ARE WRITTEN; FINAL COMMENTS ARE NEVER PROVIDED VERBALLY. IF THE SHAWNEE TRIBE IS CREDITED WITH HAVING GIVEN A VERBAL RESPONSE, THAT RESPONSE IS NOT VALID.

If you receive notification through the TCNS listing the Shawnee Tribe, that is an indication that the Shawnee Tribe is interested in consulting on the tower for which that notification was received. Please consider that our official indication of interest to you. The Shawnee Tribe considers the Tower Construction Notification System's weekly e-mail to be the first notification that we receive that a tower will be constructed in an area of our concern. We do not view the TCNS notification as completion of 106 consultation obligations.

The Shawnee Tribe has developed streamlined consultation procedures for cell tower developers and their subcontractors. If you do not have a copy of the procedures - most recently updated on 14 January 2008 - please contact us, as you must follow these procedures to consult with us on cell tower projects. Call us at 918-542-2441 or fax us at 918-542-9915. It is the tower builder's responsibility to make sure that you have our most recent consultation procedures.

PLEASE DO NOT SEND US INFORMATION, QUERIES, OR COMMENTS ELECTRONICALLY. SINCE 1 DECEMBER 2005, WE HAVE NOT HANDLED ANY CELL TOWER CONSULTATION, INQUIRIES, OR CORRESPONDENCE VIA E-MAIL.

9. THPO Melinda J Young - Lac du Flambeau Band of Lake Superior Chippewa Indians - Tribal Historic Preservation Office (PO Box: 67) Lac du Flambeau, WI - ldftppo@ldftribe.com - 715-588-2139

10. Dr. Brice M Obermeyer - Delaware Tribe of Indians of Oklahoma - 1 Kellogg Drive Roosevelt Hall, Room 212 Emporia, KS - bobermeyer@delawaretribe.org - 620-341-6699  
Details: Per Tribal Resolution 2015-41, the Delaware Tribe of Indians has resolved that all FCC regulated tower projects (including PTC towers) must have a fee submitted prior to the review at the fee of \$1,000 for new construction and \$500 for collocations. As of this notice, the Delaware Tribe wishes to receive notice and payment for all projects, including those that do not involve ground disturbance.

For all review requests, the fee should be included with the mailed notification packet. Notifications should include a cover letter describing the project and a topographic map depicting the project's location.

Please send all notifications and checks for projects located in the states of Connecticut, Delaware, Massachusetts, Maryland, New York, New Jersey, Pennsylvania, and Virginia to the following address:

Susan Bachor  
DTHPO Special Assistant Eastern Office  
P.O. Box 64  
Pocono Lake, PA 18347  
temple@delawaretribe.org

For projects located in the states of Illinois, Indiana, Michigan, Ohio, West Virginia please send all notifications and checks to the following address:

Larry Heady  
DTHPO Special Assistant Midwestern Office  
1929 E. 6th Street  
Duluth, MN 55812  
(262) 825-7586  
lheady@delawaretribe.org

For projects located in the states of Kansas, Missouri, and Oklahoma please send all notifications and checks to the following address:

Brice Obermeyer  
DTHPO Director, Main Office  
Rm 212 Roosevelt Hall  
1 Kellogg Drive  
Emporia State University  
Emporia, KS 66801

Thank you.

The information you provided was also forwarded to the following SHPOs in the State in which you propose to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet pursuant to Section VII.A of the NPA.

11. SHPO Ann Safley - Pennsylvania Historical & Museum Commission Bureau for Historic Preservation - 400 North St, 2nd Flr Harrisburg, PA - rsafley@state.pa.us - 717-787-9121

12. Executive Director, SHPO Patrick McIntyre Jr - Tennessee Historical Commission - 2941 Lebanon Road Nashville, TN - patrick.mcintyre@state.tn.us - 615-532-1550

13. Karl Roecker - Palisades Interstate Park Commission - Administration Bldg, NYS OPRHP/PIPC Bear Mountain, NY - Karl.Roecker@parks.ny.gov - 845-786-2701

14. SHPO Lisa P Jackson - New Jersey Department of Environmental Protection - 401 East State Street (PO Box: 402) Trenton, NJ - lisa.jackson@dep.state.nj.us - 609-292-2885

"Exclusions" above set forth language provided by the Tribal Nation or SHPO. These exclusions may indicate types of PTC wayside pole notifications that the Tribal Nation or SHPO does not wish to review. TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. However, if a proposal falls within a designated exclusion, you need not expect any response and need not pursue any additional process with that Tribal Nation or SHPO. Exclusions may also set forth policies or procedures of a particular Tribal Nation or SHPO (for example, types of information that a Tribal Nation routinely requests, or a policy that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the FCC cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. If you learn any of the above contact information is no longer valid, please contact the FCC. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 03/05/2018  
Notification ID: 168574  
Tower Owner Individual or Entity Name: Subcarrier Communications Inc.  
Consultant Name: Marianne Walsh  
Street Address: 87 Hibernia Avenue  
City: Rockaway  
State: NEW JERSEY  
Zip Code: 07866  
Phone: 973-299-5200  
Email: marianne.walsh@e2pm.com

Structure Type: LTOWER - Lattice Tower  
Latitude: 41 deg 3 min 15.0 sec N  
Longitude: 74 deg 15 min 15.6 sec W  
Location Description: 1 Skyline Drive

City: Wanaque

State: NEW JERSEY

County: PASSAIC

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.

Ground Elevation: 106.7 meters

Support Structure: 91.4 meters above ground level

Overall Structure: 93.3 meters above ground level

Overall Height AMSL: 200.0 meters above mean sea level

If you have any questions or comments regarding this notice, please contact the FCC using the electronic mail form located on the FCC's website at:

<http://wireless.fcc.gov/outreach/notification/contact-fcc.html>.

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8 a.m. to 7:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,

Federal Communications Commission





# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Edith Leoso, THPO  
NAGPRA/Cultural Preservation Director/THPO  
Bad River Tribe – THPO/NAGPRA Services  
P.O. Box 39  
Odanah, WI 54861

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Ms. Leoso:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called “Wanaque Tower” located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

Information regarding the proposed undertaking was posted on the FCC’s Tower Construction Notification System (TCNS) on March 9, 2018 (TCNS #168574). We are sending this follow-up letter to you, respectfully requesting your review of the proposed facility for its impact on properties of religious and cultural importance to the Tribe. The project plans and a map with the project location identified are enclosed with this letter.

Per the requirements of the 2001 Programmatic Agreement regarding the Section 106 National Historic Preservation Act Review Process (NPA), we are required to obtain your comments or confirm your disinterest in the proposed undertaking. Please contact me at (973) 625-5600 or at Marianne.Walsh@e2pm.com with any questions or comments regarding the proposed facility.

Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$650 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Kim Penrod, Director  
Cultural Preservation Department  
The Delaware Nation  
31064 State Highway 281  
Anadarko, OK 73005

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Ms. Penrod:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$1,000 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Gary Loonsfoot, Jr.  
Cultural Resources Director  
Keweenaw Bay Indian Community  
Tribal Historic Preservation Office  
16429 Beartown Road  
Baraga, MI 49908-9210

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Mr. Loonsfoot:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$500 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Melinda J. Young  
THPO Officer  
Lac du Flambeau Band of Lake Superior Chippewa Indians  
P.O. Box 67  
Lac du Flambeau, WI 54538

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Ms. Young:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Sincerely,

A handwritten signature in cursive script that reads 'Marianne Walsh'.

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$350 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Sequahna Mars, Program Manager  
Cultural Preservation Department  
Narragansett Indian Tribe  
PO Box 350  
Wyoming, RI 02898

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Ms. Mars:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Per the requirements of the 2001 Programmatic Agreement regarding the Section 106 National Historic Preservation Act Review Process (NPA), we are required to obtain your comments or confirm your disinterest in the proposed undertaking. Please contact me at (973) 625-5600 or at Marianne.Walsh@e2pm.com with any questions or comments regarding the proposed facility.

Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$1,000 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Joseph Montano, Assistant THPO  
Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin  
88383 Pike Road,  
Highway 13  
Bayfield, WI 54814

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Mr. Montano:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Per the requirements of the 2001 Programmatic Agreement regarding the Section 106 National Historic Preservation Act Review Process (NPA), we are required to obtain your comments or confirm your disinterest in the proposed undertaking. Please contact me at (973) 625-5600 or at Marianne.Walsh@e2pm.com with any questions or comments regarding the proposed facility.

Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$800 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



# E2 Project Management LLC

87 Hibernia Avenue  
Rockaway, New Jersey 07866  
Tel (973) 299-5200 Fax (973) 299-5059

March 19, 2018

Kim Jumper  
Historic Preservation Department  
Shawnee Tribe  
29 South Highway 69A  
Miami, Oklahoma 74354

Re: Request for Review of Proposed Wireless Telecommunication Facility on Properties of Religious and Cultural Importance to the Tribe  
**TCNS #168574**

Dear Ms. Jumper:

Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) is proposing to construct an emergency services lattice tower at a site called "Wanaque Tower" located at 1 Skyline Drive, Wanaque, NJ 07465.

The site plans prepared by E2 Project Management, LLC, indicate that Subcarrier proposes to install one emergency services lattice tower that reaches an overall height of 300 feet above ground level (agl) on concrete pier foundations to replace an existing 110 foot tall lattice tower and an interim temporary 120 foot tall lattice tower. The tower will be topped by a 6 foot tall lightning rod as well as red and white safety lights. Four dish antennas will be located at elevations of 288.5 feet and 298.5 feet agl. An equipment shelter, measuring 11.5 feet by 22 feet will be installed at the tower base. Utility conduit will be routed underground in an existing trench and access to the facility will be via the existing gravel drive.

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Per the requirements of the 2001 Programmatic Agreement regarding the Section 106 National Historic Preservation Act Review Process (NPA), we are required to obtain your comments or confirm your disinterest in the proposed undertaking. Please contact me at (973) 625-5600 or at Marianne.Walsh@e2pm.com with any questions or comments regarding the proposed facility.

Sincerely,

A handwritten signature in cursive script that reads "Marianne Walsh".

Marianne Walsh  
Senior Architectural Historian

Enclosure: Wanaque Tower Lease Exhibits, map, \$400 Tribal Consultation Fee  
Project file: E2PM # P-17-73-01



From: towernotifyinfo@fcc.gov  
Sent: Friday, March 09, 2018 3:04 AM  
To: marianne.walsh@e2pm.com  
Cc: tcnsweekly@fcc.gov  
Subject: NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER  
CONSTRUCTION NOTIFICATION INFORMATION - Email ID #5655058

Dear Sir or Madam:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the information you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the information that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribal Nations and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribal Nation or NHO. (NPA, Section IV.F.4).

The information you provided was forwarded to the following Tribal Nations and NHOs. If a Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Declaratory Ruling released on October 6, 2005 (FCC 05-176).

1. Cultural Resources Director Kim Penrod - Delaware Nation - 31064 State Highway 281 (PO Box: 825) Anadarko, OK - kpenrod@delawarenation.com; RMaldonado@delawarenation.com - 405-247-2448

Details: The Delaware Nation located in Anadarko, Oklahoma charges a \$1000 administrative fee for the review of ALL NEW projects.

(Change Effective 2015 with Resolution # 2015-014 ).

Send fee payable to the Delaware Nation in the form of a check or money order.

All Collocations projects for review by the Delaware Nation must pay the \$500 fee.

Please note that the Delaware Nation and the Delaware Tribe of Indians ARE NOT the same entity..

Send all correspondence for the Delaware Nation to:

The DelawareNation

ATTN: Cultural Resources/106 Department  
P.O. Box 825  
31064 State Hwy 281  
Anadarko, OK 73005.

2. Program Manager Sequahna Mars - Narragansett Indian Tribe - (PO Box: 350) Wyoming, RI - Sequahna@yahoo.com; Nithpotens@gmail.com - 401-419-2959  
Details: NITHPO respectfully requests that additional contacts following initial TCNS notification be made via e-mail to Sequahna Mars, at Sequahna@yahoo.com.

NITHPO respectfully requests a site map (digital if possible) and photographs for all projects that involve ground disturbance.

Please note that NITHPO's current review fees are as follows:

For projects in which there is to be no ground disturbance the review fee is \$500.

For ALL projects which include ground disturbance, the review fee is \$1000.

If the applicant/tower builder receives no response from the Narragansett Indian Tribe within 30 days after notification through TCNS, the Narragansett Indian Tribe has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Narragansett Indian Tribe in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

3. THPO Gary Loonsfoot Jr - Keweenaw Bay Indian Community - 16429 Beartown Road . Baraga, MI - gloonsfoot@kbic-nsn.gov - 906-353-4278

Details: The KBIC THPO reviews all projects within historic homelands for the presence of cultural resources with significance to the Anishinaabe. Your request will go through a preliminary review by our THPO/NAGPRA Technician, the review consists of relevant studies submitted by the applicant regarding cultural resources documentation, in house literature search, database search and GIS search for further information. If any cultural resources are identified during this process, the file will be turned over to the Tribal Historic Preservation Officer in order to make a determination of effects.

Information required in order to complete this process are as follows:

Project Name

Project Location

Physical Address

Latitude and Longitude

State, County, Township, Range, Section quarters Brief Project Description Existing studies for archaeological sites, and cultural resources.

As of June 11, 2014 the KBIC THPO will be charging a fee of \$500.00 per review/collocation unless the review covers more than one section of land in which case the fee is \$500.00 per section. Fees in this process cover the research and other activities required to provide you with a timely response so your project can stay on track. Please submit payment of \$500.00 for each project application submitted, checks should be made payable to KBIC THPO, 16429 Beartown Road, Baraga, Michigan 49908. Any questions can be directed to: Gary Loonsfoot Jr via email [gloonsfoot@kbic-nsn.gov](mailto:gloonsfoot@kbic-nsn.gov), or by phone: 906-353-6623 ext. 4108. (Please note that Minogheezhig Sandman-Shelifoe is no longer a contact within the KBIC-THPO office)

4. THPO Edith Leoso - Bad River Band of Lake Superior Tribe of Chippewa Indians - (PO Box: 39) Odanah, WI - [thpo@badriver-nsn.gov](mailto:thpo@badriver-nsn.gov); [THPOAsst@badriver-nsn.gov](mailto:THPOAsst@badriver-nsn.gov) - 715-682-7123  
Details: The Bad River Tribe is interested in projects with ground disturbance, only. This includes projects on previously disturbed soils.

The Bad River Tribe's fee to process requests is \$650.00 per request.

If the applicant/tower builder receives no response from the Bad River Band of Lake Superior Tribe of Chippewa Indians within 30 days after notification through TCNS, the Bad River Band of Lake Superior Tribe of Chippewa Indians has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Bad River Band of Lake Superior Tribe of Chippewa Indians in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

5. Assistant-THPO Joseph Montano - Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin - 88385 Pike Road, HWY 13 Bayfield, WI - [Joe.Montano@redcliff-nsn.gov](mailto:Joe.Montano@redcliff-nsn.gov); [Marvin.Defoe@redcliff-nsn.gov](mailto:Marvin.Defoe@redcliff-nsn.gov) - 715-779-3700 (ext: 4243)  
Details: Thank you for consulting with the Red Cliff Band of Lake Superior Chippewa. Please use our TCNS consultation website (<https://redcliff-nsn.tcnsportal.com/>), provided by TCNS Portal. There is NOT a system fee to submit projects through our site. The Red Cliff \$800 consulting fees still apply. The site provides a streamlined approach making it easier and faster to upload the requested information as well as receive responses in a timelier manner. More information can be found <https://redcliff-nsn.tcnsportal.com/Home/PoliciesAndProcedures>.

#### Account Setup

If you have not received an invite to setup an account or have not previously setup an account, request one at <https://redcliff-nsn.tcnsportal.com/Home/Signup>. You will receive an email once your account has been approved.

#### Project Submission

Once your account has been approved, submit one or more projects for review by following these steps:

1. Login to the site at <https://redcliff-nsn.tcnsportal.com/Home/Login>.
2. Click the Add Tower button in the upper left side of the screen.
3. Input the TCNS number, select the appropriate Tower Type, and click the Next button.
4. Input and upload all of the requested information. When ready to submit the project for review, proceed to the Cart.
5. From the Cart, select one or more projects to submit, and click the Submit button.

#### Additional Information

The following information is provided for your reference:

1. Policies and Procedures (<https://redcliff-nsn.tcnsportal.com/Home/PoliciesAndProcedures>)
2. Geographical Areas of Interest (<https://redcliff-nsn.tcnsportal.com/Home/CountyList>)
3. Frequently Asked Questions (<https://redcliff-nsn.tcnsportal.com/Home/FAQHelp>)
4. Section 106 Help (<https://redcliff-nsn.tcnsportal.com/Home/Section106Help>)

#### Contact Information

If you have questions concerning the consultation process, please contact our TCNS Administrator, at <https://redcliff-nsn.tcnsportal.com/Home/ContactTribalRepresentative> or (715) 779-3700 Ext 4242. If you have questions regarding the function of the site, please email [support@tcnsportal.com](mailto:support@tcnsportal.com).

6. TCNS Coordinator Travis Patton - Eastern Shawnee Tribe of Oklahoma - 70500 East 128 Road Wyandotte, OK - [tpatton@estoo.net](mailto:tpatton@estoo.net) - 918-666-2435 (ext: 1860)  
Details: The Cultural Preservation Office of the Eastern Shawnee Tribe of Oklahoma requires the following information and fees regarding all proposed FCC projects.

Please do not email documentation; it will be deleted without being opened. Mail one printed color copy of all documentation to:  
70500 E 128 Rd.  
Wyandotte, OK 74370

Please submit by US postal mail or other parcel carrier all of the following information for all FCC projects:

1. A 1-page cover letter with the following information:
  - a) TCNS number
  - b) Company name
  - c) Project name, city, county, state
  - d) Project type
  - e) UTM coordinates using WGS84 (G1150)
  - f) Total area surveyed in acres
  - g) Contact information.

2. Professional cultural/archaeological resource survey report.
3. Aerial and color USGS topographic maps locating project area within the state, county, and local area.
4. Aerial, color USGS topographic, or planimetric maps locating tower site, APE, access road, utility easement, guy wire locations surveyed, surveyed staging areas, and known archaeological/historic sites.
5. Project site plan map depicting labeled shovel test locations.
6. Shovel test log.
7. Site photographs.
8. A copy of the review letter or TCNS e-response from the State Historic Preservation Office and all other state-mandated review offices for projects involving ground disturbance.
9. Please submit a fee of \$550.00 per/TCNS project, for administration, data processing, handling, research and review. Make the check payable to the Eastern Shawnee Tribe of Oklahoma. On the memo line write all TCNS numbers. This includes new build towers, collocations, PTC poles, and projects in previously disturbed locations.
10. The Eastern Shawnee procedure document is available by email and is highly recommended for guidance. Send an email to Travis Patton at: [tpatton@estoo.net](mailto:tpatton@estoo.net).

7. THPO Sherri Clemons - Wyandotte Nation - 64700 E, Hwy 60 Wyandotte, OK - [algonquinconsultants@gmail.com](mailto:algonquinconsultants@gmail.com); [algonquin@neok.com](mailto:algonquin@neok.com) - 918-678-6344  
Details: Greetings from Wyandotte Nation.

PLEASE BE ADVISED THAT AS OF TCNS NO. 126800, ALL COLOCATIONS AND PREVIOUSLY DISTURBED TOWER LOCATIONS WILL BE \$200.

ALL RAW LAND NEW BUILD SITES REMAIN AT \$600.

EACH PTC POLE IS STILL \$100 (PER NON-EXEMPT POLE, NOT PER TCNS).

The following information is provided automatically via the TCNS web site. Additional information may be provided in a second email that we send for each tower that is logged into TCNS. However, as we have been unable to use the TCNS website reliably to send our second response email since early April 2014, this very likely will be the ONLY email that you receive until the technical issue preventing us from

using that feature has been addressed.

**NEW INFORMATION-** From this point forward, please send the required information for our review by email **ONLY**. Send the fee and a cover letter by hard copy to the Tribe, but **DO NOT** send review information by hard copy. Doing so will delay the review.

We are interested in consulting on this tower or broadband project, just as we are interested in being consulted regarding all federal undertakings in our homelands. This consultation is one of the activities required by the National Historic Preservation Act (NHPA) for such federal undertakings.

Please follow our archaeology procedures (9-9-13) and our general NHPA procedures for consultation (6-1-13), both available by e-mailing the cell tower program archaeologist, Rebecca Hawkins, at [algonquin@neok.com](mailto:algonquin@neok.com). These procedures supersede all earlier versions of our procedures. All further correspondence regarding this tower should also be directed to that email address. With questions, you may call Mr. Lamont Laird at 918-533-2212.

**AS STATED IN OUR GUIDELINES, AN ARCHAEOLOGIST MUST PERFORM THE FIELD WORK AND RELATED**

**ANALYSES.** The Wyandotte Nation will object to any tower where field work/analysis was performed after 9-9-13 and where a trained, experienced archaeologist did **NOT** conduct the field work. The National Park Service defines Essential Competencies for the field of archaeology at <http://www.nps.gov/training/npsonly/RSC/archeolo.htm>. Minimally, a "trained, experienced archaeologist" has at least a BA in Anthropology with a focus in archaeology and two solid years of field experience in the region where the field work is being performed.

The fee for all collocations and towers built in previously disturbed areas is \$100. The fee for all other towers is \$600.

Please make sure to provide your archaeologists with a copy of our procedures **PRIOR TO** the time that they do field work. If archaeology reports do not provide the information requested on the last 2 pages of our archaeology procedures, which you may use as a checklist, the report will be rejected. Please do not send reports that you know are deficient, as doing only delays the response process for your tower and those of other applicants as well.

Tizame (thank you),

Sherri Clemons, THPO  
Wyandotte Nation

kimjumper@shawnee-tribe.com - 918-542-2441

Details: THIS IS YOUR OFFICIAL NOTICE THAT THE SHAWNEE TRIBE IS INTERESTED IN CONSULTING ON

ALL PROJECTS BUILT IN OUR AREAS OF GEOGRAPHIC INTEREST.

ATTENTION, NEW INFORMATION: Our procedures were updated on 14 January 2008. Please call Kim Jumper, THPO, at 918-542-2441, so that she can send you a copy.

If your tower is a co-location, please fax us this information to let us know. We cannot always tell from the TCNS web site that a tower is a co-location. We require a written response from you to let us know that it is a co-location. If a co-location project includes some new ground disturbance (such as from an expanded compound or access road, or construction of an ancillary structure), the Shawnee Tribe treats such a project the same as any other non co-location project.

Our correct mailing/physical address is: 29 South Highway 69A. Our correct phone number is (918-542-2441) and our historic preservation fax line is (918-542-9915). THPO Kim Jumper manages all cell tower consultation.

As of 26 June 2006, all of the faxed responses of our final comments on a tower site will contain an original Shawnee Tribe signature. Each final comment fax is signed individually. Copies may be compared, for authentication, against the original in our files. If a final comment fax does not contain a signature, it is not valid. ALL FINAL COMMENTS FROM THE SHAWNEE TRIBE ARE WRITTEN; FINAL COMMENTS ARE NEVER PROVIDED VERBALLY. IF THE SHAWNEE TRIBE IS CREDITED WITH HAVING GIVEN A VERBAL RESPONSE, THAT RESPONSE IS NOT VALID.

If you receive notification through the TCNS listing the Shawnee Tribe, that is an indication that the Shawnee Tribe is interested in consulting on the tower for which that notification was received. Please consider that our official indication of interest to you. The Shawnee Tribe considers the Tower Construction Notification System's weekly e-mail to be the first notification that we receive that a tower will be constructed in an area of our concern. We do not view the TCNS notification as completion of 106 consultation obligations.

The Shawnee Tribe has developed streamlined consultation procedures for cell tower developers and their subcontractors. If you do not have a copy of the procedures - most recently updated on 14 January 2008 - please contact us, as you must follow these procedures to consult with us on cell tower projects. Call us at 918-542-2441 or fax us at 918-542-9915. It is the tower builder's responsibility to make sure that you have our most recent consultation procedures.

PLEASE DO NOT SEND US INFORMATION, QUERIES, OR COMMENTS ELECTRONICALLY. SINCE 1 DECEMBER 2005, WE HAVE NOT HANDLED ANY CELL TOWER CONSULTATION, INQUIRIES, OR CORRESPONDENCE VIA E-MAIL.

9. THPO Melinda J Young - Lac du Flambeau Band of Lake Superior Chippewa Indians - Tribal Historic Preservation Office (PO Box: 67) Lac du Flambeau, WI - ldftppo@ldftribe.com - 715-588-2139



10. Dr. Brice M Obermeyer - Delaware Tribe of Indians of Oklahoma - 1 Kellogg Drive Roosevelt Hall, Room 212 Emporia, KS - bobermeyer@delawaretribe.org - 620-341-6699  
Details: Per Tribal Resolution 2015-41, the Delaware Tribe of Indians has resolved that all FCC regulated tower projects (including PTC towers) must have a fee submitted prior to the review at the fee of \$1,000 for new construction and \$500 for collocations. As of this notice, the Delaware Tribe wishes to receive notice and payment for all projects, including those that do not involve ground disturbance.

For all review requests, the fee should be included with the mailed notification packet. Notifications should include a cover letter describing the project and a topographic map depicting the project's location.

Please send all notifications and checks for projects located in the states of Connecticut, Delaware, Massachusetts, Maryland, New York, New Jersey, Pennsylvania, and Virginia to the following address:

Susan Bachor  
DTHPO Special Assistant Eastern Office  
P.O. Box 64  
Pocono Lake, PA 18347  
temple@delawaretribe.org

For projects located in the states of Illinois, Indiana, Michigan, Ohio, West Virginia please send all notifications and checks to the following address:

Larry Heady  
DTHPO Special Assistant Midwestern Office  
1929 E. 6th Street  
Duluth, MN 55812  
(262) 825-7586  
lheady@delawaretribe.org

For projects located in the states of Kansas, Missouri, and Oklahoma please send all notifications and checks to the following address:

Brice Obermeyer  
DTHPO Director, Main Office  
Rm 212 Roosevelt Hall  
1 Kellogg Drive  
Emporia State University  
Emporia, KS 66801

Thank you.

The information you provided was also forwarded to the following SHPOs in the State in which you propose to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet pursuant to Section VII.A of the NPA.

11. SHPO Ann Safley - Pennsylvania Historical & Museum Commission Bureau for Historic Preservation - 400 North St, 2nd Flr Harrisburg, PA - rsafley@state.pa.us - 717-787-9121

12. Executive Director, SHPO Patrick McIntyre Jr - Tennessee Historical Commission - 2941 Lebanon Road Nashville, TN - patrick.mcintyre@state.tn.us - 615-532-1550

13. Karl Roecker - Palisades Interstate Park Commission - Administration Bldg, NYS OPRHP/PIPC Bear Mountain, NY - Karl.Roecker@parks.ny.gov - 845-786-2701

14. SHPO Lisa P Jackson - New Jersey Department of Environmental Protection - 401 East State Street (PO Box: 402) Trenton, NJ - lisa.jackson@dep.state.nj.us - 609-292-2885

"Exclusions" above set forth language provided by the Tribal Nation or SHPO. These exclusions may indicate types of PTC wayside pole notifications that the Tribal Nation or SHPO does not wish to review. TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. However, if a proposal falls within a designated exclusion, you need not expect any response and need not pursue any additional process with that Tribal Nation or SHPO. Exclusions may also set forth policies or procedures of a particular Tribal Nation or SHPO (for example, types of information that a Tribal Nation routinely requests, or a policy that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the FCC cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. If you learn any of the above contact information is no longer valid, please contact the FCC. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 03/05/2018  
Notification ID: 168574  
Tower Owner Individual or Entity Name: Subcarrier Communications Inc.  
Consultant Name: Marianne Walsh  
Street Address: 87 Hibernia Avenue  
City: Rockaway  
State: NEW JERSEY  
Zip Code: 07866  
Phone: 973-299-5200  
Email: marianne.walsh@e2pm.com

Structure Type: LTOWER - Lattice Tower  
Latitude: 41 deg 3 min 15.0 sec N  
Longitude: 74 deg 15 min 15.6 sec W  
Location Description: 1 Skyline Drive

City: Wanaque

State: NEW JERSEY

County: PASSAIC

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.

Ground Elevation: 106.7 meters

Support Structure: 91.4 meters above ground level

Overall Structure: 93.3 meters above ground level

Overall Height AMSL: 200.0 meters above mean sea level

If you have any questions or comments regarding this notice, please contact the FCC using the electronic mail form located on the FCC's website at:

<http://wireless.fcc.gov/outreach/notification/contact-fcc.html>.

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8 a.m. to 7:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,

Federal Communications Commission

# BAD RIVER BAND OF LAKE SUPERIOR TRIBE OF CHIPPEWA INDIANS

CHIEF BLACKBIRD CENTER

P.O. Box 39 • Odanah, Wisconsin 54861

## TRIBAL HISTORIC PRESERVATION OFFICE

THPO Review #2018-05-15-105

May 15, 2018

Marianne Walsh  
87 Hibernia Avenue  
Rockaway, NJ 07866

RE: TCNS #168574

To Whom It May Concern:

This letter is in response to your requests for review of the above referenced TCNS numbered projects that we have received a fee to process.

After review of the information provided concerning the above referenced locations, we are not aware of any historic properties in the APE's of those locations and have reached a determination that no historic properties may be affected by the above referenced federal undertakings and the projects may proceed as indicated in specified project plans. However, this does not exempt the undertaking from complying with other federal, state and local laws applicable to this federal undertaking.

As always, should this federal undertaking result in the inadvertent discovery of Native American human remains and associated/unassociated funerary items, artifacts or other culturally significant items, cease all activities in the APE and contact this office, as well as, the nearest THPO and the SHPO offices to mitigate the impacts of those finds.

We appreciate your efforts to maintain compliance with Section 106 of the National Historic Preservation Act. If you have any questions concerning this review, please contact us at your convenience.

Weweni (Sincerely),

Edith Leoso  
Bad River Band of Lake Superior Tribe of Chippewa  
Tribal Historic Preservation Officer  
[THPO@badriver-nsn.gov](mailto:THPO@badriver-nsn.gov)

From: towernotifyinfo@fcc.gov  
Sent: Tuesday, April 03, 2018 11:00 AM  
To: marianne.walsh@e2pm.com  
Cc: tcns.fccarchive@fcc.gov; kpenrod@delawarenation.com;  
RMaldonado@delawarenation.com  
Subject: Reply to Proposed Tower Structure (Notification ID: 168574) - Email ID  
#5709680

Dear Marianne Walsh,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from Cultural Resources Director Kim Penrod of the Delaware Nation in reference to Notification ID #168574:

We have no interest in this site. However, if the Applicant discovers archaeological remains or resources during construction, the Applicant should immediately stop construction and notify the appropriate Federal Agency and the Tribe.

For your convenience, the information you submitted for this notification is detailed below.

Notification Received: 03/05/2018  
Notification ID: 168574  
Tower Owner Individual or Entity Name: Subcarrier Communications Inc.  
Consultant Name: Marianne Walsh  
Street Address: 87 Hibernia Avenue  
City: Rockaway  
State: NEW JERSEY  
Zip Code: 07866  
Phone: 973-299-5200  
Email: marianne.walsh@e2pm.com

Structure Type: LTOWER - Lattice Tower  
Latitude: 41 deg 3 min 15.0 sec N  
Longitude: 74 deg 15 min 15.6 sec W  
Location Description: 1 Skyline Drive  
City: Wanaque  
State: NEW JERSEY  
County: PASSAIC

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.  
Ground Elevation: 106.7 meters

Support Structure: 91.4 meters above ground level

Overall Structure: 93.3 meters above ground level

Overall Height AMSL: 200.0 meters above mean sea level



The Delaware Tribe of Indians of Oklahoma  
Delaware Tribe Historic Preservation  
P.O. Box 64  
Pocono Lake, PA 18347  
[sbachor@delawaretribe.org](mailto:sbachor@delawaretribe.org)

August 1, 2018

E2 Project Management LLC  
Att: Marianne Walsh  
87 Hibernia Ave.  
Rockaway, NJ 07866

RE: TCNS# 168574

Dear Ms. Walsh,

Thank you for providing the report for the above referenced project. Our review indicates that there are no religious or culturally significant sites within this project area and we have no objection to the proposed project. We defer comment to your office as well as to the State Historic Preservation Office and/or the State Archaeologist.

However, we ask that in the event a concentration of artifacts and/or in the unlikely event any human remains are accidentally unearthed during the project that all work is halted until a qualified archaeologist can evaluate the find and the Delaware Tribe of Indians is informed of the inadvertent discovery.

If you have any questions, feel free to contact this office by phone at (610) 761-7452 or by e-mail at [sbachor@delawaretribe.org](mailto:sbachor@delawaretribe.org).

Sincerely,

Susan Bachor, M.A.  
Archaeologist  
Delaware Tribe Historic Preservation





# EASTERN SHAWNEE TRIBE OF OKLAHOMA

12755 S. 705 Road, Wyandotte, OK 74370  
Bluejacket Building (918) 666-2435, Fax: 888-971-3905

E2 Project Management  
ATTN: Marianne Walsh  
87 Hibernia Ave  
Rockaway, NJ 07866

RE: Cell Tower Project Wanaque Tower, Wanaque, Passaic County, NJ  
**TCNS 168574**

July 9, 2018

Dear Ms. Walsh,

The Cultural Preservation Department of the Eastern Shawnee Tribe of Oklahoma (ESTO) has received the documentation for E2 Project Management's proposed telecommunications project, Wanaque Tower, located at UTM Zone 18, 562660 m E, 4545037 m N (WGS84) in/near Wanaque in Passaic County, NJ. ESTO has reviewed the project, TCNS 168574, in accordance with Section 106 of the National Historic Preservation Act (NHPA). Based on the information provided and a review of our records, we find that **No Historic Properties** of sacred and/or cultural significance to the Tribe will be impacted by this project. Therefore, ESTO has no objection to the project proceeding as described; however, please note that any future changes to this project may require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). **This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe in regard to the proposed project referenced as Wanaque Tower, TCNS 168574.**

However, if during construction cultural objects or human remains are inadvertently discovered, please stop work immediately and contact the Cultural Preservation Department of the Eastern Shawnee Tribe of Oklahoma.

Thank you for consulting with the Eastern Shawnee Tribe of Oklahoma.

Glenna J. Wallace  
Chief  
Eastern Shawnee Tribe of Oklahoma

FOR QUESTIONS OR ADDITIONAL INFORMATION, PLEASE CONTACT:

TRAVIS PATTON  
[TPATTON@ESTOO.NET](mailto:TPATTON@ESTOO.NET)  
918-666-5151 x1860

**Marianne Walsh**

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**From:** Alden Connor <aconnor@kbic-nsn.gov>  
**Sent:** Monday, April 23, 2018 12:33 PM  
**To:** marianne.walsh@e2pm.com

***Keweenaw Bay Indian Community  
Tribal Historic Preservation Office  
and Language Program***

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16429 Beartown Road  
Baraga, Michigan 49908-9210  
[aconnor@kbic-nsn.gov](mailto:aconnor@kbic-nsn.gov), [gloonsfoot@kbic-nsn.gov](mailto:gloonsfoot@kbic-nsn.gov)  
Phone: 906.353.4278 or 4108 Fax: 906.353.7540

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4/23/2018

RE: TCNS Notification ID#168574

[REDACTED]

Ahahnii Boozhoo (Hello! Greetings!);

The KBIC Tribal Historic Preservation Office has identified no properties of interest regarding religious or cultural sites documented at this time in your proposed location. If the scope of work changes in any way, or if artifacts or human remains are discovered, please notify the KBIC THPO immediately.

Please forward any future consultation requests for review of project proposals pursuant to Section 106 of the National Historic Preservation Act to KBIC THPO, Keweenaw Bay Indian Community Tribal Historic Preservation Office or through email at: [gloonsfoot@kbic-nsn.gov](mailto:gloonsfoot@kbic-nsn.gov), and keep us informed of future projects as we continue our efforts to identify and document historic, archaeological and traditional cultural sites in the area so we can assist in making an appropriate determination. (Please note that Ms. Goyen is no longer associated with the THPO office.)

Chi-Miigwech (Big Thank You),

Gary F. Loonsfoot, Jr., Cultural Resources Director/Alden L Connor, Jr.,  
THPO Technician

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*Miigwech!*

*Gary F. Loonsfoot, Jr. and Alden Connor, Jr*

*"If you take care of the language, the spirit-keeper of the language will take care of you."*

**From:** ldfthpo <ldfthpo@ldftribe.com>  
**Sent:** Friday, April 06, 2018 2:28 PM  
**To:** 'marianne.walsh@e2pm.com'; 'joseph.schuchman@e2pm.com'  
**Subject:** TCNS# 168574; Passaic County, NJ; Site Name: Wanaque Tower

Ms. Walsh,

The Lac du Flambeau Tribal Historic Preservation Office (THPO) received your requests for comments or interest concerning the National Historic Preservation Act, Section 106 request for review and comment to the effect on historic and cultural sites within the proposed above referenced project area.

The Lac du Flambeau Tribe does not release any cultural/historical data to any agency outside of the Tribe. We will, however research and check our databases, maps, and any other pertinent inventory records with regards to said project.

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the Lac du Flambeau THPO that the project has **No Effect** to sites of historic significance and/or the direct APE.

This letter evidences the FCC's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects", and the fulfillment of the FCC's responsibility to notify the THPO, as a consulting party in the Section 106 process, under 36 CFR § 800.5(c) "Consulting party review".

Referencing above mentioned project we have determined that we have no objections to the project at this time we have now completed the necessary paper work and research for site documentation and will keep the project open until such time it ends. If the scope of work changes in any way, or if artifacts or human remains are discovered please notify Lac du Flambeau immediately.

Sarah Schuman,  
Assistant Tribal Historic Preservation Officer  
For

Melinda Young,  
Tribal Historic Preservation Officer

P.O. Box 67

Lac du Flambeau, WI 54538

Phone: 715-588-4381

Cell: 715-439-3867

[www.ldftribe.com](http://www.ldftribe.com)



**From:** walsh <bniath@gmail.com>  
**Sent:** Monday, August 06, 2018 10:20 AM  
**To:** Marianne Walsh  
**Subject:** Fwd: TCNS Portal - Red Cliff Band of Lake Superior Chippewa - TCNS #: 168574 - Approved

----- Forwarded message -----

From: <[noreply@tcnsportal.com](mailto:noreply@tcnsportal.com)>  
Date: Mon, Aug 6, 2018 at 9:48 AM  
Subject: TCNS Portal - Red Cliff Band of Lake Superior Chippewa - TCNS #: 168574 - Approved  
To: [bniath@gmail.com](mailto:bniath@gmail.com)

TCNS Portal - Red Cliff Band of Lake Superior Chippewa

**TCNS # 168574 - Approved**

August 06, 2018

Project request approved by the tribe representative.



Red Cliff Band of Lake Superior Chippewa  
Tribal Historic Preservation Office  
88455 Pike Road  
Bayfield, WI 54814  
(715) 779 – 3700 ext. 4243 or 4244

Boozhoo,

The Red Cliff Band's Tribal Historic Preservation Office (THPO) received your request for comments or interest concerning the National Historic Preservation Act, Section 106 request for review and comment to the effect on historic and cultural sites within the proposed referenced project area.

The Red Cliff Band does not release any cultural/historical data to any agency outside of the Tribe. We will, however research and check our databases, maps, and any other pertinent inventory records with regards to said project.

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the cited undertaking at the location noted. Based on the information provided for our review, it is the opinion of the Red Cliff THPO that the project has No Adverse Effect on Historic Properties within the Direct and/or Visual APE.

This response evidences the FCC's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects", and the fulfillment of the FCC's responsibility to notify the THPO, as a consulting party in the Section 106 process, under 36 CFR §

800.5(c) "Consulting party review".

Referencing mentioned project, we have determined that we have no objections to the project at this time. We have now completed the necessary paper work and research for site documentation and will keep the project open until such time that it ends. If the scope of work changes in any way, or if artifacts or human remains are discovered please notify the Red Cliff Band's Tribal Historic Preservation Office immediately.

If you have any questions, please contact us at <https://redcliff-nsn.tcnsportal.com/Home/ContactTribalRepresentative> or  [\(715\)779-3700 Ext 4242](tel:(715)779-3700).

Miigwech,

Red Cliff THPO, Tribal Historic Preservation Office  
Red Cliff Band of Lake Superior Chippewa

**Company:**  
E2 Project Management

**Submitted Consultant:**  
marianne walsh

**Tower:**  
168574

**Tower Type:**  
New Build - Prev Dist (Pre-July 2)

**Submission Date:**  
08/03/2018 05:46 PM

**Tower Fee Amt:**  
\$800.00

**Payment Received:**  
Yes

**Payment Type:**  
Manual

**Trans ID/Check #:**  
8804

**Payment Date:**  
3/22/2018

**Cover Letter:**  
[Red Cliff.pdf](#)

**Archeology Report:**  
[Red Cliff Package 2.pdf](#)

**SHPO Letter (or SHPO Exemption if applicable):**  
[Section 106 Notification of Expiration of SHPOTHPO Review Period- Email ID #2934164.pdf](#)

**USGS Maps:**  
[Topo Map.pdf](#)

**Site Photos:**

[DE Photos.pdf](#)

**Evidence of Disturbance:**

[Wanaque Highlands ZD REV A.pdf](#)

[Click here to log in](#)

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## Marianne Walsh

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**From:** Kim Jumper <kim.jumper@shawnee-tribe.com>  
**Sent:** Tuesday, April 10, 2018 12:55 PM  
**To:** marianne.walsh@e2pm.com  
**Subject:** TCNS 168574  
**Attachments:** image001.jpg; image002.jpg

The Shawnee Tribe is satisfied with efforts conducted to be sure that no Shawnee Tribe historic properties or other cultural resources will likely be adversely affected by construction and use of this tower. The Shawnee Tribe is not currently aware of any specific Shawnee Tribe cultural or historic sites in this project area. We therefore offer no objection to the proposed construction.

Because this tower lies in the homelands of the Shawnee Tribe, in the event that archaeological materials, including human remains, are discovered during construction or later ground-disturbing activities at this location, please re-open consultation at that time by contacting Kim Jumper at [kim.jumper@shawnee-tribe.com](mailto:kim.jumper@shawnee-tribe.com) or 918-542-2441. Similarly, if plans are considered to expand or modify this tower and cause additional ground disturbance in the future, please let us know. Please forward our concerns regarding any such future work and unanticipated discoveries, as well as our contact information, to the appropriate parties.

We urge everyone involved with tower development to construct and maintain their projects in keeping with best practices for minimizing environmental impact - particularly on species, such as birds and bats, who might incur negative impacts from tower development and use. Please also re-vegetate with species native to the area.

We appreciate your efforts to consult with us.

Regards,

Kim Jumper, THPO

Shawnee Tribe





**From:** Marianne Walsh <marianne.walsh@e2pm.com>  
**Sent:** Monday, April 30, 2018 11:48 AM  
**To:** sequahna@yahoo.com  
**Subject:** Request for Comments: TCNS#168574

Ms. Mars- I don't believe we've received a response from the Narragansett Tribe for this site yet. Can you please look into this? If you've already sent it and we've overlooked it, I apologize. Thanks very much.



***\*please note my new contact information***

Marianne Walsh  
Senior Architectural Historian  
**E2 Project Management LLC**  
75 East Main Street  
Rockaway, NJ 07866  
Tel. (973) 625-5600 ext. 406  
Fax. (973) 625-5059  
Cell (201) 753-1165  
[www.e2pm.com](http://www.e2pm.com)

From: towernotifyinfo@fcc.gov  
Sent: Thursday, May 03, 2018 11:26 AM  
To: marianne.walsh@e2pm.com  
Cc: tcnsweekly@fcc.gov  
Subject: Proposed Construction of Communications Facilities Notification of Final  
Contacts - Email ID #21845

Subcarrier Communications Inc.  
Marianne Walsh  
87 Hibernia Avenue  
Rockaway, NJ 07866

Dear Applicant:

This letter addresses the proposed communications facilities listed below that you have referred to the Federal Communications Commission (Commission) for purposes of contacting federally recognized Indian Tribes, including Alaska Native Villages (collectively Indian Tribes), and Native Hawaiian Organizations (NHOs), as specified by Section IV.G of the Nationwide Programmatic Agreement (NPA). Consistent with the procedures outlined in the Commission's recent Declaratory Ruling (1), we have contacted the Indian Tribes or NHOs identified in the attached Table for the projects listed in the attached Table. You referred these projects to us between 04/26/2018 and 05/03/2018. Our contact with these Tribal Nations or NHOs was sent on 05/03/2018.

Thus, as described in the Declaratory Ruling (2), if you or Commission staff do not receive a statement of interest regarding a particular project from any Tribe or NHO within 20 calendar days of 05/03/2018, your obligations under Section IV of the NPA with respect to these Tribal Nations or NHOs are complete(3). If a Tribal Nation or NHO responds that it is interested in participating within the 20 calendar day period, the Applicant must involve it in the review as set forth in the NPA, and may not begin construction until the process set forth in the NPA is completed.

You are reminded that Section IX of the NPA imposes independent obligations on an Applicant when a previously unidentified site that may be a historic property, including an archeological property, is discovered during construction or after the completion of review(4). In such instances, the Applicant must cease construction and promptly notify, among others, any potentially affected Tribal Nation or NHO. A Tribal Nation's or NHO's failure to express interest in participating in pre-construction review of an undertaking does not necessarily mean it is not interested in archeological properties or human remains that may inadvertently be discovered during construction. Hence, an Applicant is still required to notify any potentially affected Tribal Nation or NHO of any such finds pursuant to Section IX or other applicable law.

Sincerely,  
Jill Springer  
Acting Federal Preservation Officer  
Federal Communications Commission  
jill.springer@fcc.gov

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1) See Clarification of Procedures for Participation of Federally Recognized Indian Tribes and Native Hawaiian Organizations Under the Nationwide Programmatic Agreement, Declaratory Ruling, FCC 05-176 (released October 6, 2005) (Declaratory Ruling).

2) Id S 8-10.

3) We note that, under the Declaratory Ruling, an expression of interest by an Indian Tribe or NHO addressed solely to the Commission staff during the 20-day period is sufficient even if it does not contact the Applicant.

4) Id at S 11.

#### LIST OF PROPOSED COMMUNICATIONS TOWERS

TCNS# 168574 Referred Date: 04/30/2018 Location: 1 Skyline Drive, Wanaque, NJ

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.

Tribe Name: Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin

#### LEGEND:

\* - Notification numbers are assigned by the Commission staff for sites where initial contact was not made through TCNS.

From: towernotifyinfo@fcc.gov  
Sent: Thursday, August 09, 2018 9:00 AM  
To: marianne.walsh@e2pm.com  
Cc: tcnsweekly@fcc.gov  
Subject: Proposed Construction of Communications Facilities Notification of Final  
Contacts - Email ID #22331

Subcarrier Communications Inc.  
Marianne Walsh  
87 Hibernia Avenue  
Rockaway, NJ 07866

Dear Applicant:

This letter addresses the proposed communications facilities listed below that you have referred to the Federal Communications Commission (Commission) for purposes of contacting federally recognized Indian Tribes, including Alaska Native Villages (collectively Indian Tribes), and Native Hawaiian Organizations (NHOs), as specified by Section IV.G of the Nationwide Programmatic Agreement (NPA). Consistent with the procedures outlined in the Commission's Wireless Infrastructure Second Report and Order (1), we have contacted the Indian Tribes or NHOs identified in the attached Table for the projects listed in the attached Table. You referred these projects to us between 08/02/2018 and 08/09/2018. Our contact with these Tribal Nations or NHOs was sent on 08/09/2018.

Thus, as described in the Wireless Infrastructure Second Report and Order (2), if you or Commission staff do not receive a statement of interest regarding a particular project from any Tribe or NHO within 15 calendar days of 08/09/2018, your obligations under Section IV of the NPA with respect to these Tribal Nations or NHOs are complete. If a Tribal Nation or NHO responds that it has concerns about a historic property of traditional religious and cultural significance that may be affected by the proposed construction within the 15 calendar day period, the Applicant must involve it in the review as set forth in the NPA, and may not begin construction until the process set forth in the NPA is completed.

You are reminded that Section IX of the NPA imposes independent obligations on an Applicant when a previously unidentified site that may be a historic property, including an archeological property, is discovered during construction or after the completion of review. In such instances, the Applicant must cease construction and promptly notify, among others, any potentially affected Tribal Nation or NHO. A Tribal Nation's or NHO's failure to express interest in participating in pre-construction review of an undertaking does not necessarily mean it is not interested in archeological properties or human remains that may inadvertently be discovered during construction. Hence, an Applicant is still required to notify any potentially affected Tribal Nation or NHO of any such finds pursuant to Section IX or other applicable law.

Sincerely,  
Jill Springer  
Federal Preservation Officer  
Federal Communications Commission  
jill.springer@fcc.gov

---

1) See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Deployment, Second Report and Order, FCC 18-30 (Mar. 30, 2018) (Wireless Infrastructure Second Report and Order).

2) See id. at paras. 111-112.

LIST OF PROPOSED COMMUNICATIONS TOWERS

TCNS# 168574 Referred Date: 08/06/2018 Location: 1 Skyline Drive, Wanaque, NJ

Detailed Description of Project: 300' lattice tower on concrete pier foundations to replace existing 110' lattice tower and interim temp. 120' lattice tower; install 11.5' x 22' equip. shelter at tower base; utility conduit routed underground in existing trench; access via existing.

Tribe Name: Wyandotte Nation

**LEGEND:**

\* - Notification numbers are assigned by the Commission staff for sites where initial contact was not made through TCNS.

# National Flood Hazard Layer FIRMette



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

|                             |  |                                                                                                                                                                   |
|-----------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS  |  | Without Base Flood Elevation (BFE)<br>Zone A, V, A99                                                                                                              |
|                             |  | With BFE or Depth                                                                                                                                                 |
|                             |  | Regulatory Floodway Zone AE, AO, AH, VE, AR                                                                                                                       |
| OTHER AREAS OF FLOOD HAZARD |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                             |  | Future Conditions 1% Annual Chance Flood Hazard Zone X                                                                                                            |
|                             |  | Area with Reduced Flood Risk due to Levee. See Notes. Zone X                                                                                                      |
|                             |  | Area with Flood Risk due to Levee Zone D                                                                                                                          |
| OTHER AREAS                 |  | NO SCREEN Area of Minimal Flood Hazard Zone X                                                                                                                     |
|                             |  | Effective LOMRs                                                                                                                                                   |
|                             |  | Area of Undetermined Flood Hazard Zone D                                                                                                                          |
| GENERAL STRUCTURES          |  | Channel, Culvert, or Storm Sewer                                                                                                                                  |
|                             |  | Levee, Dike, or Floodwall                                                                                                                                         |
| OTHER FEATURES              |  | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation                                                                                                 |
|                             |  | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation                                                                                                 |
|                             |  | Coastal Transect                                                                                                                                                  |
|                             |  | Base Flood Elevation Line (BFE)                                                                                                                                   |
|                             |  | Limit of Study                                                                                                                                                    |
|                             |  | Jurisdiction Boundary                                                                                                                                             |
| MAP PANELS                  |  | Coastal Transect Baseline                                                                                                                                         |
|                             |  | Profile Baseline                                                                                                                                                  |
|                             |  | Hydrographic Feature                                                                                                                                              |
| MAP PANELS                  |  | Digital Data Available                                                                                                                                            |
|                             |  | No Digital Data Available                                                                                                                                         |
|                             |  | Unmapped                                                                                                                                                          |

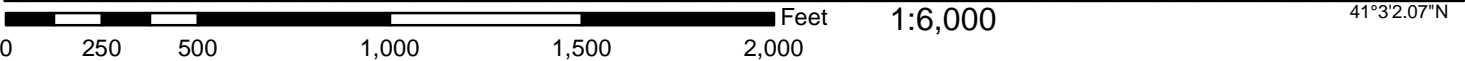


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **5/25/2018 at 12:58:00 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

41°3'29.20"N



**ATTACHMENT D**

**PHOTO LOG**



**Photo Documentation Log**  
Subcarrier Communications  
Wanaque Tower  
1 Skyline Drive, Wanaque, Passaic County, NJ  
(Block 250, Lot 1)

**Figure: 1**

**Description:** Entrance off of Skyline Drive to the site.



**Figure: 2**

**Description:** View of the site from Skyline Drive facing E-SE. Existing 110 tower and equipment sheds present (to be removed)





**Photo Documentation Log**  
Subcarrier Communications  
Wanaque Tower  
1 Skyline Drive, Wanaque, Passaic County, NJ  
(Block 250, Lot 1)

**Figure: 3**

**Description:** Existing 110 tower and equipment sheds present (to be removed)



**Figure: 4**

**Description:** View of existing gravel access drive surrounded by lower lying wooded areas.



**Photo Documentation Log**  
Subcarrier Communications  
Wanaque Tower  
1 Skyline Drive, Wanaque, Passaic County, NJ  
(Block 250, Lot 1)

**Figure: 5**

**Description:** Backside of existing equipment sheds within the property.



**Figure: 6**

**Description:** Wooded areas with wetland areas further to the east.



**ATTACHMENT E**  
**SITE LOCATION MAP AND LEASE EXHIBITS**





SITE  
41-03-15.39  
74-15-15.89  
E - 559852.615  
N - 809064.977

**E2 Project Management**



87 Hibernia Avenue  
Rockaway, NJ 07866

Phone: 973-299-5200  
Fax: 973-299-5059

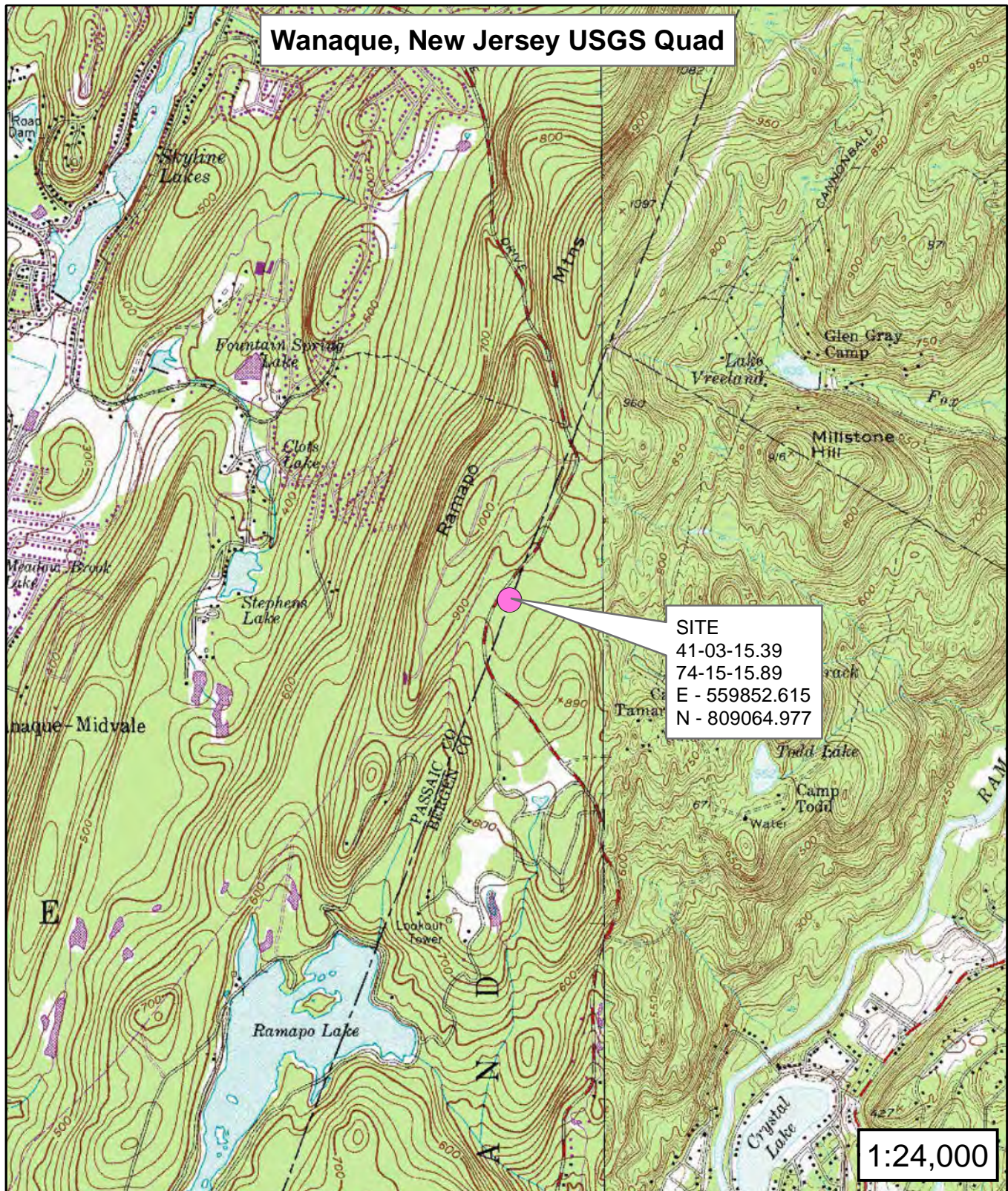


Subcarriers Communications  
139 White Oak Lane  
Old Bridge, New Jersey 08857

Project Number: P-17-73-01  
Wanaque Tower  
1 Skyline Drive  
Wanaque, New Jersey

**Figure 1: Road Map**





## E2 Project Management



87 Hibernia Avenue  
 Rockaway, NJ 07866

Phone: 973-299-5200  
 Fax: 973-299-5059



Subcarriers Communications  
 139 White Oak Lane  
 Old Bridge, New Jersey 08857

Project Number: P-17-73-01  
 Wanaque Tower  
 1 Skyline Drive  
 Wanaque, New Jersey

**Figure 2: USGS  
 Topographic Map**



SUBCARRIER COMMUNICATIONS INC

WIRELESS COMMUNICATION FACILITY

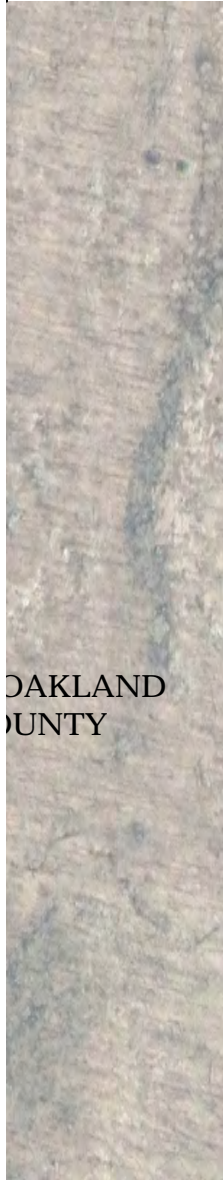

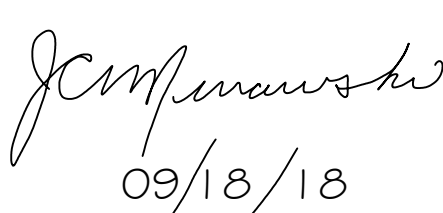
WANAQUE TOWER

1 SKYLINE DRIVE,

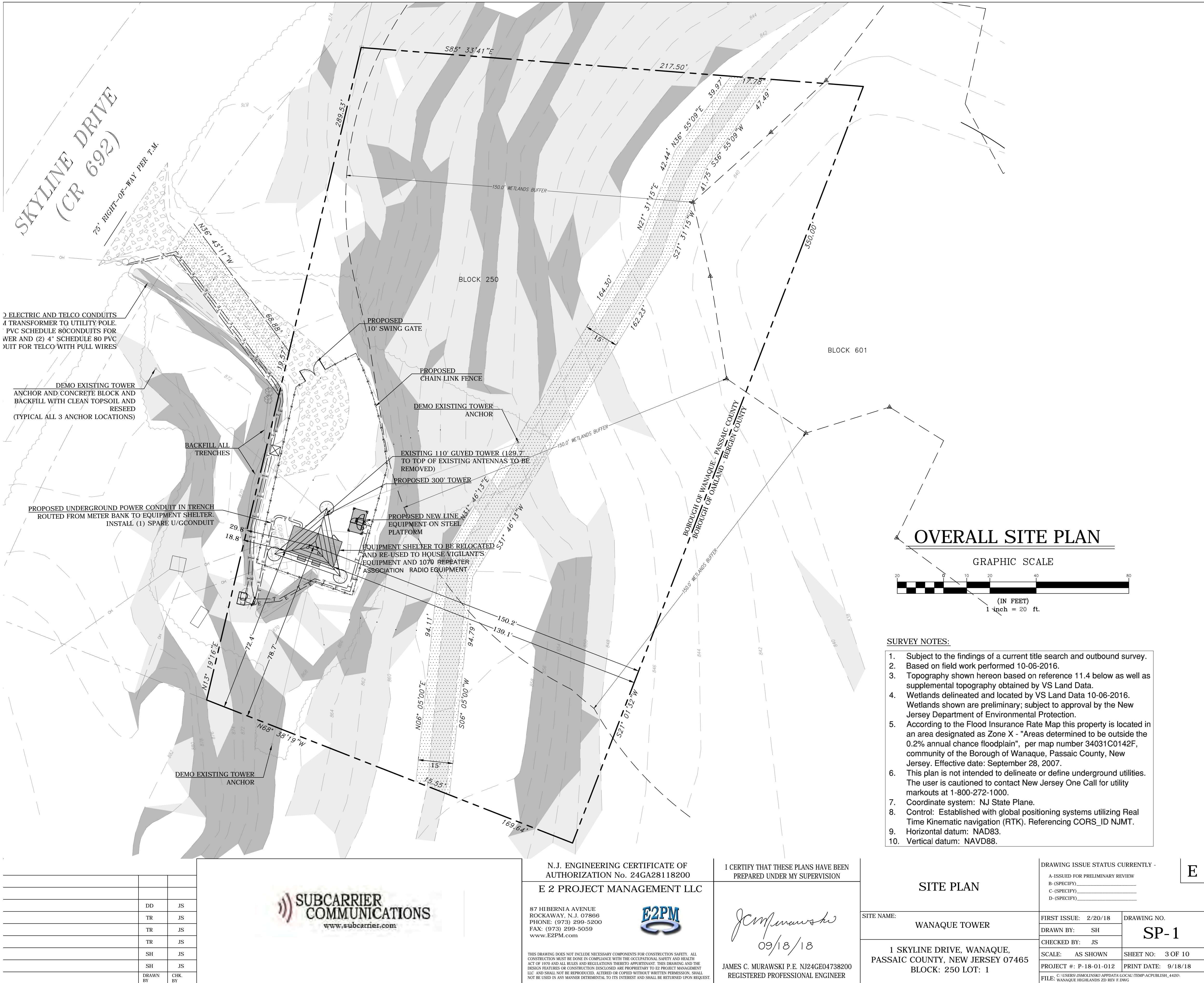
BOROUGH OF WANAQUE,

PASSAIC COUNTY, NJ 07465

BLOCK 250, LOT 1

|                                                                                                                                                                                                                  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               |                                                                                                                                        |                 |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|
|                                                                                                                                | LIST OF DRAWINGS                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BULK REQUIREMENTS                                                                  |           |                               |                                                                                                                                        | PROJECT DATA    |                                                                                     |
|                                                                                                                                                                                                                  | T-1                                  | TITLE SHEET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ZONE: WRC - WATER RESOURCE CONSERVATION<br>PROPOSED USE: TELECOMMUNICATION TOWER ⑤ |           |                               |                                                                                                                                        | PROJECT:        | WANAQUE TOWER                                                                       |
|                                                                                                                                                                                                                  | T-2                                  | TAX/ZONING MAP & 200' PROPERTY OWNER LIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                    | ORDINANCE | EXISTING                      | PROPOSED                                                                                                                               | LOCATION:       | 1 SKYLINE DRIVE, WANAQUE,<br>PASSAIC COUNTY, NJ 07465                               |
|                                                                                                                                                                                                                  | SP-1                                 | SITE PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | MINIMUM LOT AREA                                                                   | NA        | 1.395 ACRES (60,794.70 SQ FT) | NC                                                                                                                                     | LOT:            | 1                                                                                   |
|                                                                                                                                                                                                                  | SP-2                                 | ENLARGED SITE PLAN PHASE 1 & 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MINIMUM LOT WIDTH                                                                  | 300 FT    | 217.50 FT ①                   | NC                                                                                                                                     | BLOCK:          | 250                                                                                 |
|                                                                                                                                                                                                                  | SP-3                                 | SIGHT DISTANCE PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MINIMUM LOT FRONTAGE                                                               | NA        | NA                            | NC                                                                                                                                     | ZONE:           | WRC: WATER RESOURCE<br>CONSERVATION                                                 |
|                                                                                                                                                                                                                  | E-1                                  | ELEVATIONS PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MINIMUM FRONT YARD                                                                 | NA        | NA                            | NA                                                                                                                                     | PROPERTY OWNER: | SUBCARRIER COMMUNICATIONS INC<br>139 WHITE OAK LANE<br>OLD BRIDGE, NEW JERSEY 08857 |
|                                                                                                                                                                                                                  | A-1                                  | VIGILANT GLOBAL ANTENNA MOUNTING SECTIONS AND EQUIPMENT DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                       | MINIMUM SIDE                                                                       | NA        | NA                            | NA                                                                                                                                     | CONTACT :       | LISA OLESKY<br>732-607-2828 (EXT. 139)                                              |
|                                                                                                                                                                                                                  | A-2                                  | NEW LINE NETWORKS ANTENNA MOUNTING SECTIONS AND EQUIPMENT PLATFORM DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                            | MINIMUM REAR                                                                       | NA        | NA                            | NA                                                                                                                                     | APPLICANT:      | SUBCARRIER COMMUNICATIONS INC<br>139 WHITE OAK LANE<br>OLD BRIDGE, NEW JERSEY 08857 |
|                                                                                                                                                                                                                  | C-1                                  | CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MINIMUM LOT DEPTH                                                                  | NA        | NA                            | NC                                                                                                                                     | CONTACT:        | LISA OLESKY<br>732-607-2828 (EXT. 139)                                              |
| SE-1                                                                                                                                                                                                             | SOIL EROSION & SEDIMENT CONTROL PLAN | BUILDING HEIGHT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 35 FT                                                                              | NA        | NC                            | TOWNSHIP CERTIFICATION                                                                                                                 |                 |                                                                                     |
| GENERAL NOTES                                                                                                                                                                                                    |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | APPROVED THIS _____ DAY OF _____ 20____                                                                                                |                 |                                                                                     |
| 1. THE LOCATION OF PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE RESPECTIVE UTILITY COMPANIES AND MAY NEED TO BE RELOCATED.                                                                   |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | CHAIRMAN _____                                                                                                                         |                 |                                                                                     |
| 2. THE PROPOSED FACILITY IS UNMANNED. OCCUPANCY IS LIMITED TO PERIODIC VISITS BY TOWER TENANTS FOR ROUTINE MAINTENANCE AND INSPECTION APPROXIMATELY ONCE OR TWICE A MONTH. THEREFORE NO NEW PARKING IS PROPOSED. |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | SECRETARY _____                                                                                                                        |                 |                                                                                     |
| 3. POTABLE WATER AND SANITARY SEWER SERVICES ARE NOT REQUIRED OR PROPOSED FOR THE NEW FACILITY.                                                                                                                  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | TOWNSHIP ENGINEER _____                                                                                                                |                 |                                                                                     |
| 4. ONLY TASK LIGHTING IS PROPOSED.                                                                                                                                                                               |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | TITLE SHEET                                                                                                                            |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | N.J. ENGINEERING CERTIFICATE OF<br>AUTHORIZATION No. 24GA28118200<br>E 2 PROJECT MANAGEMENT LLC                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | DRAWING ISSUE STATUS CURRENTLY -<br>A- ISSUED FOR PRELIMINARY REVIEW<br>B- (SPECIFY) _____<br>C- (SPECIFY) _____<br>D- (SPECIFY) _____ |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | 87 HIBERNIA AVENUE<br>ROCKAWAY, N.J. 07866<br>PHONE: (973) 299-5200<br>FAX: (973) 299-5059<br>www.E2PM.com                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                    |           |                               | 1 I CERTIFY THAT THESE PLANS HAVE BEEN<br>PREPARED UNDER MY SUPERVISION                                                                |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                    |           |                               | <br>09/18/18                                      |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREBY APPROPRIANT. THIS DRAWING AND THE DESIGN FEATURES OR CONSTRUCTION DISCLOSED ARE PROPRIETARY TO E2 PROJECT MANAGEMENT LLC AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. SHALL NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST AND SHALL BE RETURNED UPON REQUEST. |                                                                                    |           |                               | JAMES C. MURAWSKI P.E. NJ24GE04738200<br>REGISTERED PROFESSIONAL ENGINEER                                                              |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | SITE NAME:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                    |           |                               | DRAWING NO.                                                                                                                            |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | WANAQUE TOWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                    |           |                               | T-1                                                                                                                                    |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      | 1 SKYLINE DRIVE, WANAQUE,<br>PASSAIC COUNTY, NEW JERSEY 07465<br>BLOCK: 250 LOT: 1                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                    |           |                               | SHEET NO: 1 OF 10                                                                                                                      |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | PRINT DATE: 9/18/18                                                                                                                    |                 |                                                                                     |
|                                                                                                                                                                                                                  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |           |                               | FILE: C:\USERS\JSMOLINSKI\APPDATA\LOCAL\TEMP\AC\PUBLISH_4480<br>FILE: WANAQUE HIGHLANDS 2D REV F.DWG                                   |                 |                                                                                     |





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|  | SH       | JS     |
|  | DRAWN BY | CHK BY |



**SUBCARRIER COMMUNICATIONS**  
www.subcarrier.com

N.J. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 24GA28118200

**E 2 PROJECT MANAGEMENT LLC**

87 HIBERNIA AVENUE  
ROCKAWAY, N.J. 07866  
PHONE: (973) 299-5200  
FAX: (973) 299-5059  
www.E2PM.com



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1 CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION

*James C. Murawski*  
09/18/18

JAMES C. MURAWSKI P.E. NJ24GE04738200  
REGISTERED PROFESSIONAL ENGINEER

**SITE PLAN**

DRAWING ISSUE STATUS CURRENTLY -

A: ISSUED FOR PRELIMINARY REVIEW

B: (SPECIFY)

C: (SPECIFY)

D: (SPECIFY)

FIRST ISSUE: 2/20/18

DRAWN BY: SH

CHECKED BY: JS

SCALE: AS SHOWN

PROJECT #: P-18-01-012

DRAWING NO.

**SP-1**

SHEET NO: 3 OF 10

PRINT DATE: 9/18/18



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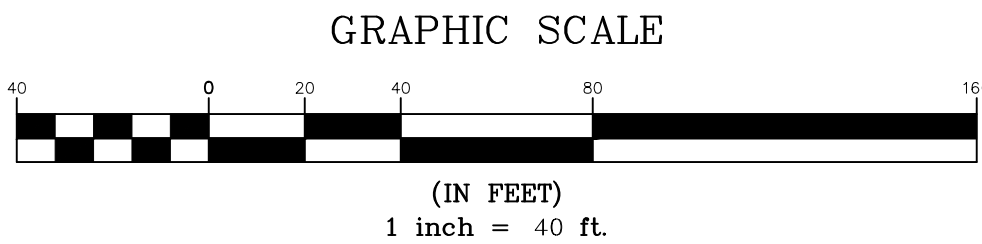


AERIAL MAP REFERENCE:

AERIAL MAPPING OBTAINED FROM THE NEW JERSEY GEOGRAPHIC INFORMATION NETWORK, SID PANEL REFERENCE J3C14.



SIGHT DISTANCE PLAN

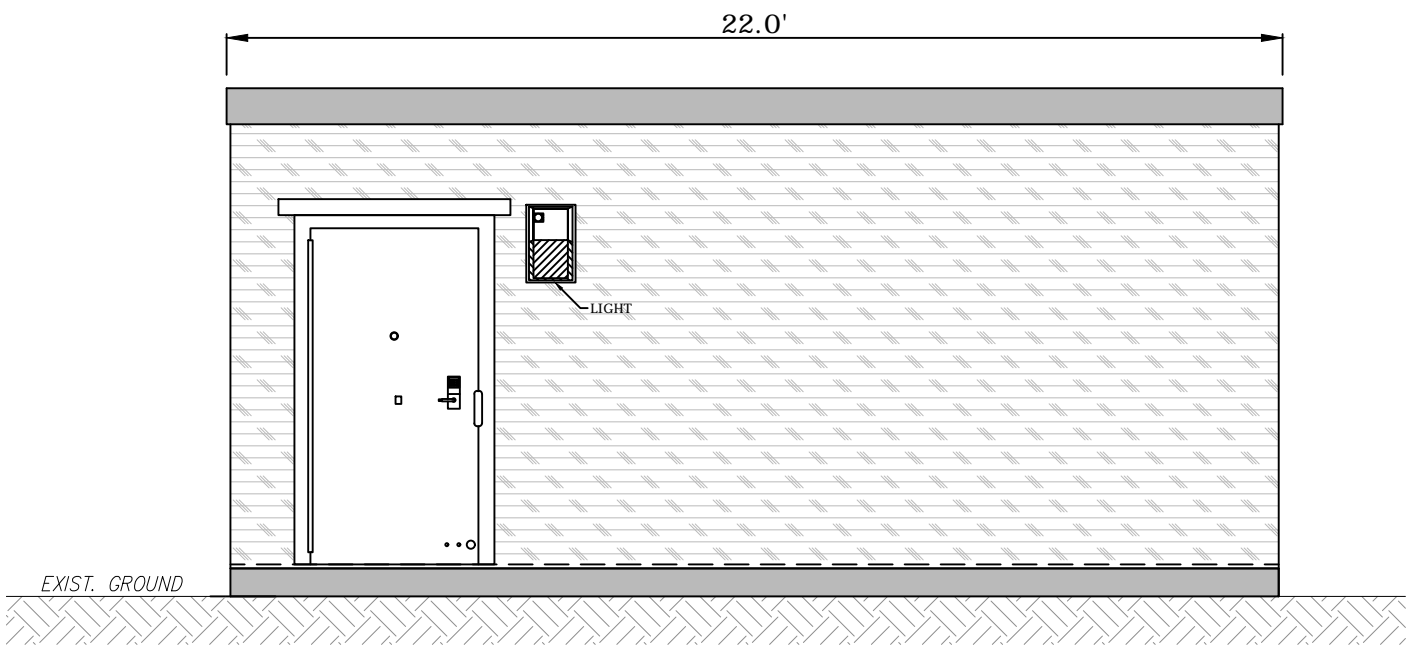
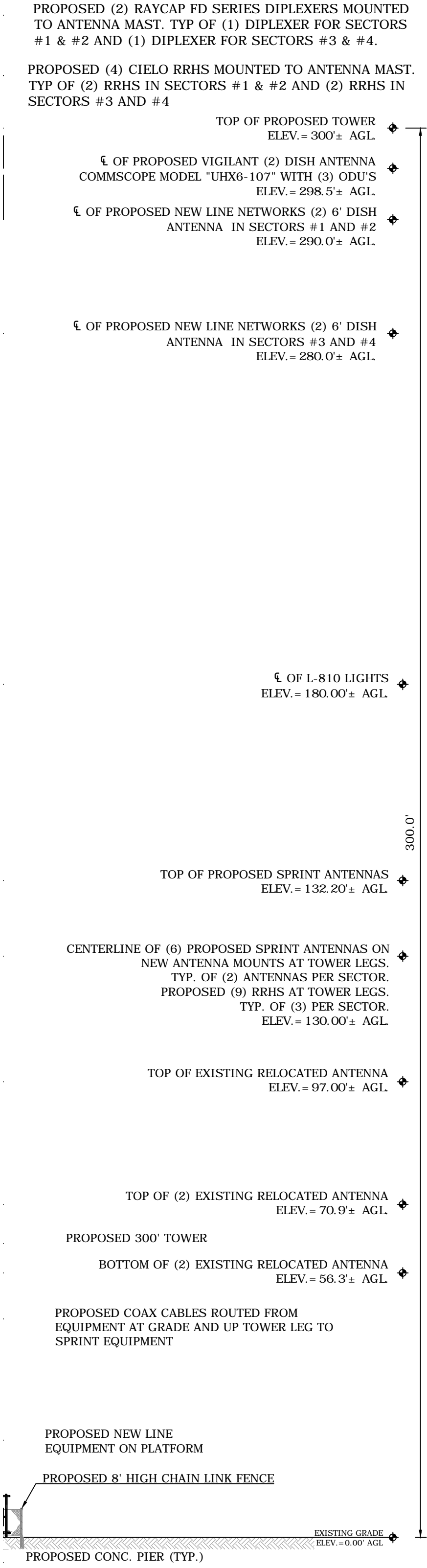


| SCHEDULE OF REVISIONS |         |                                       |          |         |
|-----------------------|---------|---------------------------------------|----------|---------|
| REV. NO.              | DATE    | DESCRIPTION OF CHANGES                | DRAWN BY | CHK. BY |
| F                     | 9/18/18 | ISSUED PER COUNTY OF PASSAIC COMMENTS | DD       | JS      |
| E                     | 6/21/18 | ISSUED FOR MUNICIPAL REVIEW/APPROVAL  | TR       | JS      |
| D                     | 5/16/18 | REVISED PER COMMENTS                  | TR       | JS      |
| C                     | 4/26/18 | REVISED PER ANTENNA CO-LOCATION       | TR       | JS      |
| B                     | 3/09/18 | REVISED AND REISSUED FOR REVIEW       | SH       | JS      |
| A                     | 2/20/18 | ISSUED FOR PRELIMINARY REVIEW         | SH       | JS      |

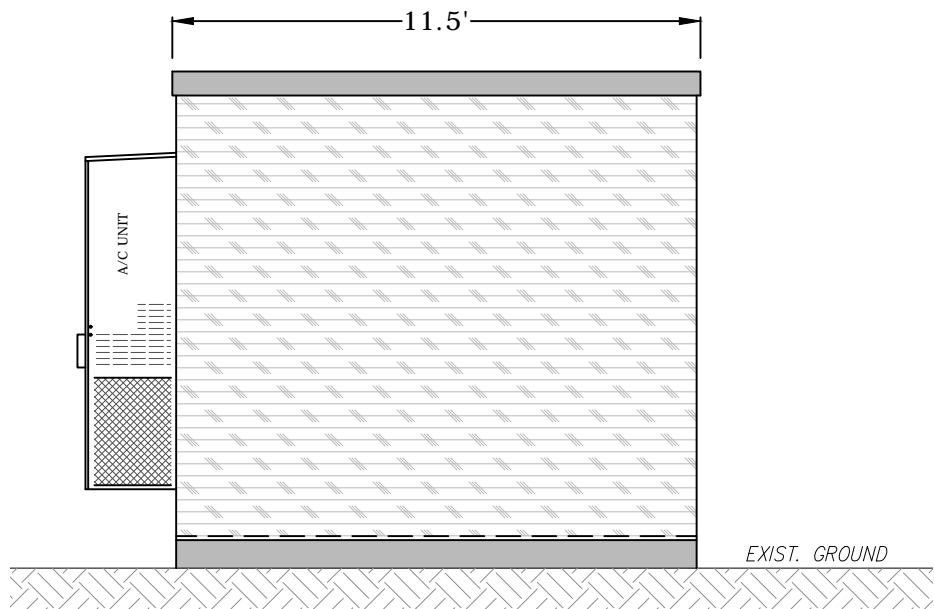


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| N.J. ENGINEERING CERTIFICATE OF AUTHORIZATION No. 24GA28118200<br><b>E 2 PROJECT MANAGEMENT LLC</b><br><br>87 HIBERNIA AVENUE<br>ROCKAWAY, N.J. 07866<br>PHONE: (973) 299-5200<br>FAX: (973) 299-5059<br>www.E2PM.com<br><br><small>THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICANT. THIS DRAWING AND THE DESIGN FEATURES OR CONSTRUCTION DISCLOSED ARE PROPRIETARY TO E2 PROJECT MANAGEMENT LLC AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED WITHOUT WRITTEN PERMISSION. SHALL NOT BE USED IN ANY MANNER DETRIMENTAL TO ITS INTEREST AND SHALL BE RETURNED UPON REQUEST.</small> | I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <br>09/18/18<br><br>JAMES C. MURAWSKI P.E. NJ24GE04738200<br>REGISTERED PROFESSIONAL ENGINEER |

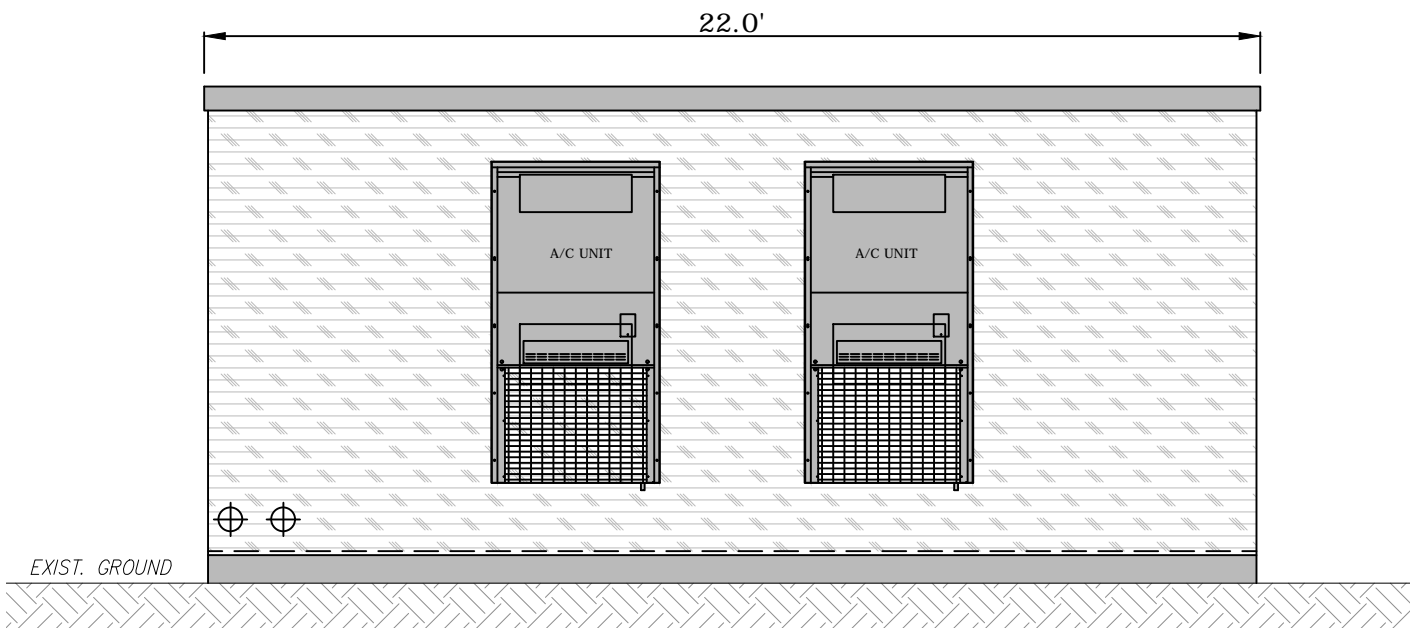




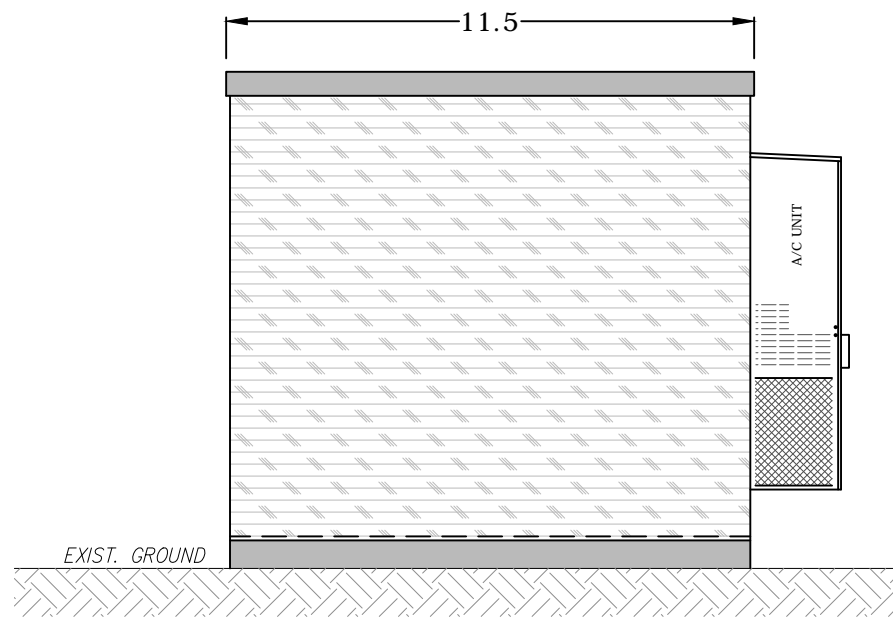
2 NORTH SHELTER ELEVATION  
E-1 SCALE: 3"= 1'-0"



3 EAST SHELTER ELEVATION  
E-1 SCALE: 3"= 1'-0"

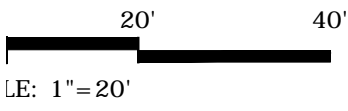


4 SOUTH SHELTER ELEVATION  
E-1 SCALE: 3"= 1'-0"



5 WEST SHELTER ELEVATION  
E-1 SCALE: 3"= 1'-0"

ELEVATION



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|  | SH       | JS      |
|  | DRAWN BY | CHK. BY |



N.J. ENGINEERING CERTIFICATE OF  
AUTHORIZATION No. 24GA28118200  
E 2 PROJECT MANAGEMENT LLC

87 HIBERNIA AVENUE  
ROCKAWAY, N.J. 07866  
PHONE: (973) 299-5200  
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I CERTIFY THAT THESE PLANS HAVE BEEN  
PREPARED UNDER MY SUPERVISION

JAMES C. MURAWSKI P.E. NJ24GE04738200  
REGISTERED PROFESSIONAL ENGINEER

ELEVATIONS PLAN

SITE NAME: WANAQUE TOWER

1 SKYLINE DRIVE, WANAQUE,  
PASSAIC COUNTY, NEW JERSEY 07465  
BLOCK: 250 LOT: 1

DRAWING ISSUE STATUS CURRENTLY -  
A- ISSUED FOR PRELIMINARY REVIEW  
B- (SPECIFY)  
C- (SPECIFY)  
D- (SPECIFY)

|                                                           |                     |
|-----------------------------------------------------------|---------------------|
| FIRST ISSUE: 2/20/18                                      | DRAWING NO.         |
| DRAWN BY: SH                                              | E-1                 |
| CHECKED BY: JS                                            |                     |
| SCALE: AS SHOWN                                           | SHEET NO: 5 OF 10   |
| PROJECT #: P-18-01-012                                    | PRINT DATE: 5/16/18 |
| FILE: M:\PROJECTS\TELECOM\SUBCARRIER\WANAQUE\DRAWINGS\ZD- |                     |

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