VISIBILITY ANALYSIS

CANTERBURY SOUTH CT

HOLOWATY PROPERTY
46 CEMETERY ROAD
CANTERBURY, CONNECTICUT 06331

Prepared for:

Verizon Wireless
99 East River Drive
East Hartford CT 06108

Prepared by:

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May 2017

Project Introduction

Cellco Partnership (d/b/a Verizon Wireless) is pursuing a Certificate of Environmental Compatibility and Public Need from the Connecticut Siting Council ("Council") for the development of a new wireless communications facility ("Facility") at 46 Cemetery Road in Canterbury, Connecticut (the "Host Property"). At the request of Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visibility of the proposed Facility within a two-mile radius of the proposed site location ("Study Area"). The Study Area also includes parts of the neighboring municipalities of Scotland, Sprague, and Lisbon which are located in the western, southwestern, and southeastern portions of the Study Area, respectively.

Site Description and Setting

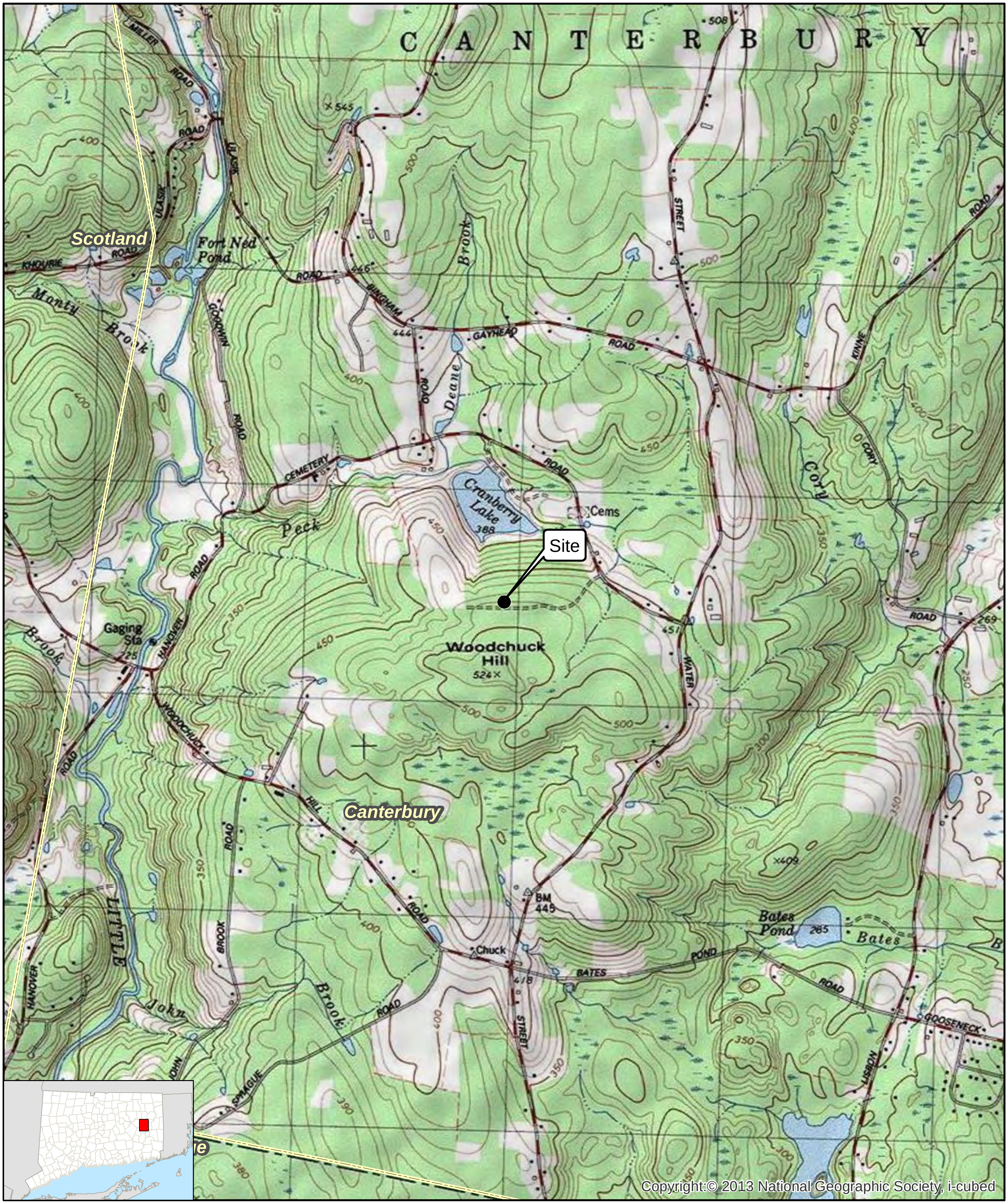
The Host Property consists of an approximately 41.8-acre parcel located on the western side of Cemetery Road, approximately 0.45 mile west of Water Street and approximately 0.5 mile south of Bingham Road 2. The residentially developed Host Property includes a large fenced field currently used to pasture goats. The area proposed for the Facility (the "Site") is located in the southwestern corner of the fenced field, approximately 1,559 feet southwest of Cemetery Road at a ground elevation of ±490 feet Above Mean Sea Level ("AMSL"). See *Figure 1 – Site Location Map.*

The proposed Facility would include a steel monopole with appurtenances that would extend to an overall height of ±160 feet. The Facility will be surrounded by a ±50-foot by ±50-foot, fenced, gravel based equipment compound with a ±26-foot by ±12-foot equipment platform with a steel canopy. A ±675-foot long, ±12 wide gravel access drive would be constructed along the south side of the fenced field and connect to an existing gravel drive and then to the paved driveway that serves the residence. The proposed Facility components and locations are illustrated in in *Figure 2 – Proposed Compound and Elevation Plan.*

Land use within the immediate vicinity of the Host Property is a mix of residential development, agricultural land and large portions of undeveloped forest. The Mohegan State Forrest is situated approximately 1.75 miles to the west and Kinne Preserve Park (aka Bicentennial Park) approximately 1.3 miles to the east of the Site. The topography is characterized generally by rolling to steep hills, with ground elevations ranging from approximately 190 feet AMSL to nearly 570 feet AMSL. The tree cover within the Study Area (consisting of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately 4,755 acres of the 8,042-acre study area (±59%).

Methodology

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private properties and other areas inaccessible for direct observations. The in-field analyses included a balloon float and reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory



Legend

Site

Municipal Boundary

Site Location Map

Proposed Wireless
Telecommunications Facility
Canterbury South CT
46 Cemetery Road
Canterbury, Connecticut

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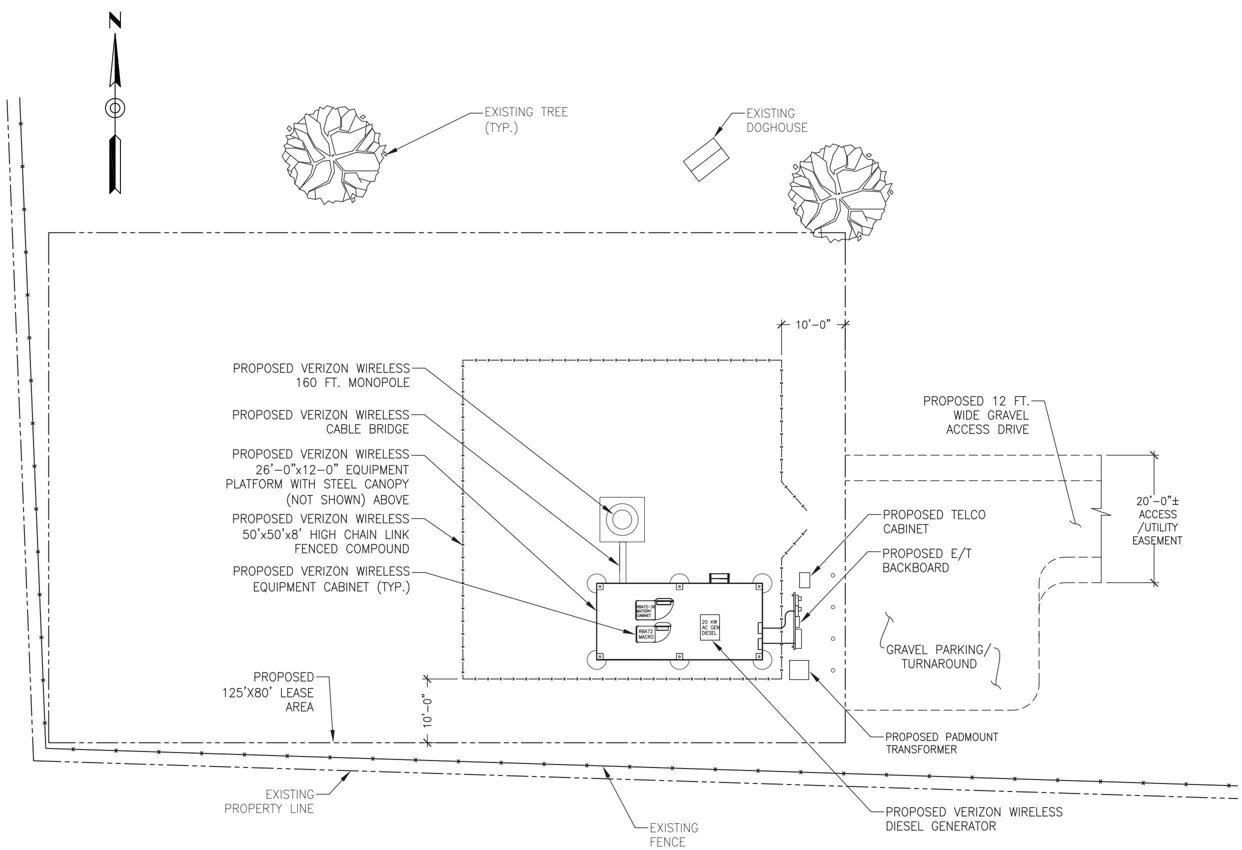
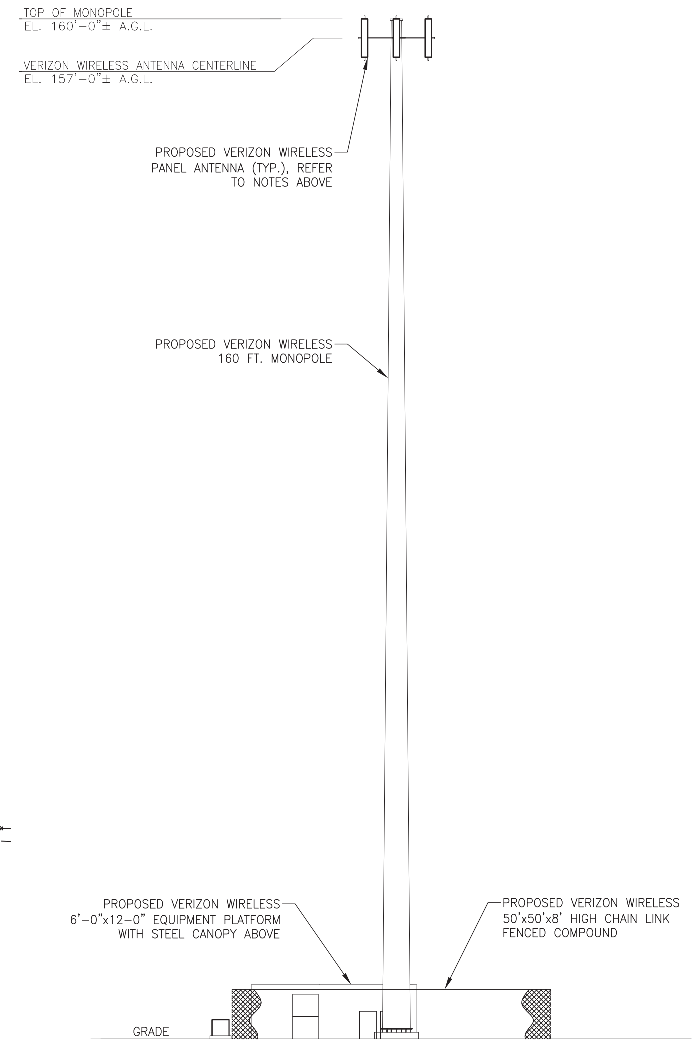
Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Scotland, CT (1983)
Map Scale: 1:24,000
Map Date: April 2017

N
W E
S

2,000 1,000 0 2,000
Feet



COMPOUND PLAN
NOT TO SCALE



NORTH ELEVATION
NOT TO SCALE

FIGURE 2: PROPOSED COMPOUND AND ELEVATION PLAN

Details extracted from technical drawings provided by On Air Engineering, LLC dated 2-14-17.

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Preliminary Computer Modeling

To conduct this assessment, a predictive computer model was developed specifically for this project using TerrSet, an image analysis program developed by Clark Labs at Clark University, to provide an estimation of potential visibility throughout the Study Area. The predictive model incorporates Project- and Study Area-specific data, including the Site location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (which are the primary features that can block direct lines of sight).

Information used in the model included lidar[1]-based digital elevation data and customized land use data layers developed specifically for this analysis. Lidar is a remote-sensing technology that develops elevation data in meters by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the returns can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building." The system is also designed to capture many more data points than older radar-based systems. Thus, lidar-based digital elevation models ("DEM"s) have a much finer resolution and can also identify the different features of the landscape at the time that it was captured.

Viewshed analysis using lidar data provide a much more detailed view of the potential obstacles (especially trees and buildings), and therefore the viewshed modeling produces results with many smaller areas of visibility than those produced by using radar-based DEMs. Its precision makes lidar a superior source of data, but at present it is only available for limited areas of the state. The viewshed results are also checked against the most current aerial photographs in case significant changes (a new housing development, for example) have occurred since the time the lidar data was captured.

The lidar-based DEM created for this analysis represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in 2010. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial photography (flown in 2016) using the image processing tools. Terrset develops light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, surface water and other distinct land use features.

With these data inputs, the model is then queried to determine where the top of the Facility can be seen from any point(s) within the Study Area, given the intervening existing topography and vegetation. The results of the preliminary analysis are intended to provide a representation of those areas where portions of the Facility *may* potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. The Facility however may not necessarily be visible from all locations within those areas identified by the predictive model. It is important to note that the computer model cannot account for mass density, the

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[1] Lidar (a word invented to mean "light radar") may also be referred to as LiDAR, an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

height, diameter and branching variability of the trees, or the degradation of views that occur with distance. In addition, each point – or pixel - represents about one square meter in area, and thus is not predicting visibility from all viewpoints through all possible obstacles. Although large portions of the predicted viewshed may theoretically offer visibility of the Facility, because of these unavoidable limitations the quality of those views may not be sufficient for the human eye to recognize the tower or discriminate it from other surrounding objects. Visibility also varies seasonally with increased, albeit obstructed, views occurring during "leaf-off" conditions. Beyond the density of woodlands found within the given Study Area, each individual tree has its own unique trunk, pole timber and branching pattern characteristics that provide varying degrees of screening in leafless conditions which cannot be precisely modeled.

Balloon Float and Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon float, vehicular and pedestrian reconnaissance, and photo-documentation.

On April 18, 2017, APT personnel conducted a balloon float and field reconnaissance to evaluate the visibility associated with the proposed Facility and to obtain existing conditions photographs for use in this report. The balloon float consisted of raising an approximately four-foot diameter, red helium-filled balloon tethered to a string height of 160 feet above ground level ("AGL") at the Site. Weather conditions were favorable for the in-field activities, with calm winds (around 5 miles per hour) and mostly sunny skies.

Once the balloon was secured, APT conducted a Study Area reconnaissance by driving along the local and State roads and other publicly-accessible locations to document and inventory where the balloon could be seen above/through the tree canopy and where the balloon was not visible. Photographs were obtained from several vantage points to document the views towards the Site. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens. APT uses a standard focal length of 50mm, presenting a consistent field of view throughout the document. On occasion, APT will include photos taken at lower focal lengths, providing a greater depth of field and context to the scene by including surrounding features within the photograph. In this report, photographs 4, 16, 24, and 25 were taken with a 24mm focal length and photograph 10 was taken using a 35mm focal length.

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the balloon float, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over or under-predict visibility. Once the additional data was integrated into the model, APT re-calculated the visibility of the proposed Facility from within the Study Area to assist in producing the final viewshed maps.

Photographic Simulations

Photographic simulations were generated to portray scaled renderings of the proposed Facility from representative locations where the proposed Facility would be visible. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the Site area and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs.

For presentation purposes in this report, the photographs were taken with focal lengths ranging from 24mm to 50mm and produced in an approximate 7-inch by 10.5-inch format. When viewing in this format size, we believe it is important to present the largest representational image while providing key contextual elements (landmarks, street signs, utility poles, etc so that the viewer can determine the proportionate scale of each object within the scene. Photo-documentation of the balloon float and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The balloon float photos provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The photo-simulations are intended to provide the reader with a general understanding of the different views that might be achieved of the Facility. It is important to consider that the publicly-accessible locations selected are typically representative of a “worst case” scenario. They were chosen to present unobstructed view lines (wherever possible), are static in nature and do not necessarily fairly characterize the prevailing views from all locations within a given area. From several locations, moving a few feet in any direction will result in a different perspective of the Facility than what is presented in the photographs. In several cases, a view of the Facility may be limited to the immediate area of the specific photo location presented herein.

Photograph Locations

The table below summarizes characteristics of the photographs and simulations presented in the attachment to this report including a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Facility and the general characteristics of that view. The photo locations were chosen in the field because they provide generally unobstructed view lines towards the Site and represent the extent and nature of visibility associated with the proposed Facility. Photo-simulations were prepared for the 19 locations with year-round and seasonal visibility to depict the proposed installation. The photo locations and simulations are depicted within the attachments provided at the end of this report.

View	Location	Orientation	Distance to Site	View Characteristics
1	Water Street	Southwest	±1.60 Miles	Not Visible
2	Water Street at Kinne Road	Southwest	±0.91 Mile	Not Visible
3	Water Street	Southwest	±0.67 Mile	Not Visible
4	Water Street at Cemetery Road*	West	±0.52 Mile	Not Visible
5	Water Street	Northwest	±0.62 Mile	Not Visible
6	Water Street	Northwest	±0.76 Mile	Not Visible
7	Woodchuck Hill Road	North	±1.04 Miles	Not Visible
8	Water Street	North	±1.64 Miles	Not Visible
9	Garoshen Road	Northeast	±0.69 Mile	Not Visible
10	Woodchuck Hill Road**	Northeast	±1.05 Miles	Not Visible
11	Goodwin Road No. 1	Southeast	±0.83 Mile	Not Visible
12	Ulasik Road	Southeast	±1.07 Miles	Not Visible
13	Gay Head Road	South	±0.81 Mile	Not Visible
14	Bingham Road 2	Southeast	±0.74 Mile	Not Visible
15	Bingham Road 2	Southeast	±0.64 Mile	Year Round
16	Cemetery Road*	Southeast	±0.58 Mile	Not Visible
17	Cemetery Road	Southeast	±0.57 Mile	Year Round
18	Cemetery Road	Southeast	±0.55 Mile	Year Round
19	Cemetery Road	Southeast	±0.53 Mile	Year Round
20	Cemetery Road	Southeast	±0.52 Mile	Not Visible
21	Cemetery Road	South	±0.47 Mile	Seasonal
22	Cemetery Road	Southwest	±0.40 Mile	Seasonal
23	Dean Cemetery	Southwest	±0.33 Mile	Seasonal
24	Cemetery Road*	Southwest	±0.30 Mile	Not Visible
25	Cemetery Road*	Southwest	±0.29 Mile	Not Visible

* *Photo taken with 24mm focal length*

** *Photo taken with 35mm focal length*

Visibility Analysis Results

Results of this analysis are graphically displayed on the viewshed maps provided in the attachment at the end of this report. Areas from where the proposed Facility would be visible above the tree canopy, year-round, comprise a total of approximately ±119 acres. When the leaves are off the trees, seasonal views through intervening tree trunks and branches have the potential to occur over some locations within an area of ±202 additional acres.

In general, the majority of year-round views of the Facility appear limited to locations on the Host Property and within the immediate vicinity of the Site, extending ±0.57 mile to the north over Cemetery Road and the southern portion of Bingham Road 2. Beyond these areas, year-round visibility is restricted due to the combination of the topography and dense forest cover. Seasonal views (during “leaf-off” conditions) would extend to areas within approximately 0.5 mile of the Site.

Proximity to Schools And Commercial Child Day Care Centers

No schools or commercial child day care centers are located within 250 feet of the Site location. The nearest commercial child day care center within the 2-mile Study Area, Brenda Holmes Daycare, is located approximately 0.85 miles to the northeast at 337 Water Street in Canterbury. The nearest school, Canterbury Elementary School, is located approximately 4.4 miles to the northeast at 67 Kitt Road in Canterbury.

Limitations

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2016 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The simulations provide a representation of the Facility under similar settings as those encountered during the balloon floats and reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location.

ATTACHMENTS

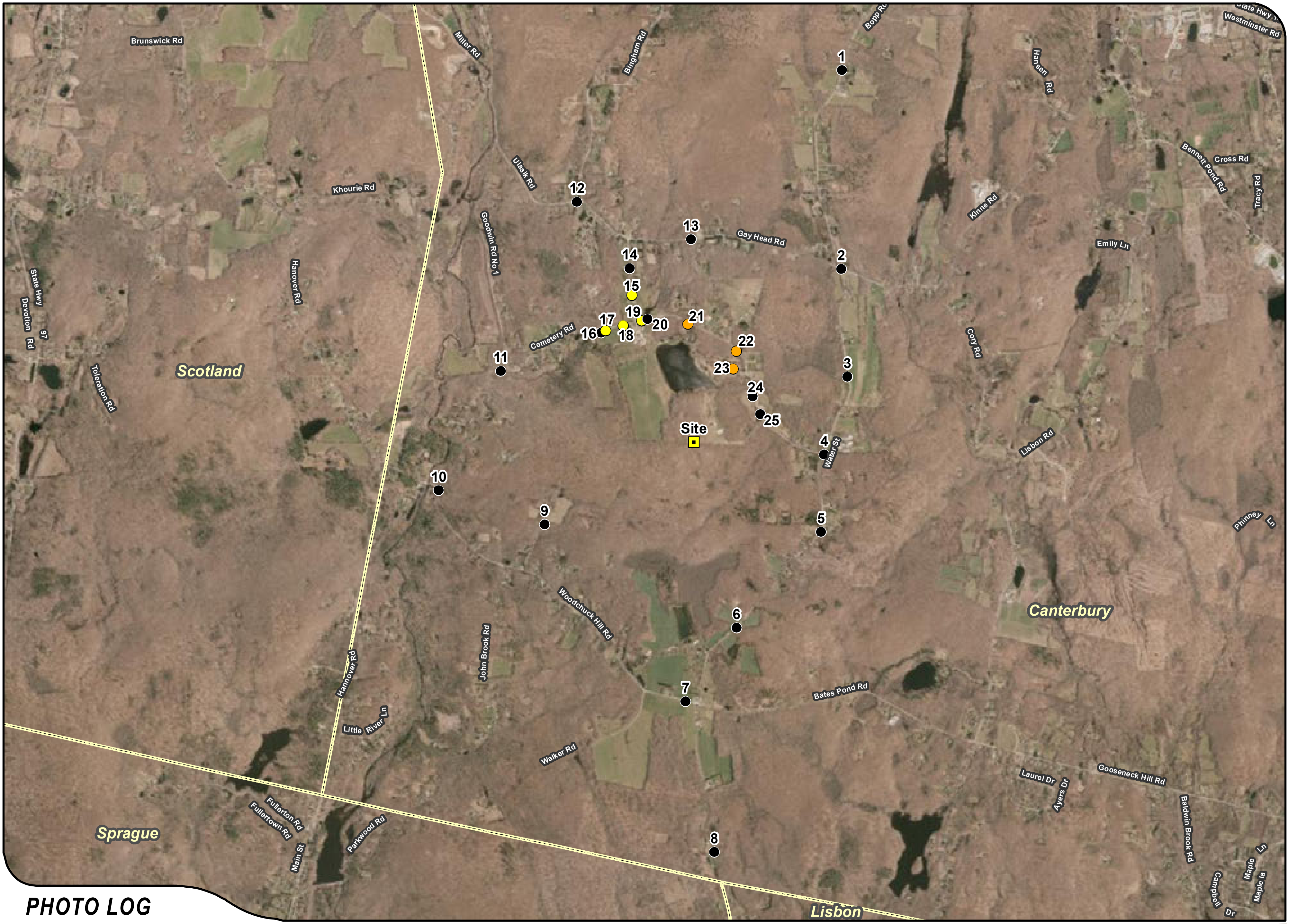

PHOTO LOG

Legend

- Site
- Year-Round Visibility
- Seasonal Visibility
- Not Visible

N S E W

3,500 1,750 0 3,500 Feet

1 inch = 3,500 feet

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**WATER STREET**	**50mm**	**SOUTHWEST**	**+/- 1.60 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	WATER STREET AT KINNE ROAD	50mm	SOUTHWEST	+/- 0.91 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**WATER STREET**	**50mm**	**SOUTHWEST**	**+/- 0.67 MILE**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**WATER STREET AT CEMETERY ROAD**	**24mm**	**WEST**	**+/- 0.52 MILE**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	WATER STREET	50mm	NORTHWEST	+/- 0.62 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	WATER STREET	50mm	NORTHWEST	+/- 0.76 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**WOODCHUCK HILL ROAD**	**50mm**	**NORTH**	**+/- 1.04 MILES**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**WATER STREET**	**50mm**	**NORTH**	**+/- 1.64 MILES**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**GAROSHEN ROAD**	**50mm**	**NORTHEAST**	**+/- 0.69 MILE**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	WOODCHUCK HILL ROAD	35mm	NORTHEAST	+/- 1.05 MILES	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	GOODWIN ROAD NO 1	50mm	SOUTHEAST	+/- 0.83 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	ULASIK ROAD	50mm	SOUTHEAST	+/- 1.07 MILES	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	**GAY HEAD ROAD**	**50mm**	**SOUTH**	**+/- 0.81 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**BINGHAM ROAD 2**	**50mm**	**SOUTHEAST**	**+/- 0.74 MILE**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**BINGHAM ROAD 2**	**50mm**	**SOUTHEAST**	**+/- 0.64 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	BINGHAM ROAD 2	50mm	SOUTHEAST	+/- 0.64 MILE	YEAR ROUND

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	CEMETERY ROAD	24mm	SOUTHEAST	+/- 0.58 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.57 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.57 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.55 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.55 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.53 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.53 MILE**	**YEAR ROUND**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	**CEMETERY ROAD**	**50mm**	**SOUTHEAST**	**+/- 0.52 MILE**	**NOT VISIBLE**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**CEMETERY ROAD**	**50mm**	**SOUTH**	**+/- 0.47 MILE**	**SEASONAL**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**CEMETERY ROAD**	**50mm**	**SOUTH**	**+/- 0.47 MILE**	**SEASONAL**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	**CEMETERY ROAD**	**50mm**	**SOUTHWEST**	**+/- 0.40 MILE**	**SEASONAL**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	**CEMETERY ROAD**	**50mm**	**SOUTHWEST**	**+/- 0.40 MILE**	**SEASONAL**

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	**DEAN CEMETERY**	**50mm**	**SOUTHWEST**	**+/- 0.33 MILE**	**SEASONAL**

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PHOTOGRAPHED ON 4/18/2017

PROPOSED

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	DEAN CEMETERY	50mm	SOUTHWEST	+/- 0.33 MILE	SEASONAL

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
24	CEMETERY ROAD	24mm	SOUTHWEST	+/- 0.30 MILE	NOT VISIBLE

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PHOTOGRAPHED ON 4/18/2017

EXISTING

PHOTO	LOCATION	FOCAL LENGTH	ORIENTATION	DISTANCE TO SITE	VISIBILITY
25	**CEMETERY ROAD**	**24mm**	**SOUTHWEST**	**+/- 0.29 MILE**	**NOT VISIBLE**

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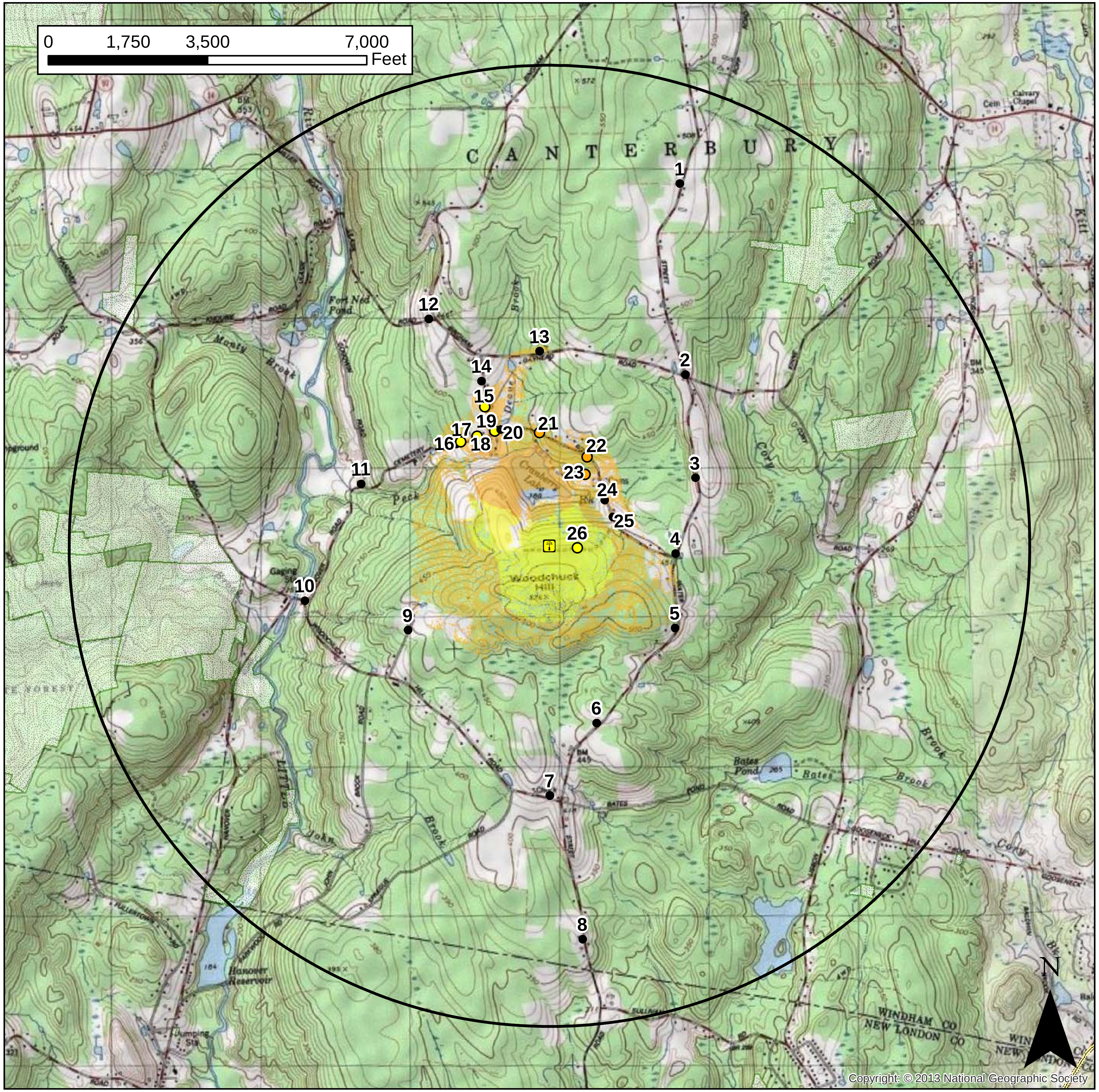
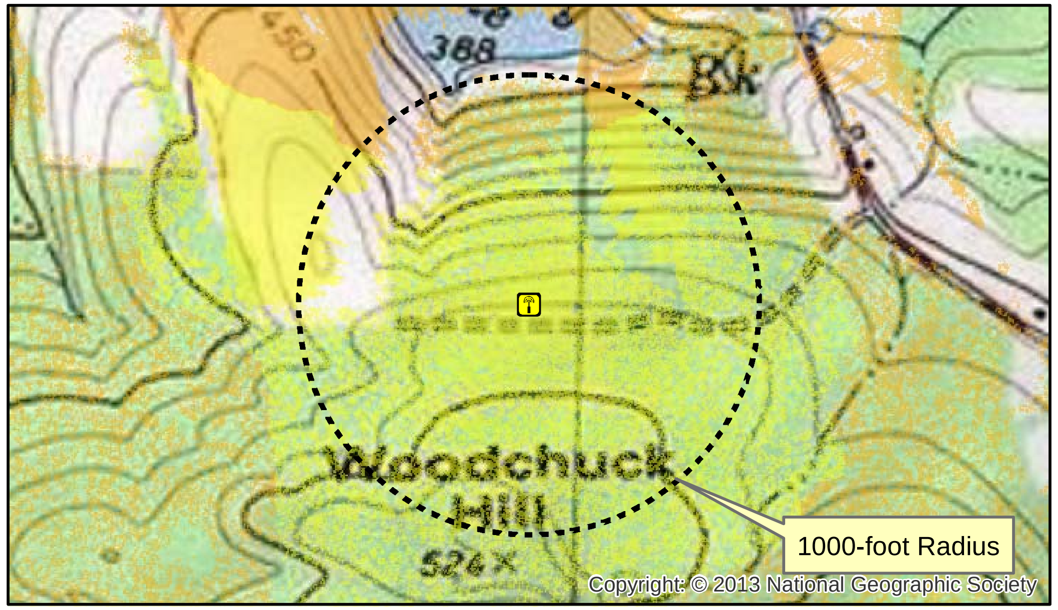




Viewshed Map – Topo Base

Proposed Wireless Telecommunications Facility
Canterbury South CT
46 Cemetery Road, Canterbury, CT

Proposed facility height is 160 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a two-mile radius and includes 8,042 acres of land.
Map compiled 4/28/2017

Map information field verified by APT on 4/18/2017.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views

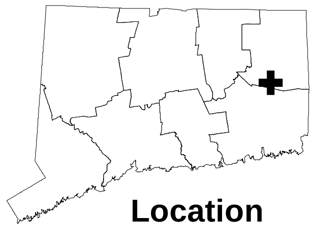
Predicted Seasonal Visibility (202 Acres)

Predicted Year-Round Visibility (119 Acres)

Towns

2-Mile Study Area

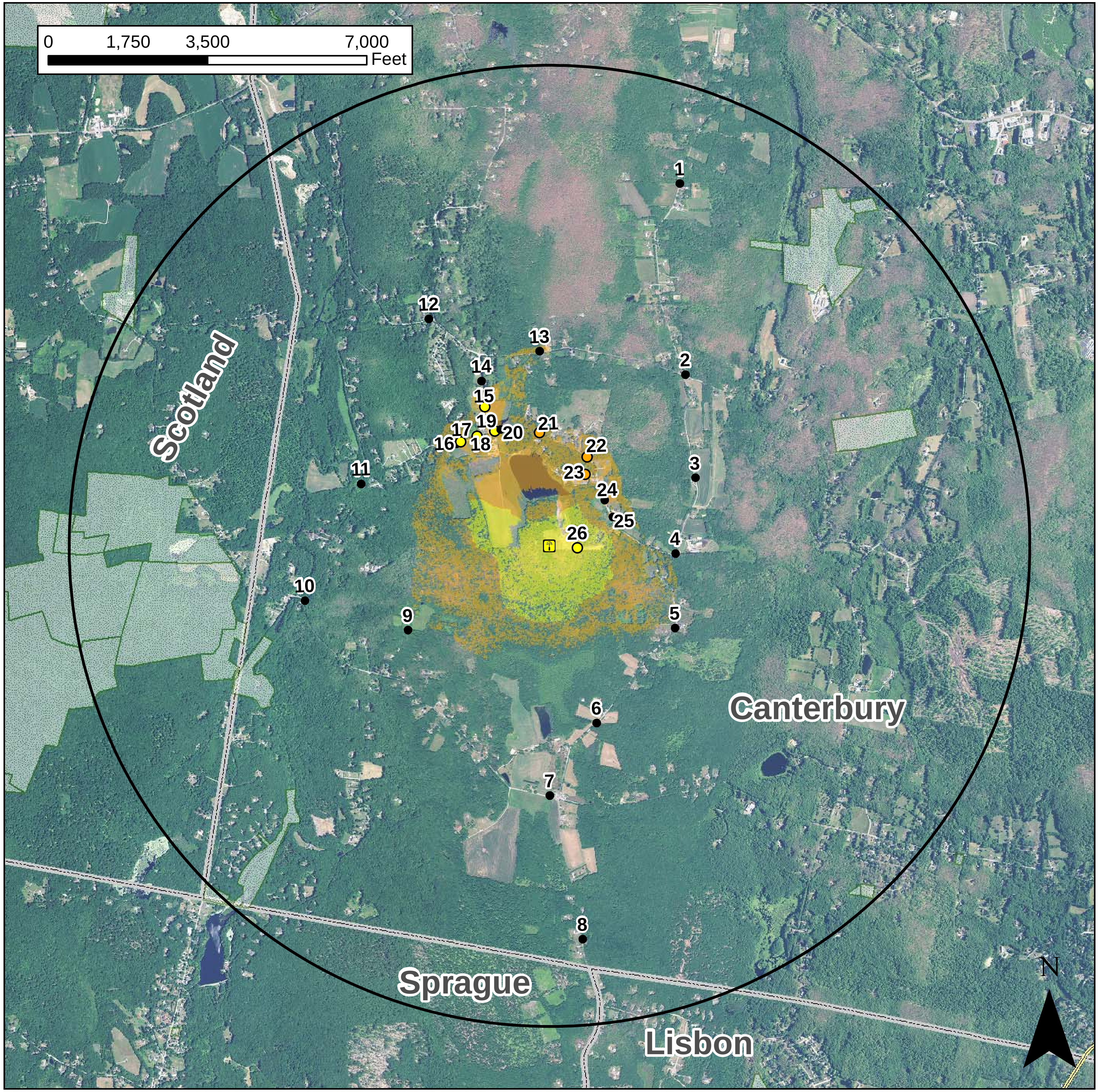
Open Space

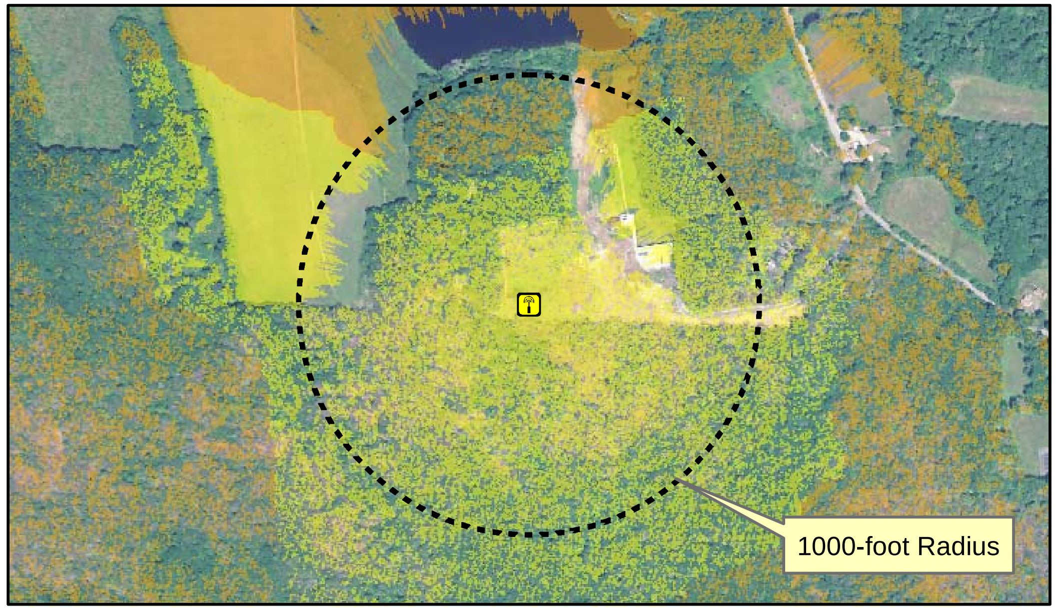


Location

verizon

ALL-POINTS TECHNOLOGY CORPORATION





Viewshed Map – Aerial Base

Proposed Wireless Telecommunications Facility
Canterbury South CT
46 Cemetery Road, Canterbury, CT

Proposed facility height is 160 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a two-mile radius and includes 8,042 acres of land.
Map compiled 4/28/2017

Map information field verified by APT on 4/18/2017.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views

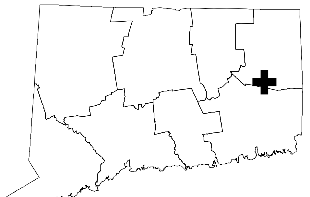
Predicted Seasonal Visibility (202 Acres)

Predicted Year-Round Visibility (119 Acres)

Towns

2-Mile Study Area

Open Space



verizon

ALL-POINTS TECHNOLOGY CORPORATION

DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS
46 Cemetery Road
Canterbury, Connecticut

Physical Geography / Background Data
Digital elevation model (DEM) derived from 1-meter USGS lidar data obtained from NOAA (2010)

Forest areas are generated with TerrSet (Clark University) image processing from the lidar data and 2016 NRCS/NAIP digital orthophotos with 1-foot pixel resolution (leaf-on) and CLEAR 2012 0.30-foot (leaf-off)

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP and the towns

United States Geological Survey
*USGS topographic quadrangle maps – Scotland (1984)
Department of Transportation data
^State Scenic Highways (2015)
Heritage Consultants
^Municipal Scenic Roads

Cultural Resources
Heritage Consultants
^National Register
^State Register of Historic Places
^Local Survey Data

Dedicated Open Space & Recreation Areas
Connecticut Department of Energy and Environmental Protection (DEEP)
*DEEP Property (May 2007)
*Federal Open Space (1997)
*Municipal and Private Open Space (1997)
*DEEP Boat Launches (1994)
Connecticut Forest & Parks Association
^Connecticut Walk Books East & West –
The Guide to the Blue-Blazed Hiking Trails of Western Connecticut Western Connecticut, 19th Edition, 2006.

Other
^ConnDOT Scenic Strips (based on Department of Transportation data)

*Available to the public in GIS-compatible format (some require fees)
^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

NOTE Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

LIMITATIONS
Viewshed analysis conducted using Clark University's TerrSet. The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating the lidar DEM, 2016 digital aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.