Visibility Analysis

515 MOREHOUSE ROAD
EASTON, CONNECTICUT

Prepared For:

Homeland Towers LLC
9 Harmony Street
Danbury, CT 06810

Prepared By:

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3 Saddlebrook Drive
Killingworth, CT 06419

April 2017

Project Introduction

Homeland Towers is considering the development of a new wireless communication facility ("Facility") at 515 Morehouse Road in Easton, Connecticut (the "Host Property"). At the request of Homeland Towers, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visual impacts associated with the proposed Facility from within a two-mile radius (the "Study Area"). The neighboring municipality of Fairfield occupies the southern portion of the Study Area.

Site Description and Setting

The 104.45-acre Host Property is located at the southwest corner of the intersection of Morehouse Road (to the east) and Banks Road (to the north). The proposed Facility Site would be located in woods in the southern section of the Host Property, approximately 0.39-mile northwest of Morehouse Road's intersection with Beers Road, 0.82-mile northeast of Beers Road's intersection with Wilson Road, 1.12-miles northeast of the Hemlock Reservoir, and 2.57-miles south of Easton Center. The Host Property is generally flat however the surrounding landscape descends towards the east, south, and west. The northern portion of the Host Property is currently developed with the Samuel Staples Elementary School, associated parking, small play grounds and several sports fields. The Town's Department of Public Works ("DPW") maintains a materials storage area in the southern section of the property, northeast of the proposed Facility Site. The Town of Easton Animal Shelter is located farther to the south.

Homeland Towers is proposing to construct a 150-foot tall monopole tower designed to resemble a pine tree ("monopine"). The proposed monopine would have an additional seven (7) feet of faux branching at its top making the overall height 157 feet tall. The monopine would be set within a 70-foot x 70-foot fenced (chain link) equipment compound with a gravel base. Access to the Site is proposed to be gained via a 12-foot wide gravel road originating approximately 300' to the north at the southern end of an existing gravel road that leads from the school, past the sports fields, and eventually to the DPW storage yard. Proposed utilities would be routed approximately 890 feet through an underground conduit from an existing utility pole located on Morehouse Road.

Land use within the immediate vicinity of the Host Property is primarily residential with large tracts of undeveloped forest. The topography is characterized generally by rolling to steep hills, with the Easton Reservoir and Hemlock Reservoir occupying the northeast and southwest portions of the Study Area, respectively. Ground elevations range from approximately 95 feet AMSL to nearly 657 feet AMSL. The tree cover within the Study Area (consisting of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately 5,492 acres of the 8,042-acre study area (±68%).

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 visible and nonvisible locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

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

[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.

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 2011 and has a horizontal resolution of approximately one (1) meter. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial photography (one-foot leaf-on and 0.34 leaf-off resolution , 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 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.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Facility might be visible. Additional data was reviewed and incorporated into the visibility analysis, including protected private and public open space, parks, recreational facilities, hiking trails, schools, and historic districts. No major trail systems are located within the Study Area. Based on a review of publicly-available information, one designated state scenic road exists within the Study Area: a 3.14-mile long stretch of Route 58 (Black Rock Turnpike) that originates at the Fairfield/Easton town line and extends north to Freeborn Road.

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.

A balloon float and field reconnaissance were conducted on April 29, 2015 to evaluate the visibility associated with the proposed Facility and to obtain 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 157 feet above ground level ("AGL") at the proposed Facility location. Weather conditions were favorable for the in-field activities, with calm winds (average of 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. Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

Photographic Documentation

APT drove the public roads within the Study Area during the balloon float and photo-documented representative areas where the balloon was and was not visible. Photographs were obtained from several vantage points to document the views towards the proposed Facility. 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.

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 monopine from seven (7) representative locations where it would be visible. Supplemental photo-simulations of an undisguised monopole (painted sky blue) are also included for comparison. 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 a 50-mm focal length and the pictures produced in an approximate 7-inch by 10.5-inch format. When reproducing the images in this format size, we believe it is important to present the largest view while providing key contextual landscape elements (existing development, 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; note the bottom of the balloon represents the top height of the proposed monopine at 157 feet AGL. The supplemental monopole photo-simulations were scaled appropriately to represent a top height of 150 feet AGL. 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 the photographs and photo-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 are depicted on the visibility analysis maps provided as attachments to this report.

View	Location	Orientation	Distance to Site	View Characteristic
1	Banks Road at Morehouse Road	Southeast	±0.60 Mile	Year Round
2	Morehouse Road at Samuel Staple Elementary School	Southeast	±0.51 Mile	Year Round
3	Host Property	Southeast	±0.31 Mile	Year Round
4	Host Property	Southeast	±0.29 Mile	Year Round
5	Morehouse Road	South	±0.20 Mile	Year Round
6	Morehouse Road	Southwest	±0.13 Mile	Seasonal
7	Host Property	Northwest	±0.07 Mile	Seasonal
8	Beers Road	Northwest	±0.46 Mile	Not Visible
9	Rolling Hills Drive	Northwest	±0.69 Mile	Not Visible
10	Blue Bell Lane	Northwest	±0.86 Mile	Not Visible
11	Fawn Road	Northwest	±0.75 Mile	Not Visible
12	Sport Hill Road	Southwest	±0.96 Mile	Not Visible
13	Center Road	Southwest	±1.02 Miles	Not Visible
14	Westport Road	Northeast	±1.68 Miles	Not Visible
15	Morehouse Road	Southeast	±1.18 Miles	Not Visible
16	Brianna Lane	Northeast	±0.82 Mile	Not Visible

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 106 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 281± additional acres.

In general, year-round views of portions of the Facility appear limited to locations north of the Site, primarily over the plateau that comprises the Host Property, and extending slightly to the east and north; all within 0.6 mile or less of the proposed Facility Site. Beyond these areas, year-round visibility is restricted due to the combination of the sloping topography and dense forest cover. Seasonal views (during "leaf-off" conditions) would extend less than 0.5 mile in all directions from the Site, primarily within undeveloped woodlands.

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 Host Property includes the Samuel Staples Elementary School which is located approximately 0.6 mile to the north of the proposed Facility. The nearest commercial child day care center (Playtots Advanced Preschool) is located at 364 Sport Hill Road, just over one mile to the northeast.

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 photo-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

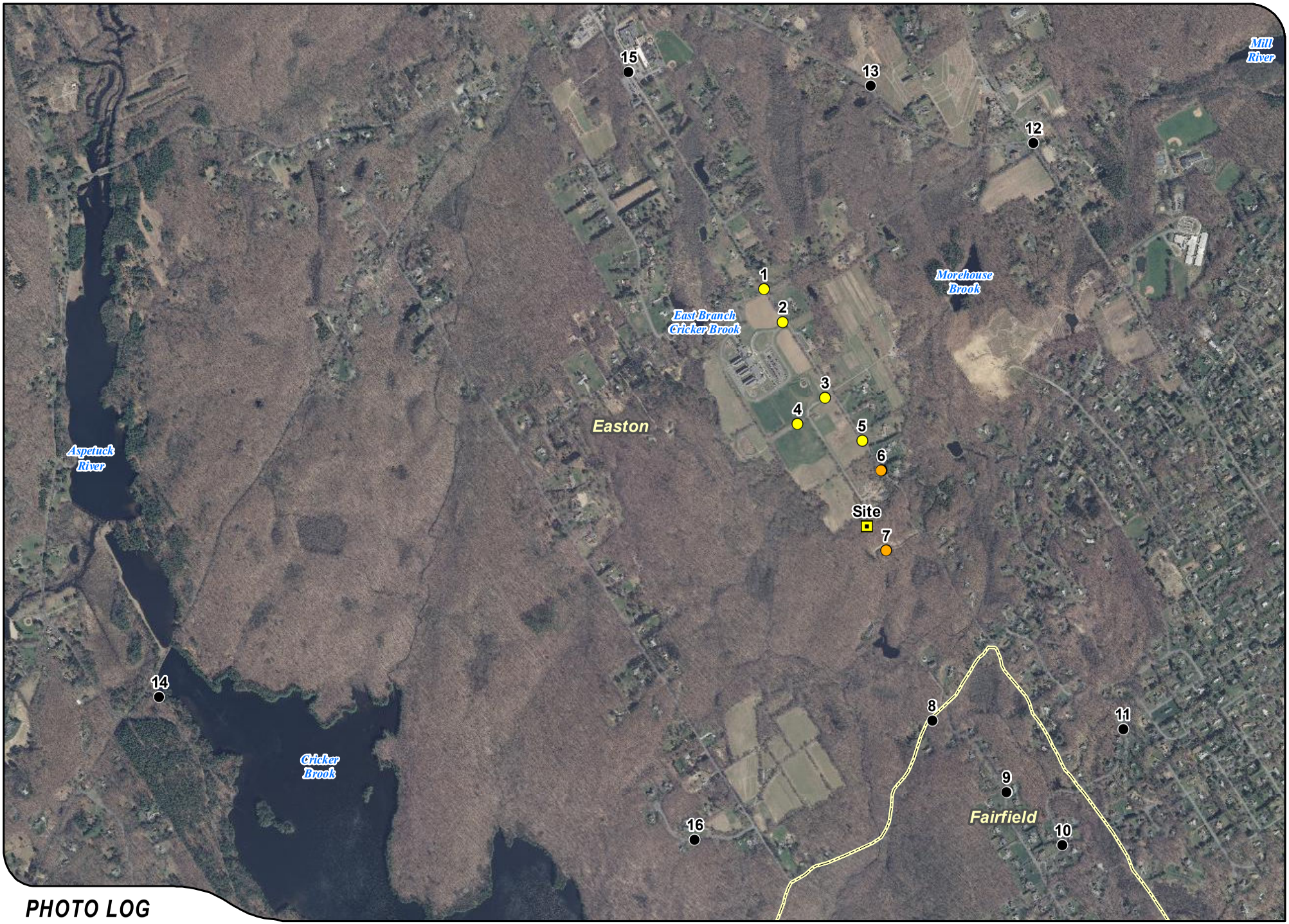

PHOTO LOG

Legend

Site | Year-Round Visibility | Seasonal Visibility | Not Visible | Municipal Boundary

1,500 750 0 1,500 Feet

1 inch = 1,500 feet

N W E S

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**BANKS ROAD AT MOREHOUSE ROAD**	**SOUTHEAST**	**+/- 0.60 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**BANKS ROAD AT MOREHOUSE ROAD**	**SOUTHEAST**	**+/- 0.60 MILE**	**YEAR ROUND**

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HOMELAND TOWERS

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ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**MOREHOUSE ROAD AT SAMUEL STAPLES ELEMENTARY SCHOOL**	**SOUTHEAST**	**+/- 0.51 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**MOREHOUSE ROAD AT SAMUEL STAPLES ELEMENTARY SCHOOL**	**SOUTHEAST**	**+/- 0.51 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**HOST PROPERTY**	**SOUTHEAST**	**+/- 0.31 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**HOST PROPERTY**	**SOUTHEAST**	**+/- 0.31 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**HOST PROPERTY**	**SOUTHEAST**	**+/- 0.29 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**HOST PROPERTY**	**SOUTHEAST**	**+/- 0.29 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**HOST PROPERTY**	**SOUTHEAST**	**+/- 0.29 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**MOREHOUSE ROAD**	**SOUTH**	**+/- 0.20 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**MOREHOUSE ROAD**	**SOUTH**	**+/- 0.20 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**MOREHOUSE ROAD**	**SOUTH**	**+/- 0.20 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**MOREHOUSE ROAD** (24mm Focal Length)	**SOUTHWEST**	**+/- 0.13 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**MOREHOUSE ROAD (24mm Focal Length)**	**SOUTHWEST**	**+/- 0.13 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**MOREHOUSE ROAD (24mm Focal Length)**	**SOUTHWEST**	**+/- 0.13 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**HOST PROPERTY (24mm Focal Length)**	**NORTHWEST**	**+/- 0.07 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**HOST PROPERTY (24mm Focal Length)**	**NORTHWEST**	**+/- 0.07 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**HOST PROPERTY (24mm Focal Length)**	**NORTHWEST**	**+/- 0.07 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**BEERS ROAD**	**NORTHWEST**	**+/- 0.46 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**ROLLING HILLS DRIVE**	**NORTHWEST**	**+/- 0.69 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**BLUE BELL LANE**	**NORTHWEST**	**+/- 0.86 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**FAWN ROAD**	**NORTHWEST**	**+/- 0.75 MILE**	**NOT VISIBLE**

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	**SPORT HILL ROAD**	**SOUTHWEST**	**+/- 0.96 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	**CENTER ROAD**	**SOUTH**	**+/- 1.02 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**WESTPORT ROAD**	**NORTHEAST**	**+/- 1.68 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

DOCUMENTATION

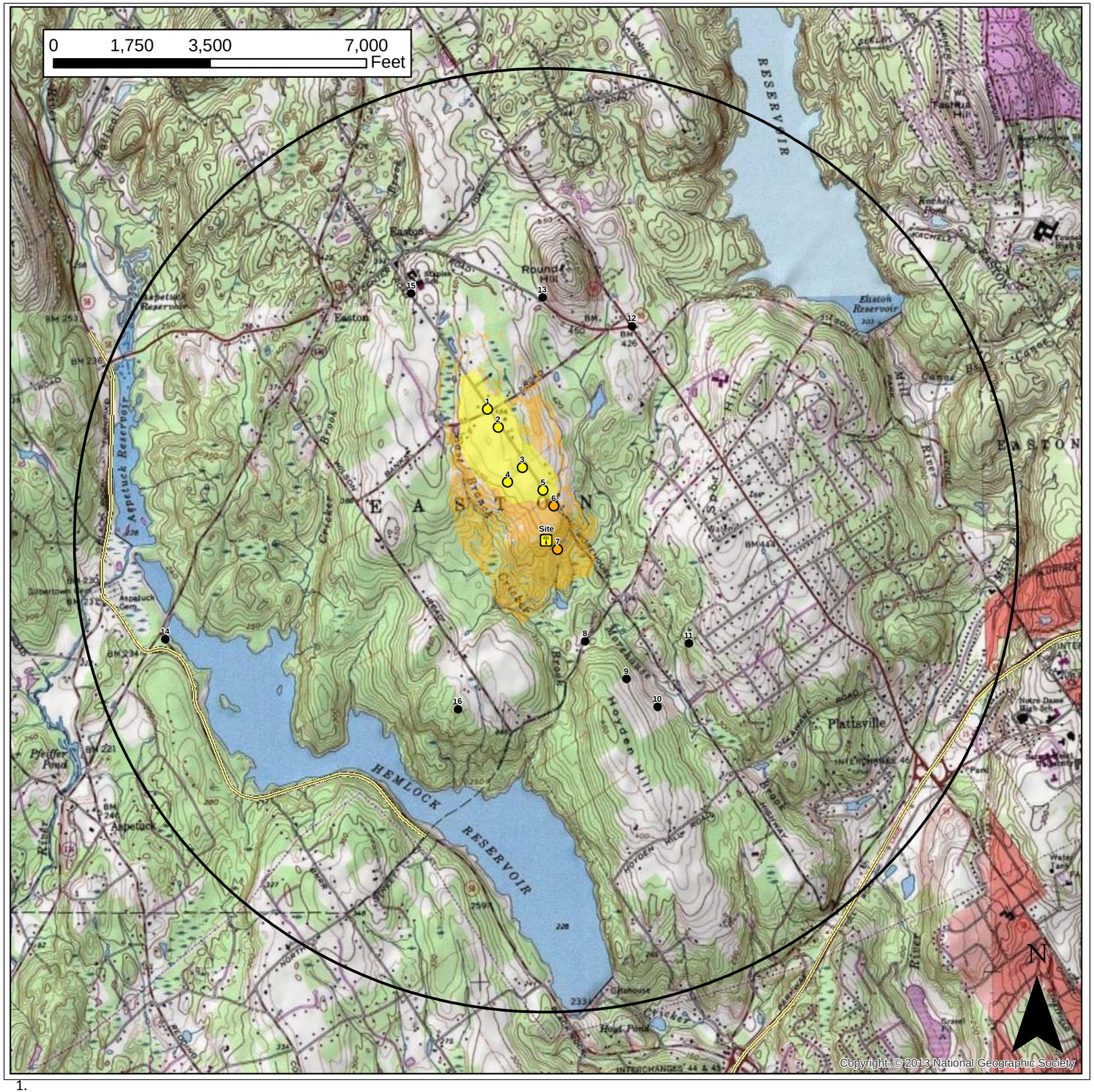
PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**MOREHOUSE ROAD**	**SOUTHEAST**	**+/- 1.18 MILES**	**NOT VISIBLE**

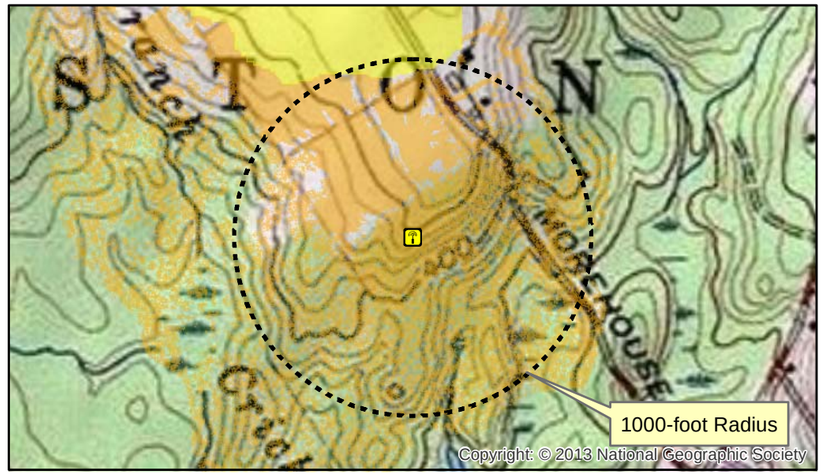
DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	**BRIANNA LANE**	**NORTHEAST**	**+/- 0.82 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS





Viewshed Map – Topo Base

Proposed Wireless Telecommunications Facility
Easton
515 Morehouse Road, Easton, CT

Proposed facility height is 157 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 3/14/2017

Map information field verified by APT on 4/29/2015.

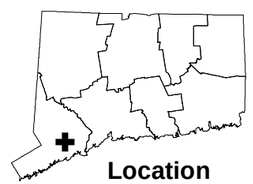
Only those resources located within the extent of the map are depicted.

Legend

- Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views
- Predicted Seasonal Visibility (281 Acres)
- Predicted Year-Round Visibility (106 Acres)
- 2-Mile Study Area
- Scenic Roads

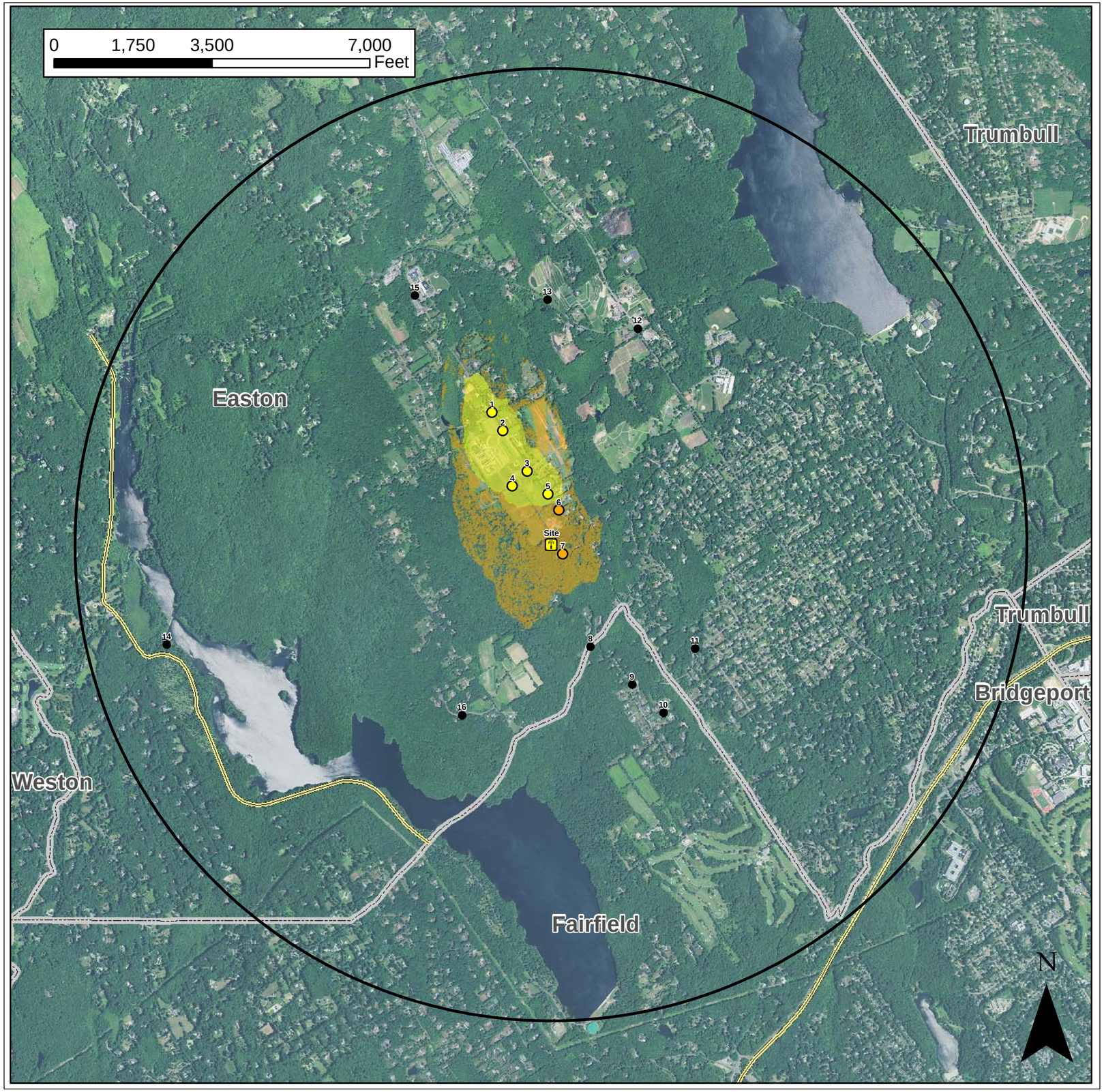


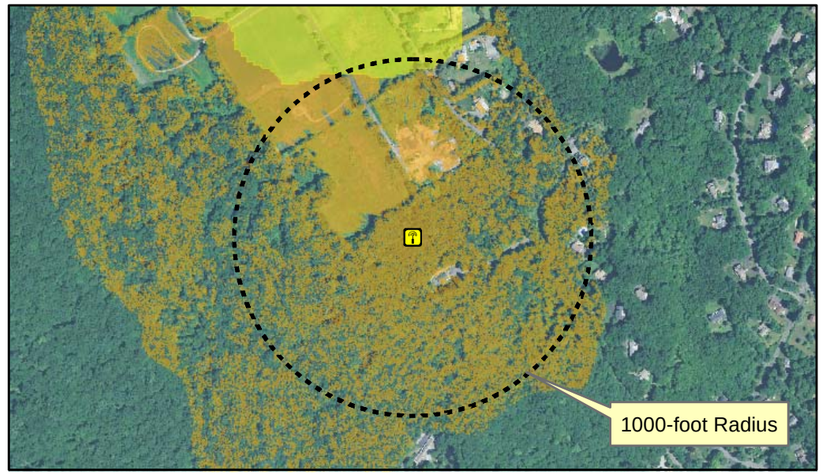
Location

verizon

ALL-POINTS TECHNOLOGY CORPORATION

1.





Viewshed Map – Aerial Base

Proposed Wireless Telecommunications Facility
Easton
515 Morehouse Road, Easton, CT

Proposed facility height is 157 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 3/14/2017

Map information field verified by APT on 4/29/2015.

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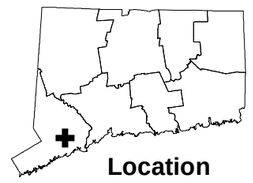

Location

verizon

ALL-POINTS TECHNOLOGY CORPORATION

DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS
515 Morehouse Road
Easton, Connecticut

Physical Geography / Background Data
Digital elevation model (DEM) derived from 1-meter USGS lidar data obtained from NOAA (2011)

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 2016 0.34-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 – Westport, Botsford (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.