

Visual Assessment & Photo-Simulations

LITCHFIELD SE CT
MASON HILL ROAD
NORTHFIELD, CT

Prepared in February 2023 by:
All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06320

Prepared for Verizon Wireless



VISUAL ASSESSMENT & PHOTO-SIMULATIONS

Cellco Partnership, d/b/a Verizon Wireless ("Verizon Wireless") is seeking approval for the development of a new wireless communications facility (the "Facility") at a property on Mason Hill Road in Litchfield, Connecticut (the "Host Property"). All-Points Technology Corporation, P.C. ("APT") completed this assessment to evaluate the potential visual effects of the proposed Facility from within a two-mile radius (the "Study Area"). The municipal boundary between Litchfield and Thomaston bisects the Study Area, which also encompasses portions of the neighboring municipalities of Plymouth to the east and Harwinton to the northeast.

Project Setting

The Host Property is an 8.17-acre undeveloped, triangular-shaped parcel located on the west side of Mason Hill Road, north of the municipal boundary between Litchfield and Thomaston. An electric transmission line and access drive extends through the western portion of the Host Property in a generally north-south direction. The proposed Facility would be located in the east central portion of the Host Property ("Site"). Land use within the immediate area is a mix of residential and agricultural development, with large tracts of undeveloped woodland.

The topography within the Study Area consists of relatively hilly terrain. Ground elevations range from approximately 356 feet above mean sea level ("AMSL") in the southeastern extents of the Study Area along the Naugatuck River to approximately 1090 feet AMSL approximately 1.5 miles northwest of the Site. Tree cover within the Study Area (consisting primarily of mixed deciduous hardwoods and interspersed stands of conifers) occupies approximately 5,439 acres (or ±67.6%) of the 8,042-acre Study Area.

Project Undertaking

Based on information contained in CT Siting Council Drawings (prepared by Centek Engineering, dated November 21, 2022), the proposed Facility would be located at a ground elevation of approximately 792 feet AMSL and include a 110-foot tall monopole. Associated ground-mounted equipment would be placed within a 50' by 50' gravel based fenced compound surrounded by an 8-foot high chain link fence. Verizon Wireless would install antennas at a centerline of 105' above ground level ("AGL"). The Facility has been designed to accommodate multiple service providers. Access to the Site would be gained from Mason Hill Road over the existing gravel drive along the electrical transmission right-of-way; a new gravel drive will be constructed to extend to the Site.

Methodology

APT used the combination of a predictive computer model, in-field analysis, and a review of various data sources to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of visibility throughout the entire Study Area, including private properties and other areas inaccessible for direct observations. The in-field analysis consisted of a balloon float and field reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory seasonal and year-round view 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 ESRI's ArcMap GIS¹ software and available GIS data. 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 (the primary features that can block direct lines of sight).

A digital surface model ("DSM"), capturing both the natural and built features on the Earth's surface, was generated for the extent of the Study Area utilizing State of Connecticut 2016 LiDAR² LAS³ data points. LiDAR is a remote-sensing technology that develops elevation data 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," "surface water" or "building." Derived from the 2016 LiDAR data, the LAS datasets contain the corresponding elevation point data and return classification values. The Study Area DSM incorporates the first return LAS dataset values that are associated with the highest feature in the landscape, typically a treetop, top of a building, and/or the highest point of other tall structures.

Once the DSM was generated, ESRI's Viewshed Tool was utilized to identify locations within the Study Area where the proposed Facility may be visible. ESRI's Viewshed Tool predicts visibility by identifying those cells⁴ within the DSM that can be seen from an observer location. Cells

¹ ArcMap is a Geographic Information System desktop application developed by the Environmental Systems Research Institute for creating maps, performing spatial analysis, and managing geographic data.

² Light Detection and Ranging

³ An LAS file is an industry-standard binary format for storing airborne LiDAR data.

⁴ Each DSM cell size is 1 square meter.

where visibility was indicated were extracted and converted from a raster dataset to a polygon feature which was then overlaid onto aerial photograph and topographic base maps. Since the DSM includes the highest relative feature in the landscape, isolated “visible” cells are often indicated within heavily forested areas (e.g., from the top of the highest tree) or on building rooftops during the initial processing. It is recognized that these areas do not represent typical viewer locations and overstate visibility. As such, the resulting polygon feature is further refined by extracting those areas. The viewshed results are also cross-checked against the most current aerial photographs to assess whether significant changes (a new housing development, for example) have occurred since the time the LiDAR-based LAS datasets were captured.

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. However, the Facility may not necessarily be visible from all locations within those areas identified by the predictive model, which has its limitations. For instance, the computer model cannot account for mass density, tree diameters and branching variability of trees, or the degradation of views that occurs with distance. As a result, some areas depicted on the viewshed maps as theoretically offering potential visibility of the Facility may be over-predictive because the quality of those views is not sufficient for the human eye to recognize the Facility or discriminate it from other surrounding or intervening objects.

Seasonal Visibility

Visibility also varies seasonally with increased, albeit obstructed, views occurring during “leaf-off” conditions. Beyond the variabilities associated with density of woodland stands found within any given Study Area, each individual tree also has its own unique trunk, pole timber and branching patterns that provide varying degrees of screening in leafless conditions which, as introduced above, cannot be precisely modeled. Seasonal visibility is therefore estimated based on a combination of factors including the type, size, and density of trees within a given area; topographic constraints; and other visual obstructions that may be present. Considering these dynamics, areas depicting seasonal visibility on the viewshed maps are intended to represent locations from where there is a potential for views through intervening trees, as opposed to indicating that leaf-off views will exist from within an entire seasonally-shaded area.

Balloon Test 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 test, vehicular and pedestrian reconnaissance, and photo-documentation. The balloon test and field reconnaissance were completed on

January 9, 2023. The balloon test consisted of raising a brightly-colored (red), approximately 4-foot diameter, helium-filled balloon tethered to a string height of ± 110 feet AGL⁵ at the proposed Site. Weather conditions were favorable for the in-field activities with calm winds and partly cloudy skies. APT conducted a Study Area reconnaissance by driving along local and State roads and other publicly accessible locations to document and inventory where the balloon could be seen above and through the tree canopy and other visual obstructions.

Photographic Documentation and Simulations

Visual observations from the reconnaissance were used to evaluate the results of the preliminary visibility mapping, including identifying any discrepancies in the initial modeling, and to obtain photo-documentation from representative locations within the Study Area. Photographs were taken with a Canon EOS 6D digital camera body⁶ and Canon EF 24 to 105 millimeter ("mm") zoom lens. The coordinates of the balloon (i.e., the proposed tower location) were entered as a "waypoint" into a handheld global positioning system ("GPS") device, with the "find" tool on the GPS unit then used to provide the distance and orientation to the flag position. The geographic coordinates of each photo location were recorded as meta data using GPS technology internal to the camera.

APT typically uses a standard focal length of 50 mm to present a consistent field of view. On occasion, photos are taken at lower focal lengths to provide a greater depth of field and to provide context to the scene by including surrounding features within the photograph. During this evaluation, four (4) photographs presented in the attached photo-documentation were taken at a 35 mm focal length and two (2) photographs were taken at a 24 mm focal length, as noted in Table 1 – Photo Locations.

Photographic simulations were generated to portray scaled renderings of the proposed Facility from 14 locations presented herein where the Facility may be recognizable above or through the trees. Using field data, site plan information and 3-dimensional (3D) modeling software, spatially referenced models of the Site 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, which were ultimately composited and merged with the existing conditions photographs (using Adobe Photoshop image editing software). The scale of the subjects in the photograph (the balloon) and the corresponding simulation (the Facility) is proportional to their surroundings.

⁵ The bottom of the balloon represented the top of the monopole.

⁶ The Canon EOS 6D is a full-framed camera which includes a lens receptor of the same size as the film used in 35 mm cameras. As such, the images produced are comparable to those taken with a conventional 35 mm camera.

For presentation purposes in this report, the photographs were 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 developments, street signs, utility poles, etc.) so that the viewer can determine the proportionate scale of each object within the scene. Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The field reconnaissance photos that include the balloon in the view provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The corresponding photo-simulations depict the proposed monopole and antennas. The photo-simulations are intended to provide the reader with a general understanding of the different view characteristics associated with the Facility from various locations. Photographs were taken from publicly accessible areas and unobstructed view lines were chosen wherever possible.

Table 1 – Photo Locations summarizes the photographs and simulations presented in the attachment to this report, and includes a description of each location, view orientation, distance from where the photo was taken relative to the Site, and the general characteristics of the view. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

Table 1 – Photo Locations

Photo	Location	Orientation	Distance to Site	Visibility
1	Knife Shop Road at Mason Hill Road, Litchfield	Southeast	± 0.33 Mile	Not Visible
2	Penfield Drive at Mason Hill Road, Litchfield**	East	± 0.22 Mile	Not Visible
3	Mason Hill Road, Litchfield	Southeast	± 0.20 Mile	Seasonal
4	Mason Hill Road, Litchfield*	Southeast	± 454 Feet	Year Round
5	Mason Hill Road*	West	± 363 Feet	Seasonal
6	Atwood Heights, Thomaston*	Northwest	± 0.24 Mile	Not Visible
7	Atwood Heights, Thomaston	Northwest	± 0.23 Mile	Seasonal
8	Atwood Heights, Thomaston	West	± 0.16 Mile	Seasonal
9	Mason Hill Road	Southwest	± 0.15 Mile	Seasonal
10	Mason Hill Road	Southwest	± 0.24 Mile	Not Visible
11	Campville Road, Litchfield	Southwest	± 0.40 Mile	Not Visible
12	Smith Road at Campville Road	Southwest	± 0.41 Mile	Not Visible
13	Michelle Lane North, Thomaston	Northwest	± 0.46 Mile	Not Visible
14	Michelle Lane North, Thomaston	Northwest	± 0.43 Mile	Seasonal
15	Atwood Road, Thomaston	Northwest	± 0.39 Mile	Not Visible
16	Humiston Circle at Senior Avenue	Northwest	± 0.90 Mile	Not Visible
17	Marthas Way, Thomaston	Northwest	± 0.88 Mile	Not Visible
18	Hopkins Road, Litchfield	South	± 0.60 Mile	Not Visible
19	Hopkins Road, Litchfield	Southeast	± 0.54 Mile	Not Visible
20	Northfield Road, Litchfield	Southeast	± 1.06 Miles	Not Visible
21	Camp Hill Road, Litchfield	East	± 1.13 Miles	Year Round
22	Goodwin Hill Road, Litchfield*	Northeast	± 1.26 Miles	Not Visible
23	Hickory Hill Drive, Litchfield	Northeast	± 0.62 Mile	Seasonal
24	Kennedy Drive, Thomaston	Northeast	± 0.72 Mile	Seasonal
25	Kennedy Drive, Thomaston	Northeast	± 0.65 Mile	Year Round
26	Walnut Hill Road, Thomaston	Northeast	± 1.08 Miles	Year Round
27	Northfield Brook Lake, Thomaston	North	± 1.01 Miles	Year Round
28	Northfield Road, Thomaston	Northeast	± 0.46 Mile	Year Round
29	Northfield Road, Thomaston**	Northeast	± 0.37 Mile	Not Visible

*Photograph was taken at 35 mm focal length.

**Photograph was taken at 24 mm focal length.

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the field reconnaissance, the photograph 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 recalculated the visibility of the proposed Facility within the Study Area.

Conclusions

As presented on the attached viewshed maps, year-round visibility of the Facility would be limited to small pockets within the western and southern portions of the Study Area, generally in open fields at high elevations and/or cleared areas along the transmission line right-of-way. Additionally, the monopole would only extend above the tree canopy to modest heights of 10 to 30 feet, depending upon location (See Photos 21, 26 and 27).

Seasonal views are anticipated primarily in areas immediately surrounding the Site. Photos 5, 8 and 9 depict representative seasonal views from this area. Seasonal visibility will also extend approximately 0.45-mile southeast and 0.35-mile northwest, as well as along the transmission line right-of-way to the south. (See Photos 3 and 14.)

The combined predicted visibility associated with the proposed Facility totals ± 75 acres, or $\pm 0.01\%$ of the 8,042-acre Study Area. Seasonal visibility (± 54 acres) accounts for approximately 72% of that total. Year-round visibility is predicted to account for an additional ± 21 acres.

The results of the viewshed modeling and balloon test photographs demonstrate that much of the Facility's year-round visibility would be limited to agricultural and undeveloped areas remote from the Site. The residential properties surrounding and southeast of the Site are expected to experience seasonal visibility, with occasional year-round visibility.

Proximity to Schools And Commercial Child Day Care Centers

No schools or commercial child day care centers are located within 250 feet of the proposed Facility. The Litchfield Montessori School is approximately 0.65-mile northwest of the Site at 5 Knife Shop Road in the Northfield section of Litchfield. The Play and Learn Child Development Center is located approximately ± 1.84 -mile southeast of the Site at 30 Tobey Road 30 North Main Street in Thomaston. The Facility will not be visible from either location.

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 five (5) feet above the ground and intervening topography, tree canopy, and structures. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating aerial photographs, and in-field observations from publicly accessible locations. 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 field review 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. Weather conditions on the day of the field review included calm winds and partly cloudy skies.

ATTACHMENTS

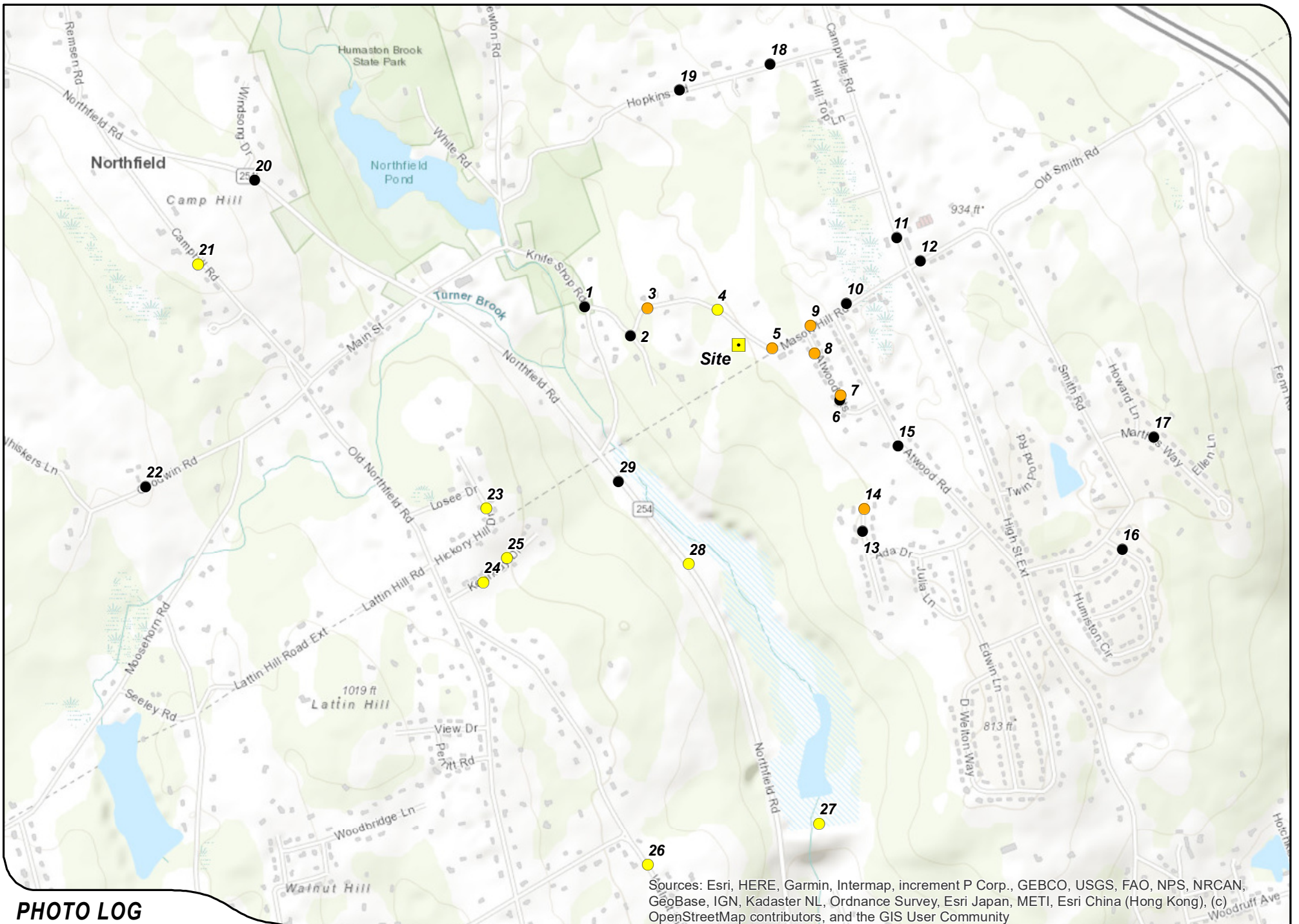
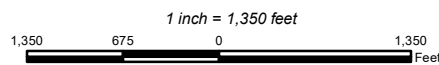


PHOTO LOG

Legend

- Site
- Not Visible
- Seasonal
- Year-Round



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community





PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	KNIFE SHOP ROAD AT MASON HILL ROAD - LITCHFIELD	SOUTHEAST	+/- 0.33 MILE	NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023
24mm focal length

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	PENFIELD DRIVE AT MASON HILL ROAD - LITCHFIELD	EAST	+/- 0.22 MILE	NOT VISIBLE



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

3

LOCATION

MASON HILL ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.20 MILE

VISIBILITY

SEASONAL



PROPOSED

PHOTO

3

LOCATION

MASON HILL ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.20 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/19/2023
35mm focal length

EXISTING

PHOTO

4

LOCATION

MASON HILL ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 454 FEET

VISIBILITY

YEAR ROUND





PROPOSED

PHOTO

4

LOCATION

MASON HILL ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 454 FEET

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/19/2023
35mm focal length

EXISTING

PHOTO

5

LOCATION

MASON HILL ROAD

ORIENTATION

WEST

DISTANCE TO SITE

+/- 363 FEET

VISIBILITY

SEASONAL





PROPOSED

PHOTO

5

LOCATION

MASON HILL ROAD

ORIENTATION

WEST

DISTANCE TO SITE

+/- 363 FEET

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/19/2023
35mm Focal Length

EXISTING

PHOTO

6

LOCATION

ATWOOD HEIGHTS - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.24 MILE

VISIBILITY

NOT VISIBLE





PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

7

LOCATION

ATWOOD HEIGHTS - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.23 MILE

VISIBILITY

SEASONAL



PROPOSED

PHOTO

7

LOCATION

ATWOOD HEIGHTS - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.23 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	ATWOOD HEIGHTS - THOMASTON	WEST	+/- 0.16 MILE	SEASONAL



PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	ATWOOD HEIGHTS - THOMASTON	WEST	+/- 0.16 MILE	SEASONAL



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

9

LOCATION

MASON HILL ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.15 MILE

VISIBILITY

SEASONAL



PROPOSED

PHOTO

9

LOCATION

MASON HILL ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.15 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

10

LOCATION

MASON HILL ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.24 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

11

LOCATION

CAMPVILLE ROAD - LITCHFIELD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.40 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

12

LOCATION

SMITH ROAD AT CAMPVILLE ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.41 MILE

VISIBILITY

NOT VISIBLE





PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

13

LOCATION

MICHELLE LANE NORTH - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.46 MILE

VISIBILITY

NOT VISIBLE





PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

14

LOCATION

MICHELLE LANE NORTH - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.43 MILE

VISIBILITY

SEASONAL



PROPOSED

PHOTO

14

LOCATION

MICHELLE LANE NORTH - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.43 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

15

LOCATION

ATWOOD ROAD - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.39 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

16

LOCATION

HUMISTON CIRCLE AT SENIOR AVENUE - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.90 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

17

LOCATION

MARTHAS WAY - THOMASTON

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.88 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

18

LOCATION

HOPKINS ROAD - LITCHFIELD

ORIENTATION

SOUTH

DISTANCE TO SITE

+/- 0.60 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

19

LOCATION

HOPKINS ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.54 MILE

VISIBILITY

NOT VISIBLE



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

20

LOCATION

NORTHFIELD ROAD - LITCHFIELD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 1.06 MILES

VISIBILITY

NOT VISIBLE





PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

21

LOCATION

CAMP HILL ROAD - LITCHFIELD

ORIENTATION

EAST

DISTANCE TO SITE

+/- 1.13 MILE

VISIBILITY

YEAR ROUND



PROPOSED

PHOTO

21

LOCATION

CAMP HILL ROAD - LITCHFIELD

ORIENTATION

EAST

DISTANCE TO SITE

+/- 1.13 MILE

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/9/2023
35mm focal length

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	GOODWIN HILL ROAD - LITCHFIELD	NORTHEAST	+/- 1.26 MILE	NOT VISIBLE



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

23

LOCATION

HICKORY HILL DRIVE - LITCHFIELD

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.62 MILE

VISIBILITY

SEASONAL



PROPOSED

PHOTO

23

LOCATION

HICKORY HILL DRIVE - LITCHFIELD

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.62 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

24

LOCATION

KENNEDY DRIVE - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.72 MILE

VISIBILITY

SEASONAL





PROPOSED

PHOTO

24

LOCATION

KENNEDY DRIVE - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.72 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

25

LOCATION

KENNEDY DRIVE - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.65 MILE

VISIBILITY

YEAR ROUND





PROPOSED

PHOTO

25

LOCATION

KENNEDY DRIVE - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.65 MILE

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/9/2023

EXISTING

PHOTO

26

LOCATION

WALNUT HILL ROAD - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 1.08 MILES

VISIBILITY

YEAR ROUND





PROPOSED

PHOTO

26

LOCATION

WALNUT HILL ROAD - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 1.08 MILES

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

27

LOCATION

NORTHFIELD BROOK LAKE - THOMASTON

ORIENTATION

NORTH

DISTANCE TO SITE

+/- 1.01 MILES

VISIBILITY

YEAR ROUND





PROPOSED

PHOTO

27

LOCATION

NORTHFIELD BROOK LAKE - THOMASTON

ORIENTATION

NORTH

DISTANCE TO SITE

+/- 1.01 MILES

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/19/2023

EXISTING

PHOTO

28

LOCATION

NORTHFIELD ROAD - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.46 MILE

VISIBILITY

YEAR ROUND





PROPOSED

PHOTO

28

LOCATION

NORTHFIELD ROAD - THOMASTON

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.46 MILE

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 1/19/2023
24mm Focal Length

EXISTING

PHOTO

29

LOCATION

NORTHFIELD ROAD - THOMASTON

ORIENTATION

NORTHEAST

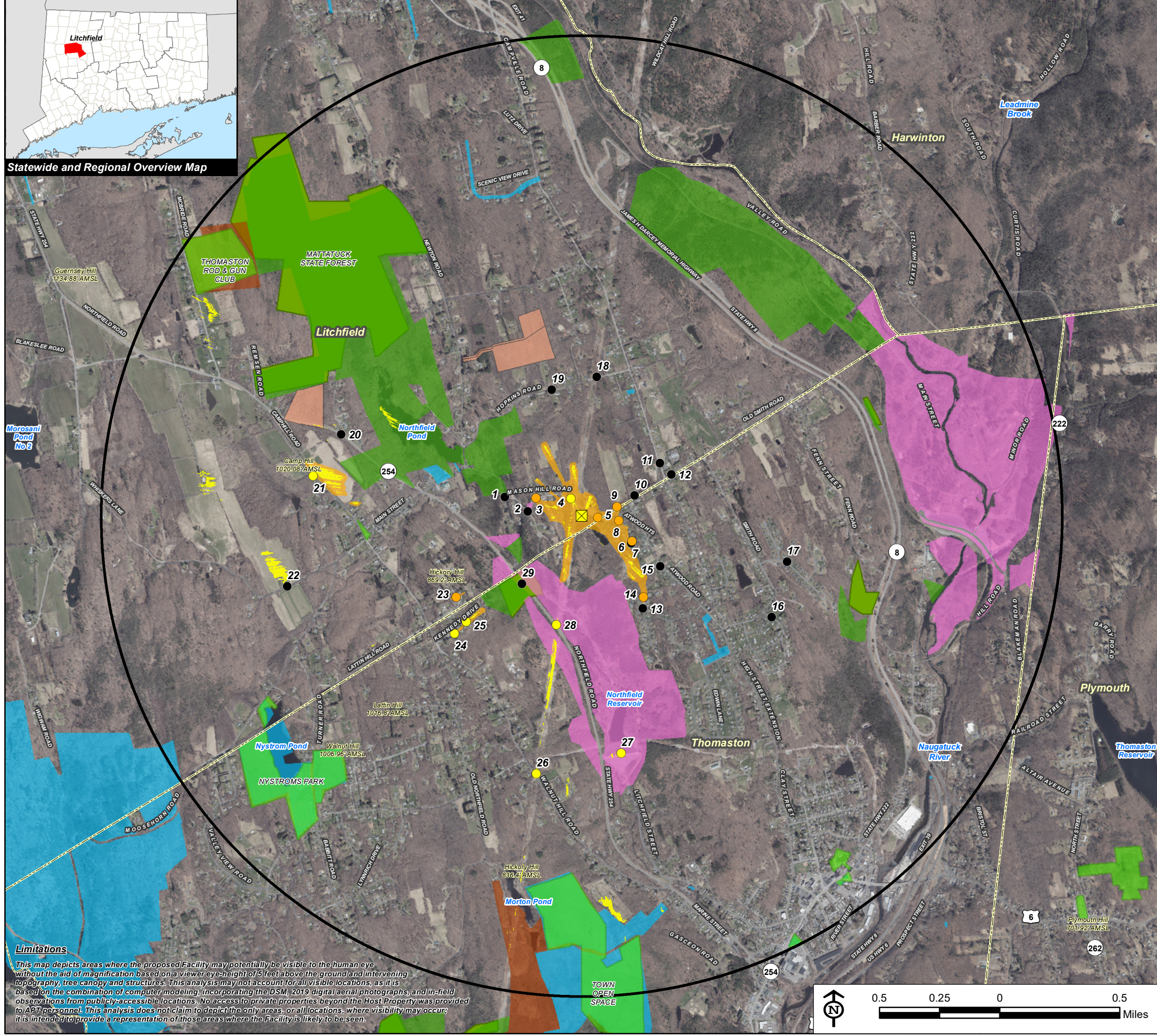
DISTANCE TO SITE

+/- 0.37 MILE

VISIBILITY

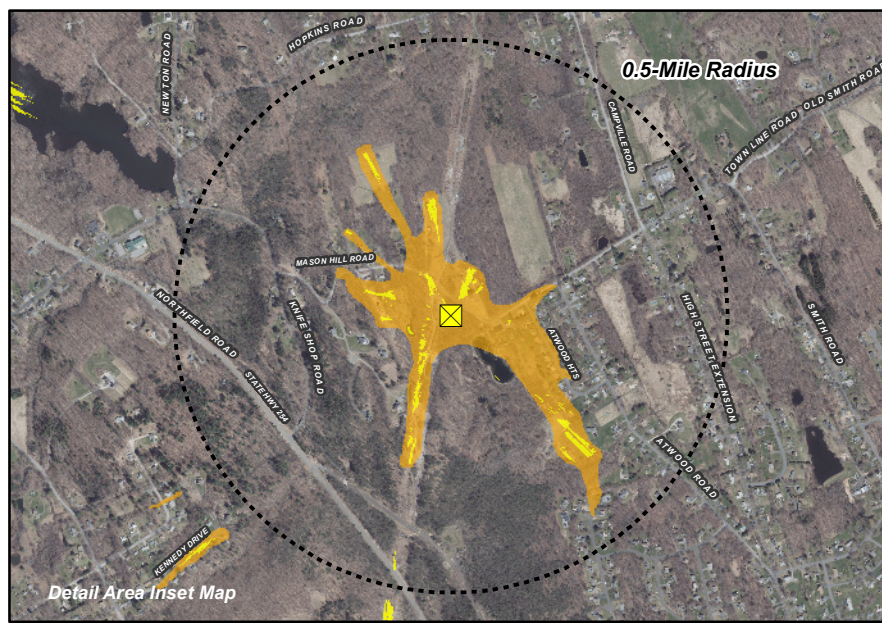
NOT VISIBLE





Statewide and Regional Overview Map

Limitations
 This map depicts 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 account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM, 2019 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.

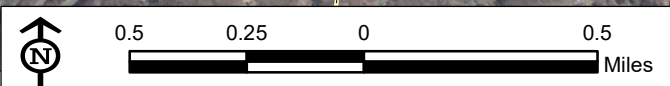


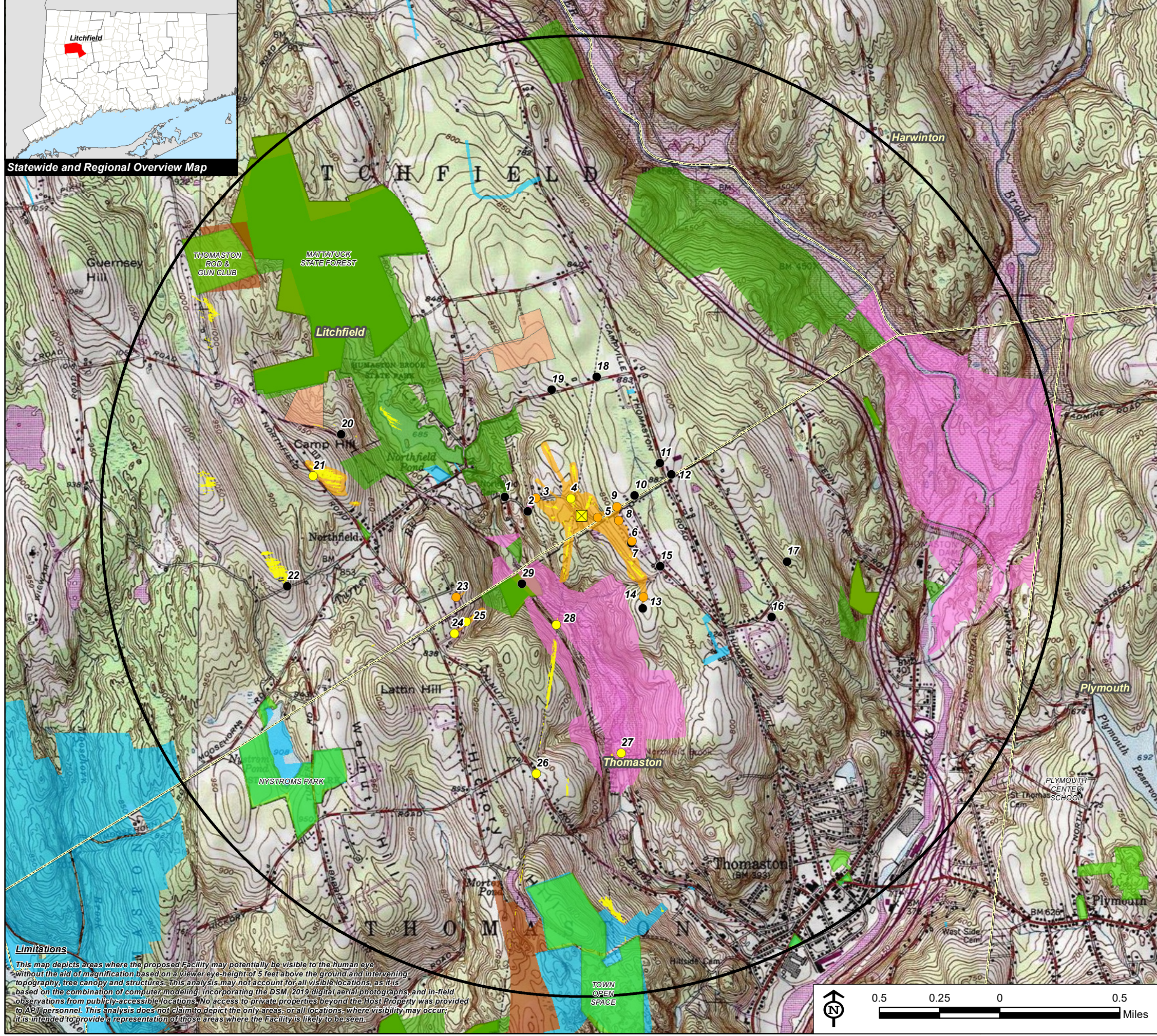
Viewshed Analysis Map
 Proposed Wireless Telecommunications Facility
 Litchfield SE CT
 Mason Hill Road
 Northfield, Connecticut

Proposed facility height is 110 feet AGL.
 Forest canopy height is derived from LIDAR data.
 Study area encompasses a two-mile radius and includes 8,042 acres.
 Existing conditions field verified by APT on January 9, 2023
 Base Map Source: 2019 Aerial Photograph (CTECO)
 Map Date: January 2023

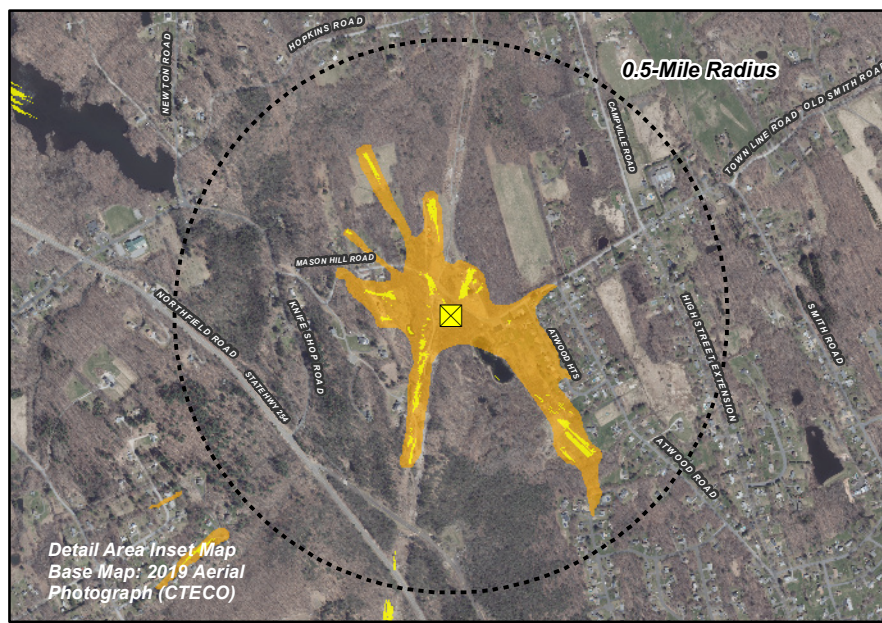
- Legend**
- Proposed Site
 - Study Area (2-Mile Radius)
 - Photo Locations (January 9, 2023)
 - Not Visible
 - Seasonal
 - Year-Round
 - Predicted Year-Round Visibility (21 Acres)
 - Areas of Potential Seasonal Visibility (54 Acres)
 - Municipal Boundary
 - Trail
 - Scenic Highway
 - DEEP Boat Launches
 - Municipal and Private Open Space Property
 - State Forest/Park
 - Protected Open Space Property**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:
Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.
 Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)
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
Other
 CTDOT Scenic Strips (based on Department of Transportation data)
Notes
 **Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.





Statewide and Regional Overview Map



Viewshed Analysis Map
 Proposed Wireless Telecommunications Facility
 Litchfield SE CT
 Mason Hill Road
 Northfield, Connecticut

Proposed facility height is 110 feet AGL.
 Forest canopy height is derived from LIDAR data.
 Study area encompasses a two-mile radius and includes 8,042 acres.
 Existing conditions field verified by APT on January 9, 2023
 Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Litchfield, CT (1984) and Thomaston, CT (1976)
 Map Date: January 2023

Legend

- Proposed Site
- Study Area (2-Mile Radius)
- Photo Locations (January 9, 2023)
 - Not Visible
 - Seasonal
 - Year-Round
 - Predicted Year-Round Visibility (21 Acres)
 - Areas of Potential Seasonal Visibility (54 Acres)
 - Municipal Boundary
- Trail
- Scenic Highway
- DEEP Boat Launches
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:

Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

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

Other
 CTDOT Scenic Strips (based on Department of Transportation data)

Notes

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

Limitations
 This map depicts 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 account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM, 2019 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.

