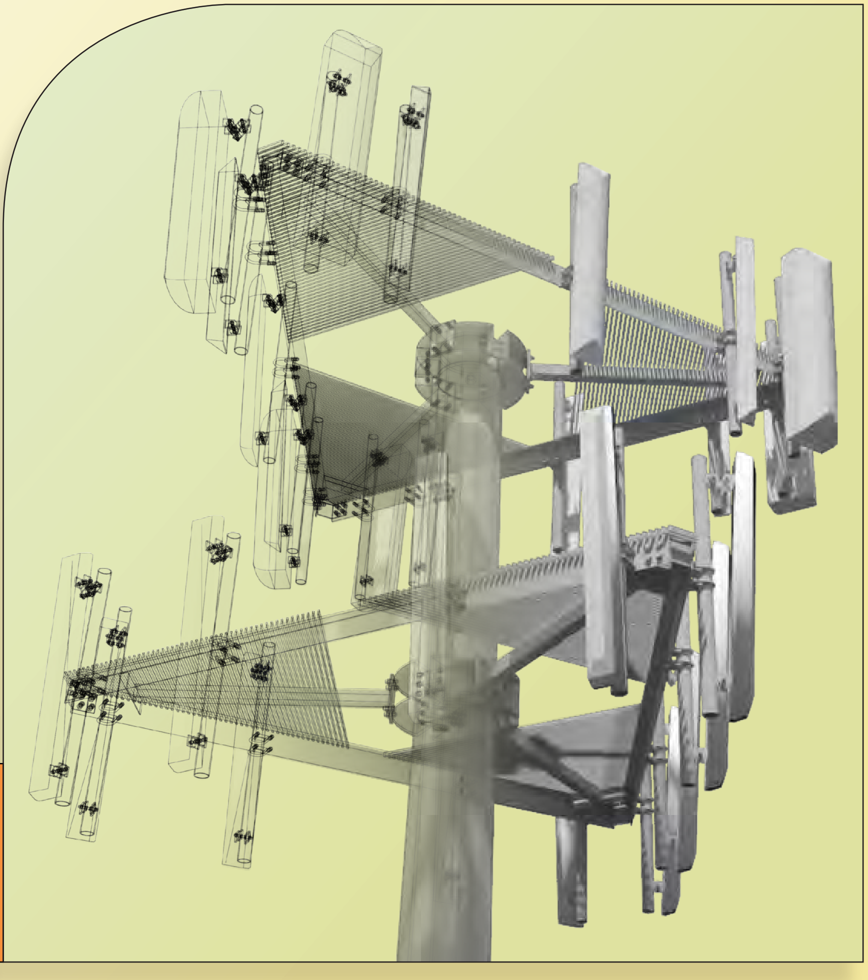
Attachment 5

Visibility Analysis

Proposed AT&T Wireless Facility
SR1252
Bridgewater
111 Second Hill Road
Bridgewater, CT



Prepared in February 2013 by:
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3 Saddlebrook Drive
Killingworth, CT 06141

Project Introduction

New Cingular Wireless PCS, LLC, d/b/a AT&T is pursuing a Certificate of Environmental Compatibility and Public Need (“Certificate”) from the Connecticut Siting Council (“Council”) for the construction, maintenance and operation of a wireless communications facility (“Facility”) at 111 Second Hill Road in Bridgewater, Connecticut (identified herein as the “ host Property”).

The proposed Facility would be located in the northern portion of the host Property and include a 160-foot tall monopole tower. AT&T would install a total of twelve (12) panel-type antennas with a center line of 157 feet above ground level (“AGL”). Supporting ground equipment would be housed within a 12-foot by 20-foot free-standing equipment shelter located near the base of the monopole. The entire Facility would be enclosed within a fenced, gravel-base compound measuring approximately 45 feet by 90 feet. The Facility would be located at a ground elevation of approximately 908 feet Above Mean Sea Level (“AMSL”). Access to the Facility would be gained via a new, gravel-base drive originating off Second Hill Road and extending approximately 350 feet eastward to the compound. Both the tower and compound are designed to accommodate multiple carriers and municipal emergency service providers, should the need arise.

At the request of AT&T, All-Points Technology Corporation, P.C. (“APT”) prepared this Visibility Analysis to evaluate potential views associated with the Facility from within a two-mile radius (“Study Area”). In addition to the Town of Bridgewater, portions of the neighboring municipalities of New Milford (to the north) and Roxbury (east) are located within the Study Area.

Site Description and Setting

The 4.5± acre host Property is owned by Robert J. Reibe and identified in Bridgewater land records as Map 28, Lot 50. Located in a Residential R3 zone, the host Property is developed with a single-family home.

Land use within the vicinity of the host Property is a mix of residential and agricultural, with large tracts of wooded areas. The host Property is abutted to the north by an 80-foot wide utility right-of-way and agricultural fields. Additional agricultural fields lie to the east and southeast; a residence and farm buildings are located to the south. A few residences are scattered along the west side of Second Hill Road in the general area of the host Property, surrounded by a mix of agricultural fields and woodland. The Study Area contains a total of approximately 72 linear miles of paved roadways, including State Routes 67 and 133.

The topography within the Study Area is characterized by rolling hills with ground elevations that range from approximately 194 feet AMSL to nearly 960 feet AMSL. The Study Area contains approximately 80 acres of surface water, including the Housatonic River nearly 2 miles to the west of the Facility. The tree cover within the Study Area (mixed deciduous hardwoods interspersed with stands of mature evergreens) occupies approximately 5,761 acres of the 8,042-acre study area (72%). The average tree canopy is estimated to be approximately 65 feet.

METHODOLOGY

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility. The predictive model provides an assessment of potential visibility throughout the entire Study Area, including private properties and other areas inaccessible for direct observations. A balloon float was also conducted to field verify results of the model, inventory visible and nonvisible locations, and to provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

APT used ArcGIS® Spatial Analyst, a computer modeling tool developed by Environmental Systems Research Institute, Inc. to calculate those areas from which at least the top of the proposed Facility is estimated to be visible. Project- and Study Area-specific data were incorporated into the computer model, including the Facility's location, height, and ground elevation, as well as the surrounding topography and existing vegetation, two primary features that can prohibit direct lines of sight. Iinformation used in the model included Connecticut LiDAR[1]-based digital elevation data and a digital forest (or tree canopy) layer developed specifically for the Study Area. The LiDAR-based Digital Elevation Model ("DEM") represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the year 2000 and has a horizontal resolution of ten (10) feet. The data was edited in 2007 and made available by the University of Connecticut through its Center for Land Use Education and Research. Mature trees and woodland areas depicted on digital ortho- (aerial) photographs (with one-foot pixel resolution) were manually digitized (hand-traced) in ArcGIS®, creating a geographic data layer for inclusion in the computer model. The digital aerial photographs, obtained from the University of Connecticut Map and Geographic Information Center (MAGIC) and ESRI (included as part of ArcGIS® version 10) , were flown in the in 2004 and 2010, respectively and depict pre-leaf emergence (i.e., "leaf-off") conditions.

Once the data layers were entered, the ArcGIS® Spatial Analyst Viewshed tool was applied to achieve an estimate of locations where the Facility might be visible. First, only topography was used as a possible visual constraint; the tree canopy was omitted to evaluate potential visibility with no intervening vegetative screening. The initial omission of this data layer results in an excessive over-prediction, but provides an opportunity to identify and evaluate those areas with direct sight lines towards the Facility and gain some insight regarding potential seasonal views. Visibility varies seasonally with increased, albeit mostly obstructed, views occurring during "leaf-off" conditions. Each individual Study Area includes mature vegetation with a unique and variable composition and density of woodlands, with mast or pole timber and branching providing the majority of screening in leafless conditions. Because tree spacing, dimensions and branching patterns and the understory vary greatly, creating an accurate Study Area-specific "leaf-off" tree density data layer is not realistic. Considering that any given Study Area has its own discrete forest characteristics, modeling for seasonal variations of visibility is problematic and, in our experience, even when incorporating conservative constraints into the model, the results over-predict visibility in "leaf-off" conditions.

[1] LiDAR is 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.

Eliminating the tree canopy altogether, as performed in the preliminary analysis, exaggerates areas of visibility because it assumes unobstructed sight lines everywhere. However, using this technique allows us to initially identify areas where seasonal visibility may occur and is especially useful during the in-field activities (described below) to further evaluate "leaf-off" scenarios. A conservative average tree canopy height of 50 feet was then incorporated into the forest data layer and added to the DEM, thus providing a baseline assessment of intervening vegetation. These preliminary visibility maps were used during the in-field activities to compare the outcome of the initial computer modeling with direct observations of the balloon float.

Additional data layers are incorporated into the preliminary visibility map, including protected and private, state and federal open space, obtained from the State of Connecticut Department of Energy and Environmental Protection ("CTDEEP"), which depict various land and water resources such as parks and forests, recreational facilities, dedicated open space, hiking and multi-use trails, public boat launches and schools, among other categories.

Second Hill Road is locally-designated as a scenic road. The portion of Route 67 from the Bridgewater-Roxbury town line extending eastward, and beyond the limits of the Study Area, is a State-designated scenic road. Based on a review of published information, no additional local or State-designated scenic roadways are present within the Study Area.

A 110-foot tall, CTDEEP-owned tower is located at 96-110 Second Hill Road (visible in photo numbers 3, 4 and 5), approximately 750 feet southwest of the host property.

In-Field Activities

To supplement and substantiate the results of the computer modeling efforts, APT completed in-field verification activities consisting of multiple balloon floats, vehicular and pedestrian reconnaissance, and photo-documentation.

Balloon Float and Field Reconnaissance

Balloon floats were conducted on March 30, 2011 during pre-leaf emergence (or "leaf-off" state) and May 3, 2012 (during the initial stage of "leaf break"), respectively, to evaluate varying seasonal conditions. The balloon floats consisted of raising an approximately four-foot diameter, helium-filled balloon tethered to a height of 110 feet AGL at the proposed Facility location. Once the balloon was secured at the proposed Facility height, a Study Area reconnaissance was performed by driving along the local and State roads and locations where the balloon could be seen above/through the tree mast and canopy were inventoried. 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. On March 30, 2011 weather conditions included partly sunny skies with a temperature of approximately 50 degrees Fahrenheit and calm winds (around 5 mph, with occasional gusts of higher speeds). Weather conditions on May 3, 2012 were overcast but with calm winds (less than 2 mph) and a mild temperature of approximately 65 degrees Fahrenheit.

During the balloon floats, several trees were randomly surveyed using a hand-held infrared laser range finder and Suunto clinometer to ascertain their heights. Numerous locations were selected to obtain tree canopy heights, including along roadways, wooded lots, and high- and low-lying areas to provide for the irregularities associated with different land characteristics and uses found within the Study Area. The average canopy height was developed based on measurements and comparative observations, in this case approximately 65 feet AGL. Throughout Connecticut, the tree canopy height varies from about 55 feet to in excess of 80 feet (where eastern white pine becomes a dominant component of the forest type, average tree heights may be even slightly higher). This general uniformity is most likely the result of historic state-wide clear cutting of forests for charcoal production in the late 1800s and early 1900s. Approximately 69% of Connecticut's forests are characterized as mature[2].

Information obtained during the balloon float was subsequently incorporated into the computer model to refine the visibility map.

Photographic Documentation

During the balloon floats, field reconnaissance were completed by driving the public roads within the Study Area and recording observations, including photo-documentation, of those areas where the balloon was and was not visible. Photographs were obtained from several vantage points to document the view towards the proposed Facility. At each photo location, the geographic coordinates of the camera’s position were logged using global positioning system (“GPS”) equipment technology.

Photographs were taken with a Nikon D-3000 digital camera body and Nikon 18 to 135 millimeter (“mm”) zoom lens. For all but one of the views the lens was set to 50mm. Photograph number 9 was taken using a 24 mm focal length in order to provide a greater depth of field for presentation in this report. Focal lengths ranging from 24 mm to 50 mm approximate views similar to that achieved by the human eye. However, two key aspects of an image can be directly affected by the specific focal length that is selected: field of view and relation of sizes between objects in the frame. In this analysis, a 24 mm focal length provides a wider field of view, representative of the extent the human eyes may see (including some peripheral vision), but the relation of sizes between objects at the edges of the photos can become minimally skewed. A 50 mm focal length has a narrower field of view than the human eye but the relation of sizes between objects is represented similar to what the human eye might perceive.

> *“The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.[3]"*

When taking photographs for these analyses, APT prefers a focal length of 50 mm; however there are times when wider views (requiring the use of the 24 mm lens setting, in this case) can better reflect “real world” viewing conditions by providing greater context to the scene. Regardless of the lens setting, the scale of subject in the photo (the Facility) remains proportional to its surroundings.

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[2] USDA Resource Bulletin NE-160, 2004.

[3] Warren, Bruce. Photography, West Publishing Company, Eagan, MN, c. 1993, (page 70).

The table below summarizes characteristics of the photographs 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 date(s) of the photos.

Photo No.	Location	View Orientation	Distance to Facility	Photo Date(s)
1	Adjacent to #7 Sarah Sanford Road	North	± 1.93-Mile	3-23-11
2	Main Street north of Sarah Sanford Road	North	± 1.91-Mile	3-23-11
3	North of #94 Curtis Road	Northeast	± 1.11-Mile	3-23-11 & 5-3-12
4	Curtis Road south of Stackhouse Lane	Northeast	± 0.97-Mile	3-23-11
5	North of #204 Curtis Road	Northeast	± 0.63-Mile	3-23-11 & 5-3-12
6	Adjacent to #35-39 Hatch Road	Northeast	± 0.55-Mile	3-23-11 & 5-3-12
7	Cedar Hill Road south of Deer Pond Woods	Southeast	± 0.44-Mile	3-23-11 & 5-3-12
8	Adjacent to #96 Second Hill Road	Northeast	± 0.13-Mile	3-23-11 & 5-3-12
9	Second Hill Road (*24mm focal length)	Southeast	± 0.11-Mile	3-23-11 & 5-3-12
10	Second Hill Road	Southeast	± 0.27-Mile	3-23-11 & 5-3-12
11	Adjacent to #3 Standish Drive	South	± 0.95-Mile	3-23-11 & 5-3-12
12	Adjacent to #11 Jefferson Drive	Southwest	± 0.92-Mile	3-23-11 & 5-3-12
13	Adjacent to #20 Revere Road	Southeast	± 0.75-Mile	5-3-12
14	Bluestone Lane east of Mine Hill Road	Southwest	± 1.40-Mile	3-23-11 & 5-3-12
15	Beaver Pond Lane	Southwest	± 1.47-Mile	3-23-11 & 5-3-12

Final Visibility Mapping

Field data and observations were incorporated into the mapping data layers, including the photo locations, areas that experienced land use changes since the 2010 aerial photo flight, and those places where the initial model was found to either under or over-predict visibility.

The revised average tree canopy height data layer (using 65 feet AGL) was merged with the DEM and added to the base ground elevations. As a final step, forested areas were extracted from areas of potential visibility, assuming that a person standing within a forest would not be able to view the Facility from beyond a certain distance due to the presence of intervening tree mast and/or understory. APT elected to use a distance of 500 feet for this analysis. Each location is dependent on the specific density and composition of the surrounding woodlands, and it is understood that some locations within this distance could provide visibility of at least portions of the Facility at any time of the year. In "leaf-on" conditions, this distance may be overly conservative as the deciduous vegetation would substantially hinder direct views in many cases at close range. However, even in "leaf off" conditions when views expand, tree mast can still serve to block lines of sight, even at distances less than 500 feet. For purposes of this analysis, it was reasoned that contiguous forested land beyond 500 feet of the Facility would consist of light-impenetrable trees of a uniform height.

Once the additional data was integrated into the model, APT re-calculated the visibility of the Facility from within the Study Area to produce the final visibility map.

Photographic Simulations

Simulations of the proposed Facility were generated for those photographs where the balloon was visible during the in-field activities and portray scaled renderings of the Facility from these locations. 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[4].

A photolog map (depicting the photo locations), photo-documentation and simulations are presented in the attachment at the end of this report. The photographs of the balloon are included to provide visual reference points for the location, height and proportions of the proposed Facility relative to the scene.

As stated earlier, APT has elected to use a 50 mm focal length whenever possible; however, there are occasions when the use of a wider-angle lens setting is preferred. For presentation purposes in this report, the photographs are produced in an approximate 7” by 10.5” format. When viewing in this format size, we believe it is important to provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph. One photograph presented in this report (View 9) was taken with a 24 mm focal length to balance preserving the integrity of the scene’s setting while depicting the subject (the Facility location) in a way similar to what an observer might see, to the greatest extent possible.

[4] As a final step, the accuracy and scale of select simulations are tested against photographs of existing Facilities with recorded camera position, focal length, photo location, and Facility location.

Visibility Analysis Results

Results of this analysis are graphically displayed on the visibility analysis map provided in the attachment at the end of this report. A total of 112± acres within the Study Area would have some visibility of the proposed Facility above the tree canopy year-round (that is, during both "leaf-off" and "leaf-on" conditions). This represents slightly more than one percent of the 8,042-acre Study Area. As depicted on the visibility analysis map, the majority of year-round visibility associated with proposed Facility would occur on the open, undeveloped agricultural fields located off Second Hill Road adjacent to the Host Property and extending approximately 2000 feet to the north and south (Views 8, 9 and 10). The map also depicts areas of anticipated year-round visibility along elevated portions of Curtis Road (Views 3, 4 and 5) and Hatch Road (View 6) southwest of the proposed Facility; limited portions of Bluestone Lane (View 14) and Beaver Pond Lane (View 15) to the northeast; select portions of Standish Drive and Jefferson Drive to the north (Views 11 and 12); and portions of Old Ridge Road. Several areas of potential year-round visibility are also depicted over open fields on private properties to the east and west of Route 133 located between 1.6 and 2 miles to the south/southwest of the proposed Facility. VHB estimates that at least partial year-round views of the proposed Facility may be achieved from portions of 19 residential properties located within the Study Area. In general, potential year-round views of the proposed Facility would be limited to the areas described herein by a combination of intervening topography and vegetation contained within the Study Area.

We estimate that approximately 44 additional acres have the potential to offer some views of the Facility through the trees during "leaf-off" conditions. These areas are generally located within the immediate vicinity of the proposed Facility, including select portions of Second Hill Road. Limited seasonal views are also expected to extend to portions of Cedar Hill Road to the west (View 7); Route 133 to the south (Views 1 and 2); and Standish Road to the north (View 13). At least 22 residential properties may achieve seasonal views of portions of the Facility.

The table on the following page presents an inventory of residential properties[5] within the Study Area that have the potential for views of at least portions of the Facility.

[5] For purposes of this analysis, the term "residential property" may, in addition to parcels occupied by homes, also include agricultural land, forested tracts with some clearing, and/or parcels with uninhabited structures. Potential visibility identified on a residential property does not necessarily mean that views would be achieved from within dwellings, or on exterior decks, porches or patios that might be associated with a parcel.

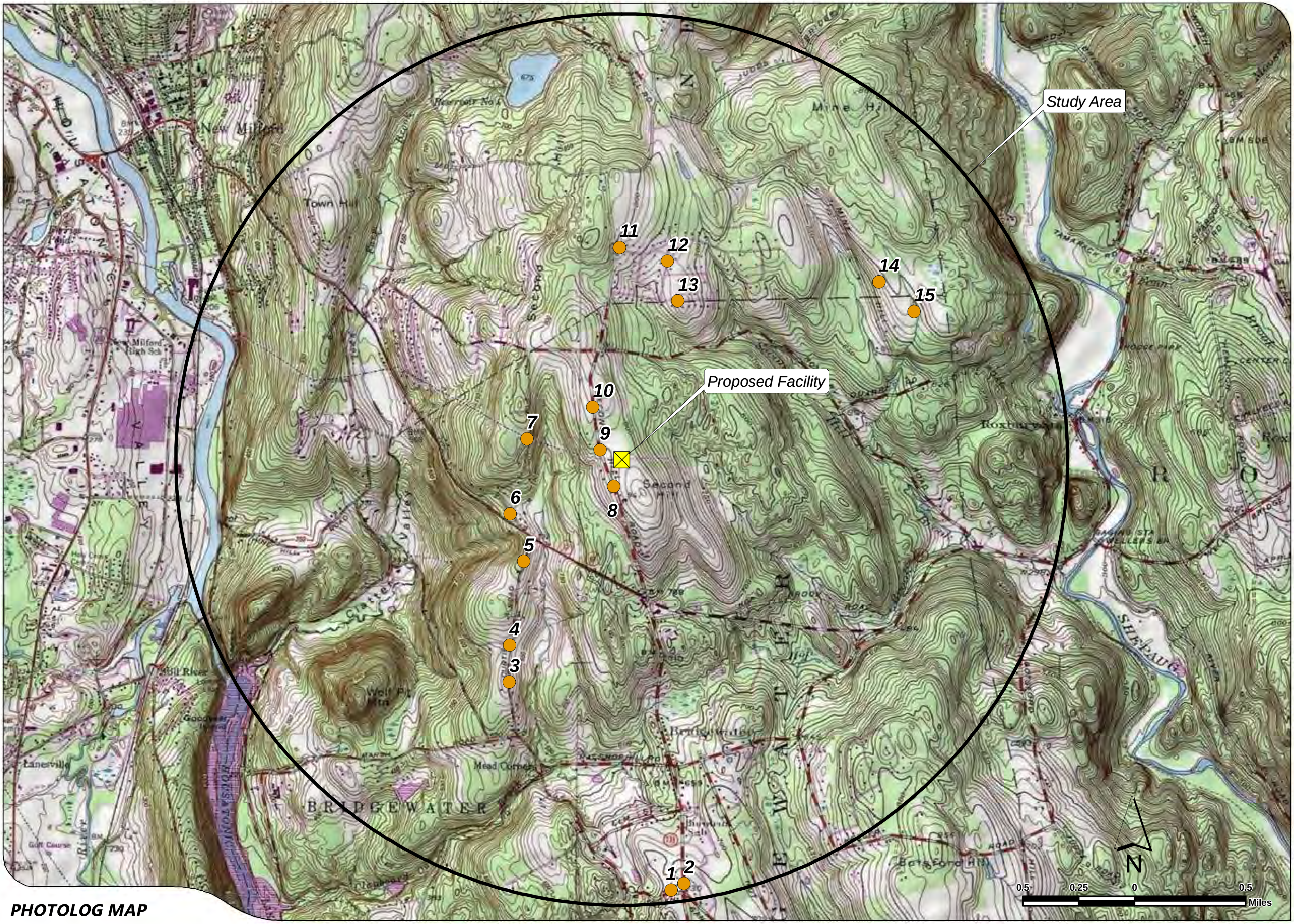
Location	*Number of Residential Properties With Potential Year-Round Visibility (Leaf-On)	*Number of Residential Properties With Potential Seasonal Visibility (Leaf-Off)
Main Street (Route 133)	2	3
Curtis Road	4	1
Hatch Road	1	-
Beaver Pond Lane	1	3
Bluestone Lane	-	2
Cedar Hill Road	-	3
Second Hill Road	5	1
Jefferson Drive	5	1
Standish Road	-	1
Old Ridge Road	1	1
Sarah Sanford Road West	-	2
Revere Road	-	4
TOTAL:	**19**	**22**

*Indicates potential year-round or seasonal visibility from portions of "residential" properties. For purposes of this analysis, the term "residential" property may include undeveloped or agricultural land, forested tracts with some clearing, and/or parcels with non-residential structures. Potential visibility on a residential property does not necessarily mean that views would be achieved from within residential dwellings, exterior decks, porches or patios that might be located on such properties. Further, it may be possible to view the Facility from within portions of the shaded areas indicating potential visibility, but not necessarily from all locations within those shaded areas.

Proximity to Schools and Commercial Child Day Care Centers

No school or commercial child day care facilities are located within 250 feet of the proposed Facility. The nearest school (The Burnham School) is located approximately 1.55 miles to the south. The nearest commercial child day care center (Childcare) is located at 9 Wampum Drive in New Milford, approximately 2.23 miles northwest of the proposed Facility. Neither of these off-site locations would have views of the proposed Facility.

ATTACHMENTS



PHOTOLOG MAP

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**ADJACENT TO #7 SARAH SANFORD ROAD**	**NORTH**	**1.93 MILES +/-**	**SEASONAL**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**ADJACENT TO #7 SARAH SANFORD ROAD**	**NORTH**	**1.93 MILES +/-**	**SEASONAL**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**MAIN STREET SOUTH NORTH OF SARAH SANFORD ROAD**	**NORTH**	**1.91 MILES +/-**	**SEASONAL**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**MAIN STREET SOUTH NORTH OF SARAH SANFORD ROAD**	**NORTH**	**1.91 MILES +/-**	**SEASONAL**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**NORTH OF #94 CURTIS ROAD**	**NORTHEAST**	**1.11 MILES +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	NORTH OF #94 CURTIS ROAD	NORTHEAST	1.11 MILES +/-	YEAR ROUND

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**NORTH OF #94 CURTIS ROAD**	**NORTHEAST**	**1.11 MILES +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	NORTH OF #94 CURTIS ROAD	NORTHEAST	1.11 MILES +/-	YEAR ROUND

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**CURTIS ROAD SOUTH OF STACKHOUSE LANE**	**NORTHEAST**	**0.97 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**CURTIS ROAD SOUTH OF STACKHOUSE LANE**	**NORTHEAST**	**0.97 MILE +/-**	**YEAR ROUND**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**NORTH OF #204 CURTIS ROAD**	**NORTHEAST**	**0.63 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**NORTH OF #204 CURTIS ROAD**	**NORTHEAST**	**0.63 MILE +/-**	**YEAR ROUND**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	NORTH OF #204 CURTIS ROAD	NORTHEAST	0.63 MILE +/-	YEAR ROUND

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**NORTH OF #204 CURTIS ROAD**	**NORTHEAST**	**0.63 MILE +/-**	**YEAR ROUND**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**ADJACENT TO #35-39 HATCH ROAD**	**NORTHEAST**	**0.55 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**ADJACENT TO #35-39 HATCH ROAD**	**NORTHEAST**	**0.55 MILE +/-**	**YEAR ROUND**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**ADJACENT TO #35-39 HATCH ROAD**	**NORTHEAST**	**0.55 MILE +/-**	**YEAR ROUND**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**CEDAR HILL ROAD SOUTH OF DEER POND WOODS**	**SOUTHEAST**	**0.44 MILE +/-**	**SEASONAL**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	CEDAR HILL ROAD SOUTH OF DEER POND WOODS	SOUTHEAST	0.44 MILE +/-	SEASONAL

ALL-POINTS TECHNOLOGY CORPORATION

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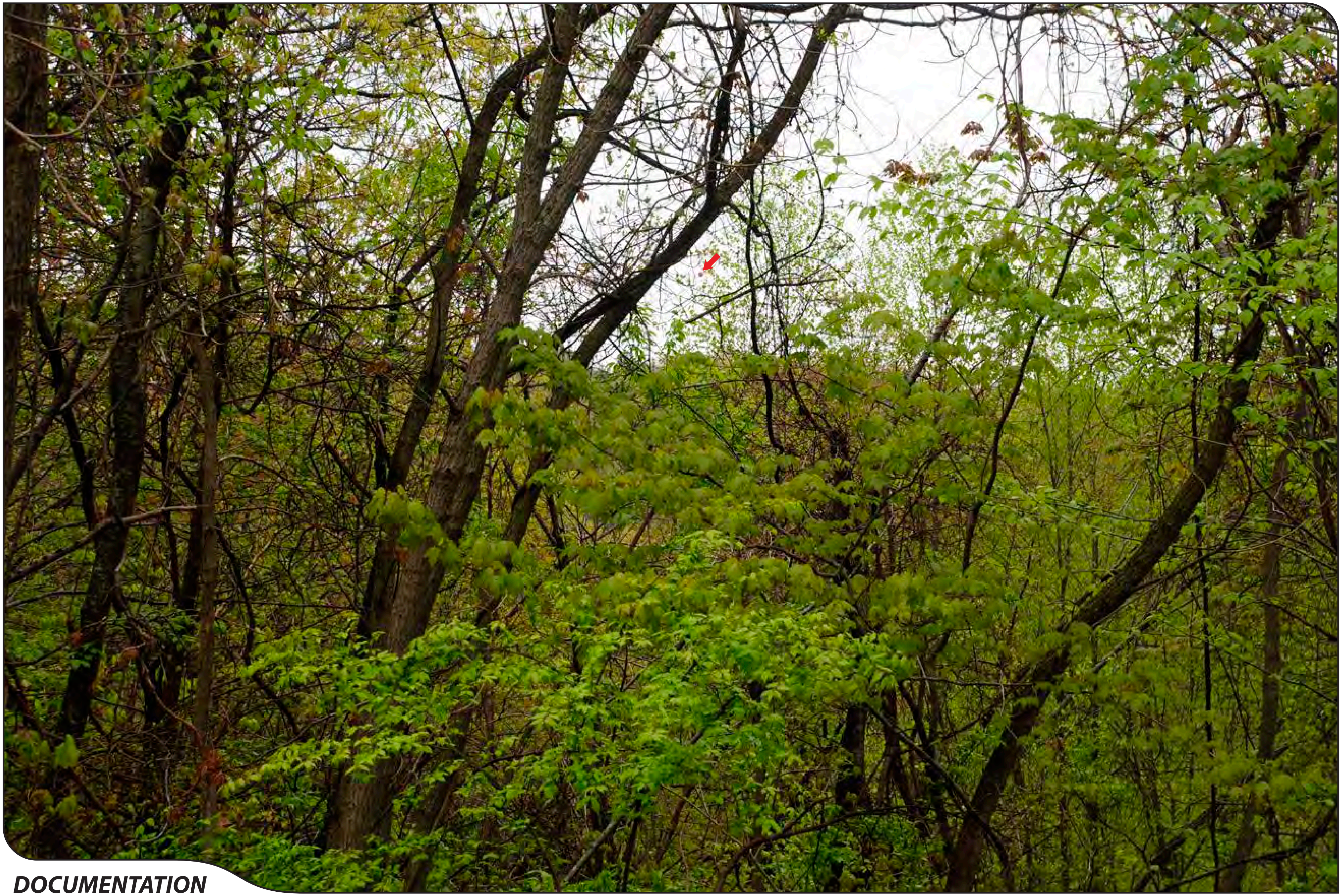

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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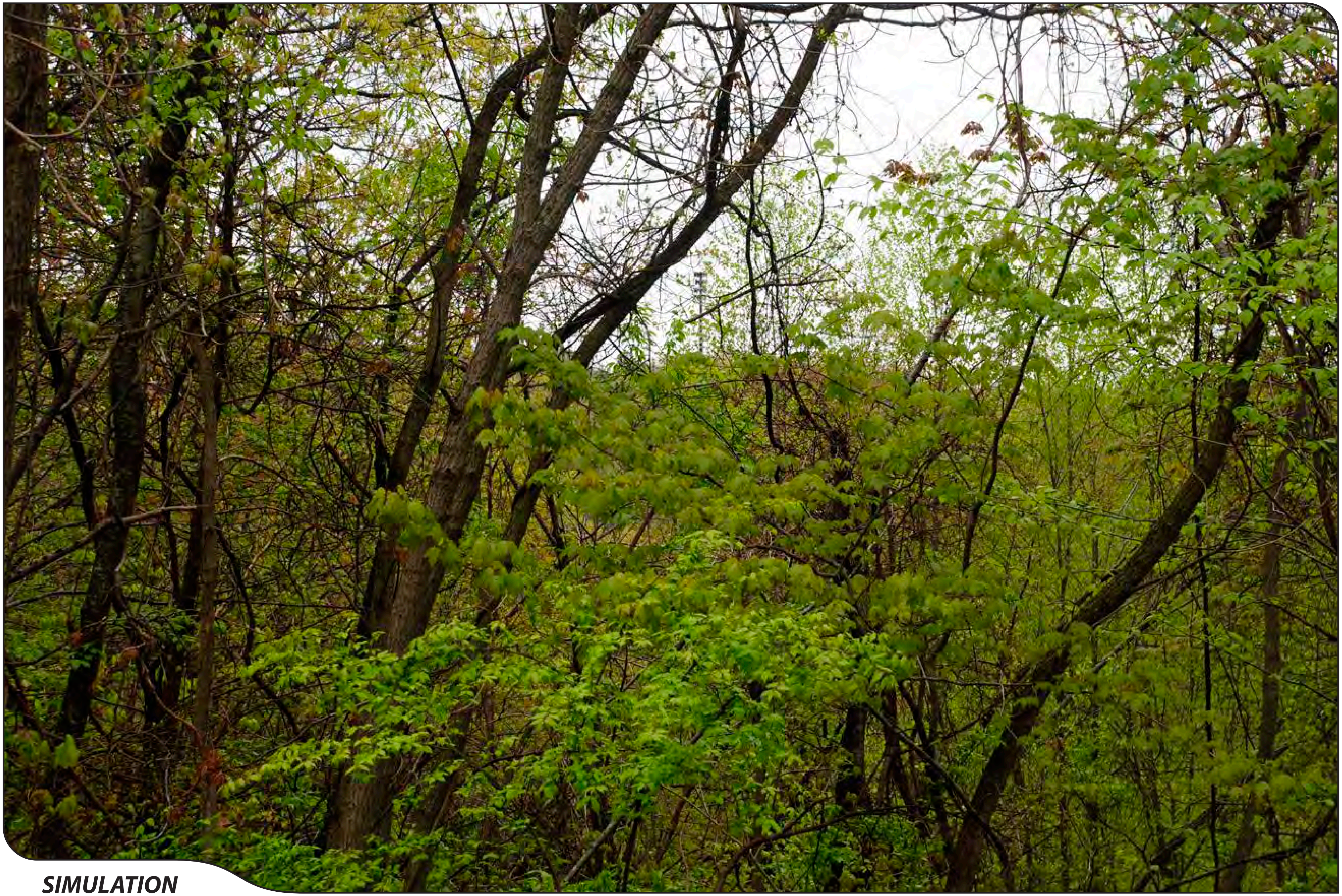

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	CEDAR HILL ROAD SOUTH OF DEER POND WOODS	SOUTHEAST	0.44 MILE +/-	SEASONAL

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**ADJACENT TO #96 SECOND HILL ROAD**	**NORTHEAST**	**0.13 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

ALL-POINTS TECHNOLOGY CORPORATION

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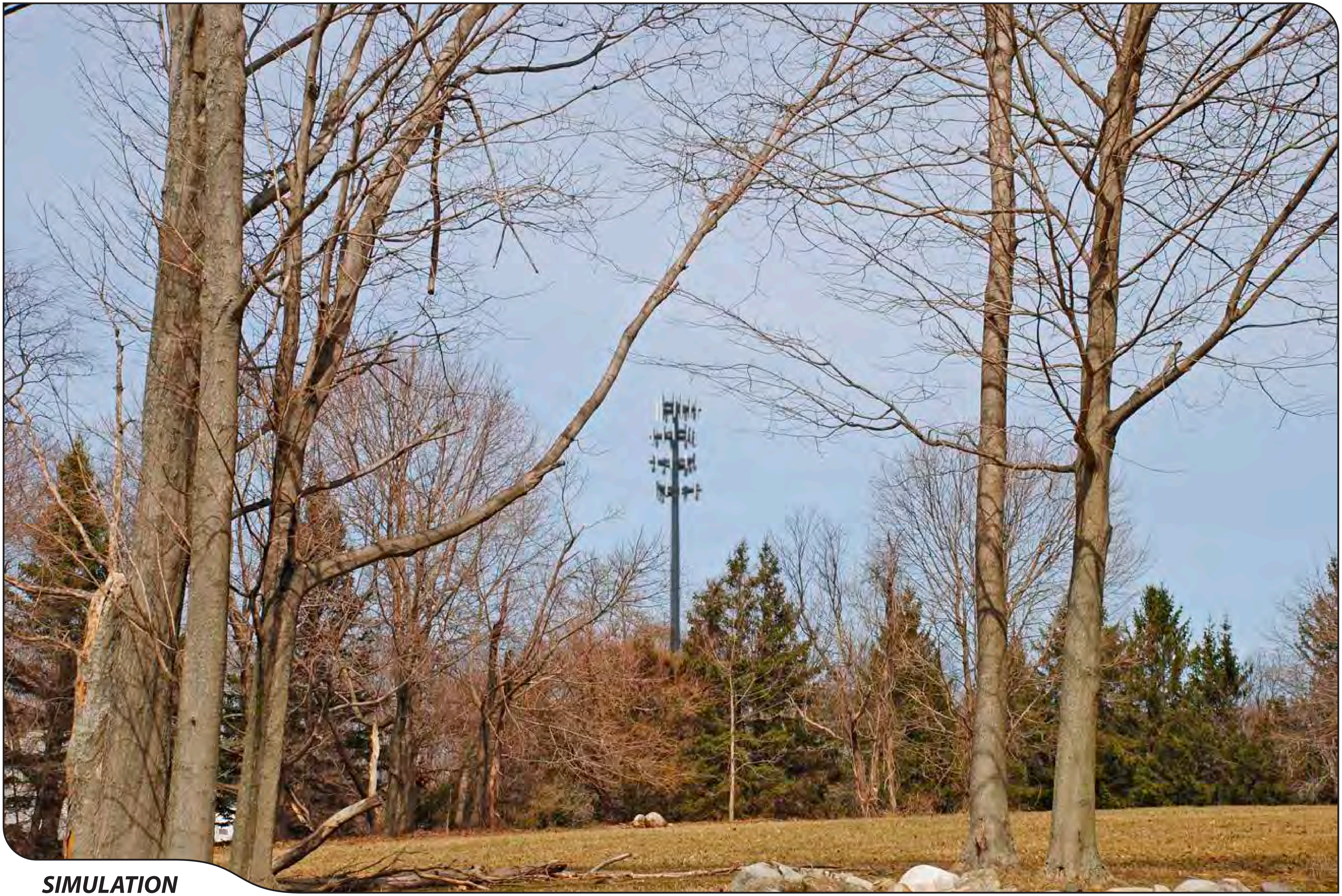

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	ADJACENT TO #96 SECOND HILL ROAD	NORTHEAST	0.13 MILE +/-	YEAR ROUND

ALL-POINTS TECHNOLOGY CORPORATION

at&t

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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SIMULATION

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

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**SECOND HILL ROAD (24mm focal length)**	**SOUTHEAST**	**0.11 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

ALL-POINTS TECHNOLOGY CORPORATION

at&t

SIMULATION

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9	**SECOND HILL ROAD (24mm focal length)**	**SOUTHEAST**	**0.11 MILE +/-**	**YEAR ROUND**

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PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**ADJACENT TO #3 STANDISH DRIVE**	**SOUTH**	**0.95 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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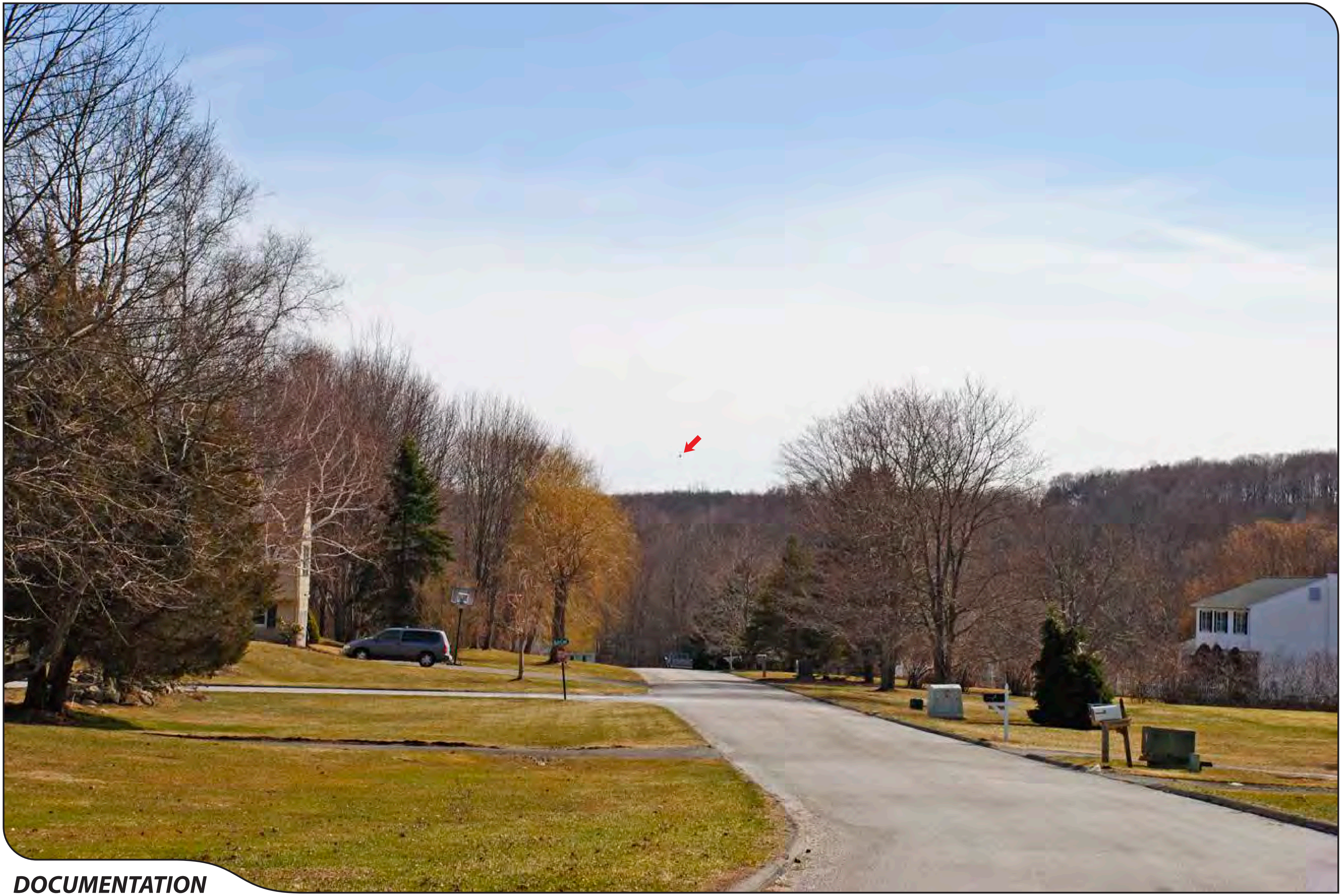

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	**ADJACENT TO #11 JEFFERSON DRIVE**	**SOUTHWEST**	**0.92 MILE +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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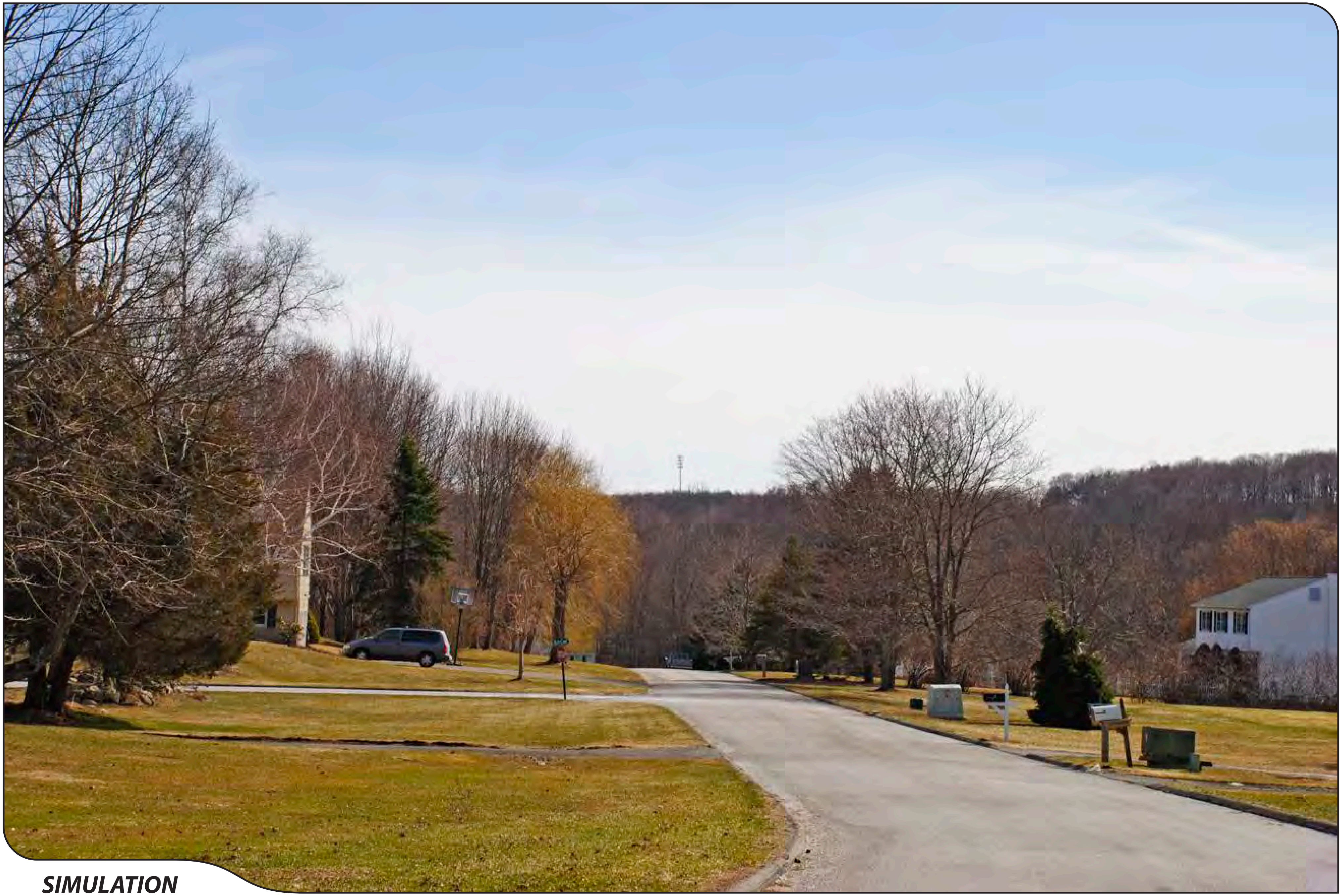

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	**ADJACENT TO #20 REVERE ROAD**	**SOUTHEAST**	**0.75 MILE +/-**	**SEASONAL**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**BLUESTONE LANE EAST OF MINE HILL ROAD**	**SOUTHWEST**	**1.40 MILES +/-**	**YEAR ROUND**

RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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RED ARROW INDICATES LOCATION OF BALLOON TETHERED AT 160 FEET

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PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**BEAVER POND LANE**	**SOUTHWEST**	**1.47 MILES +/-**	**YEAR ROUND**

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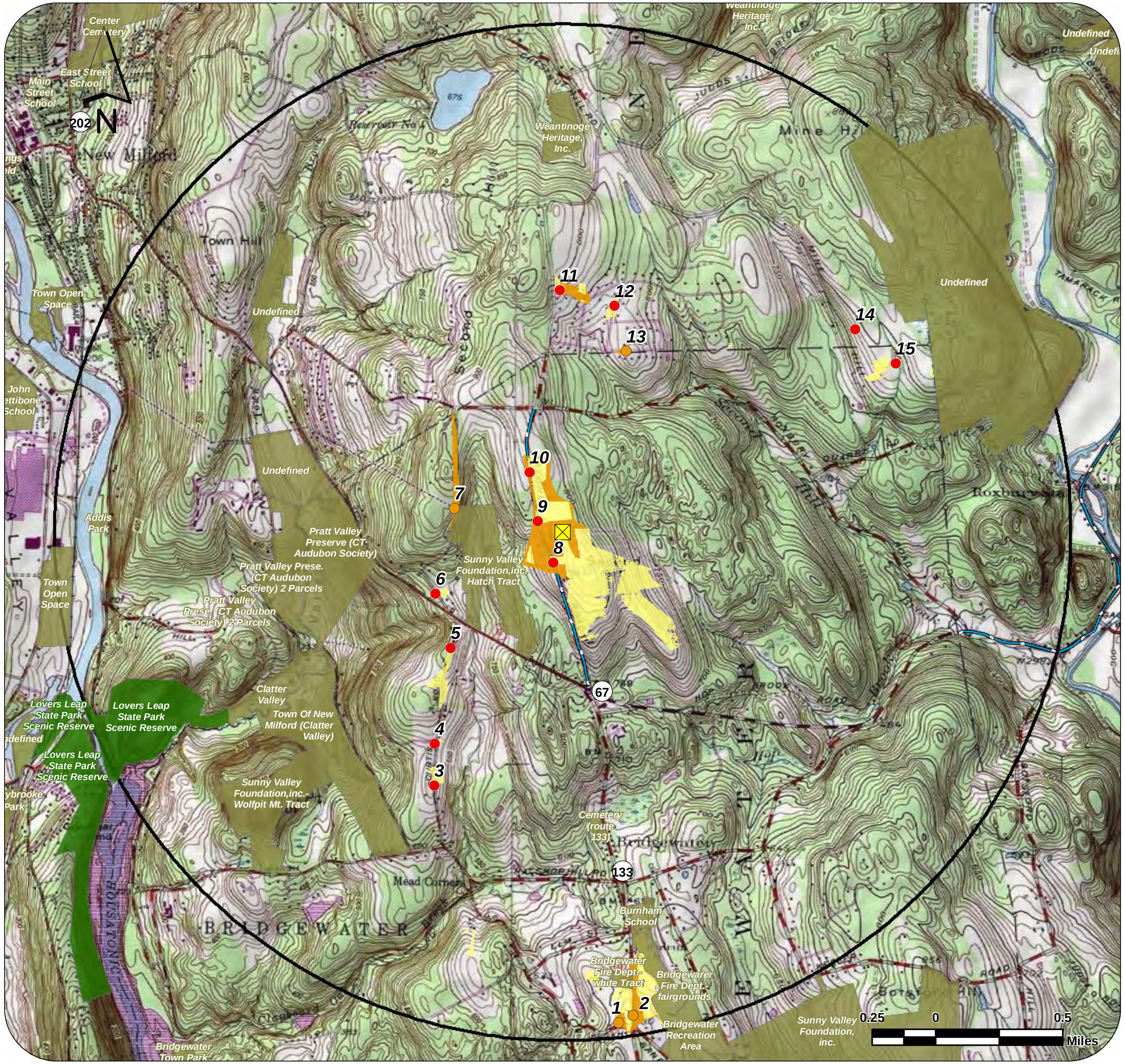
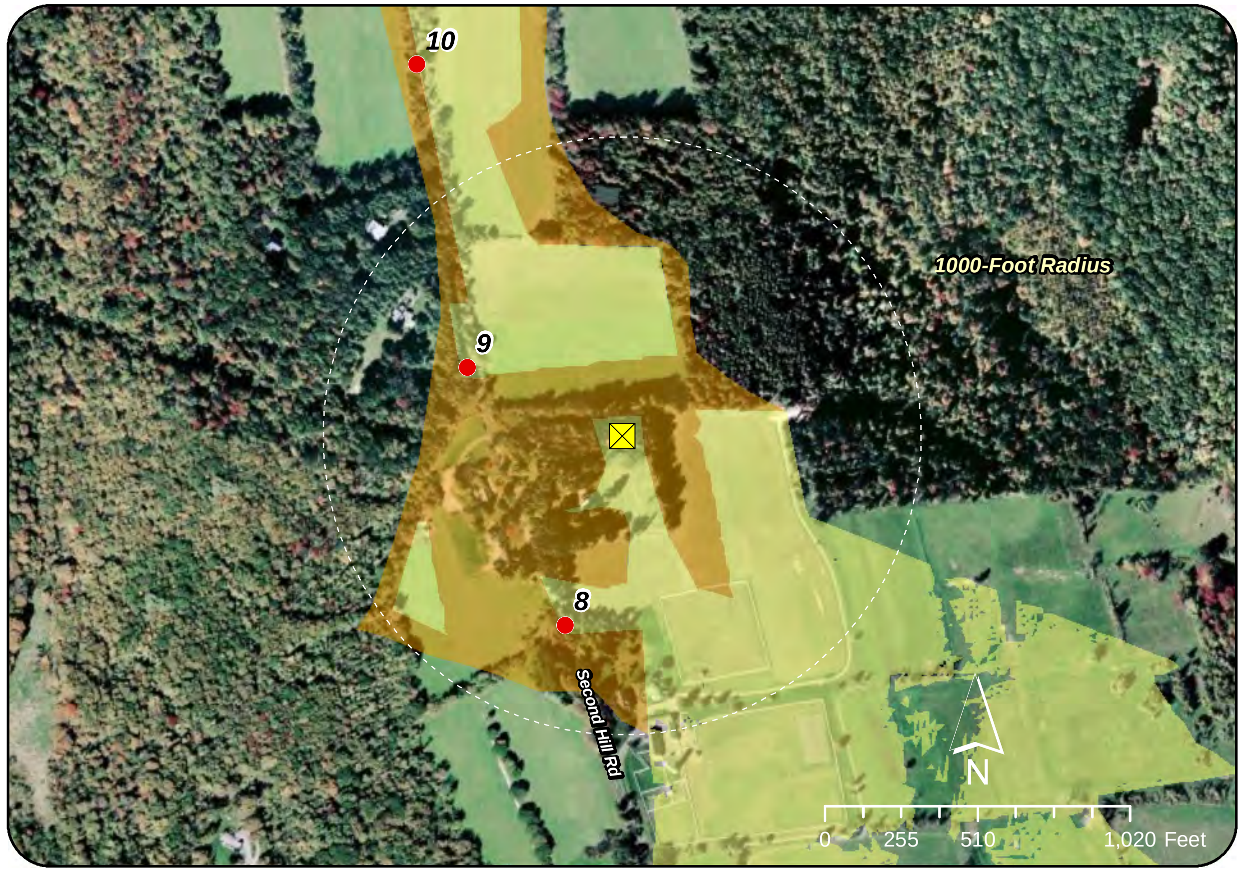




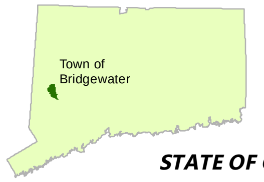
AERIAL PHOTOGRAPH SITE AND SURROUNDING AREA

Legend

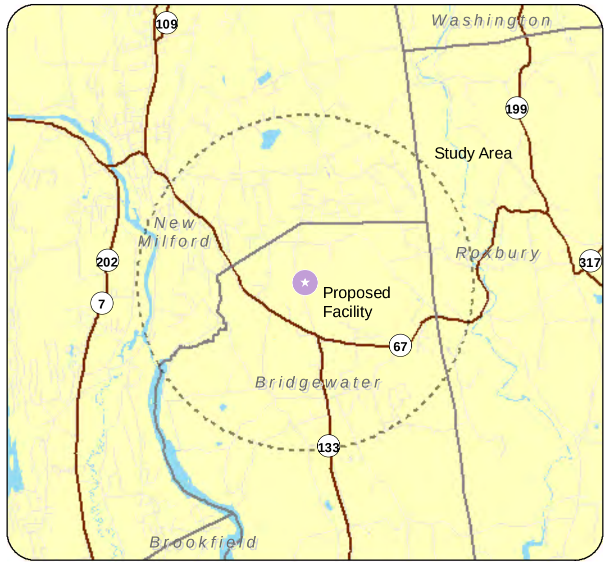
- Proposed Facility

Photos - March 30, 2011 and May 3, 2012

- Balloon Visible Through Trees
- Balloon Visible Above Trees
- DEP Boat Launch
- Federal Open Space (CTDEP, 2004)
- Protected Properties (CTDEP, May 2007)
- Protected Properties (Municipal)
- Study Area (2-Mile Radius)
- Year-Round Visibility (Approx. 112 Acres)
- Seasonal Visibility (Approx. 44 Acres)
- Scenic Roads



STATE OF CONNECTICUT



STUDY AREA AND VICINITY

VISIBILITY ANALYSIS MAP

PROPOSED WIRELESS
TELECOMMUNICATIONS FACILITY
111 SECOND HILL ROAD
BRIDGEWATER, CONNECTICUT

NOTE:
- *Map compiled MaY 2012*
- *Viewshed analysis conducted using ESRI's Spatial Analyst.*
- *Proposed Facility height is 160 feet AGL.*
- *Existing tree canopy height estimated at 65 feet.*
- *Study Area is comprised of a two-mile radius surrounding the proposed facility and includes 8,042 acres of land.*

DATA SOURCES:
- *Digital elevation model (DEM) derived from Connecticut LiDAR-based Digital Elevation Data (collected in 2000) with a 10-foot spatial resolution produced by the University of Connecticut and the Center for Land Use Education and Research (CLEAR); 2007*
- *Forest areas derived from 2010 ESRI/Bing digital orthophotos with 1-foot pixel resolution; digitized by All-Points Technology Corp., 2012*
- *Base map comprised of Roxbury (1984) and New Milford (1984) USGS Quadrangle Maps*
- *Protected municipal and private open space properties and federal protected properties and data layers provided by CT DEP, 1997*
- *Protected CT DEP properties data layer provided by CTDEP, May 2007*
- *CT DEP boat launches data layer provided by CT DEP, 1994*
- *Scenic Roads layer derived from available State and Local listings.*

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