

## Proposed Wireless Telecommunications Facility

Site Name: North Branford (CT-021)  
222 Clintonville Road  
Northford, CT 06472

# VISUAL RESOURCE ASSESSMENT



HOMELAND TOWERS

Prepared for:  
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Homeland Towers seeks approval from the Connecticut Siting Council (CSC) to construct a wireless telecommunications facility (the "Facility") at 222 Clintonville Road, Town of North Branford, CT 06472 ("host property"). To address issues of potential visual impact, Saratoga Associates, Landscape Architects, Architects, Engineers, and Planners, P.C. was retained to conduct a Visual Resource Assessment ("VRA") of the proposed Project.

The study area for this VRA extends to a two-mile radius from the Facility (hereafter referred to as the "2-mile study area").

### **PROJECT DESCRIPTION**

The Facility will be located at 41°23'45.28"N, 72°47'35.42"W. ("Facility site"). The 7.86± acre host property is identified as tax parcel #67-D6. The existing ground elevation at the Facility site is approximately 272± feet above mean sea level (AMSL). The Facility is located approximately 590 feet northeast of Clintonville Road, 510 feet southeast of Pistapaug Road and approximately 650 feet west of Old Post Road.

The Facility involves the construction of a wireless telecommunications structure consisting of a 110-foot-tall stealth monopine type tower designed to support up to four antenna levels. The upper antenna will be mounted at a centerline height of 96 feet above finished grade. One 14-foot tall and one 24-foot tall 2-inch diameter white colored omnidirectional "whip" Town public safety antennas will be mounted at the 110-foot elevation with the tallest whip antenna extending to a maximum height of 134 feet above finished grade. The two whip antennas will be separated horizontally by approximately 10 feet.

The stealth monopine tower design will include a dense non-uniform branching pattern with branches ranging in length from approximately 9 feet to 15 feet and in sufficient density to substantially conceal the antenna arrays and associated equipment, and help blend the structure with the visual characteristics of the surrounding woodland landscape. Antenna arrays will be covered in an earth tone green textured sleeve to further camouflage equipment. Monopine branching will extend to the 110-foot elevation. The stealth monopine will not include topping branches as a means to minimize the tower height.

In the alternative, this VRA also evaluates a traditional monopole structure painted an earth tone brown color to blend the facility with the woodland characteristics of the surrounding landscape. For this alternative the structure includes a 100-foot-tall primary tubular steel tower measuring approximately 5 feet in diameter at the base tapering to approximately 3 feet at the top designed to support up to four antenna levels. The upper antenna will be mounted at a centerline height of 96 feet above finished grade.

To maintain a slim profile, the brown colored monopole alternative includes a 10-foot-tall tubular steel extension approximately 1-foot in diameter mounted atop the primary tower resulting in a total tower height of 110 feet above finished grade. One 14-foot tall and one 24-foot tall 2-inch diameter white colored omnidirectional “whip” Town public safety antennas will be mounted at the 110-foot elevation with the tallest whip antenna extending to a maximum height of 134 feet above finished grade. The two whip antennas will be separated horizontally by approximately 10 feet.

Associated ground equipment will be located within a 75 by 57-foot (4,061 square foot) irregularly shaped fenced compound at the base of the tower. The ground level equipment will be approximately eight (8) feet tall. The compound fence will be eight feet tall. Access to the Facility site will be from a new 785± foot long 12-foot-wide access drive connecting with an existing paved driveway on-site. The fenced compound, parking area and access drive will be gravel surface. Construction of compound and access drive will require removal of a number of mature trees from the wooded site.

#### **LANDSCAPE SETTING**

The Facility is located in North Branford, CT (2019 estimated population 14,146<sup>1</sup>). The 7.86± acre host property is zoned R40-Residencel as defined by the North Branford Town Code.

The host property is bordered by Clintonville Road to the east. The western portion of the host property is occupied by a single-family residence and two small accessory cottages. The eastern portion of the host property is undeveloped woodland. The Facility is bordered on all sides by dense woodland, which provides a substantial buffer visual between the Facility and adjacent properties and roadways.

Land use within two miles of the Facility is generally comprised of a relatively even mix of low to moderate density (1/2 to 10+ acre) single family residential properties and undeveloped woodlot, with areas of active and inactive agriculture. Structures are typically one- and two-story single-family homes within organized subdivisions or individual homes setback from local roads. Residential neighborhoods are commonly wooded, often with well landscaped understory areas that generally limit views to the immediate foreground. Along roadways mature trees commonly extend to road edges preventing long distance vistas.

The hamlet of Northford is approximately 1,000 feet southeast of the Facility. The hamlet is comprised of a small commercial district including two small retail plazas, individual retail and commercial businesses, gas stations, fire station, library, institutional facilities and churches.

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<sup>1</sup><https://www.census.gov/quickfacts/fact/table/northbranfordtownnewhavencountyconnecticut/BZA110218>

The nearest residential structure is approximately 213 feet north of the Facility (61 Pistapaug Road). The Facility is approximately 270 feet east of the Center for Autism Spectrum & Development Disorders (“ACES”) (26 Old Post Road).

Table 1 summarizes land cover within the 2-mile study area.

Table 1- Land Cover (2-Mile Study Area)

Type	Coverage (acres)	Percent Coverage
Woodland	5,545	69%
Developed	1,935	24%
Agriculture (active/inactive/scrub)	542	7%
Open Water	11	<1%
Total	8,040	100%

The local topography is characterized by a hilly and often steeply sloped landscape. The topographic high point (elevation 597± feet AMSL) is Totoket Mountain approximately 1.5 miles east of the Facility. The topographic low point (elevation 38± feet AMSL) is along Muddy River at the southwest portion of the 2-mile study area. Waterbodies include Dayton Pond (4 acres±), and several other minor ponds.

#### VIEWSHED ANALYSIS

Viewshed mapping identifies the geographic area within which there is a relatively high probability that some portion of the Facility could be visible above intervening landform, buildings and vegetation.

Global Mapper 21.0 GIS software was used to generate viewshed areas based on publicly available LiDAR data. A digital surface model (DSM) created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features of the earth’s surface. Using Global Mapper's viewshed analysis tool, the proposed Facility location and height were input and a conservative offset of six feet was applied to account for the observer's eye level. The resulting viewshed identifies grid cells with a theoretical line-of-sight to the Facility high point (i.e., 110 feet above ground level).

By themselves, the viewshed maps do not determine how much of the proposed Facility would be visible above intervening landform, structures or vegetation (e.g., 100%, 50%, 10% etc. of total tower height), but rather the geographic area within which some portion of the Facility would theoretically be visible. Their primary purpose is to provide a general understanding of a Facility’s potential visibility and identify areas to be visited during field reconnaissance.

Figure A1 identifies areas of potential project visibility at a macro scale within the 2-mile study area. Figure A2 provides a more localized assessment potential visibility within 1/2 mile of the facility. Figure A1 and Figure A2 are provided in Appendix A.

Of the 8,040 acres within the 2-mile study area, a view of the proposed telecommunications tower is theoretically possible from approximately 39 acres (0.5%). Of the 502 acres within 1/2-mile of the Facility, a view of the proposed tower is possible from approximately 10 acres (2%).

#### **STUDY AREA RECONNAISSANCE**

A balloon visibility test was conducted on February 24, 2021. The weather on February 21, 2021 was sunny with clear visibility. One 4-foot± diameter red balloon was raised to an elevation of approximately 100 feet above grade<sup>2</sup> (measured to the bottom of the balloon). The balloon was anchored approximately 30 feet northeast of the proposed tower center in order to avoid overhead tree canopy. The balloon was raised at approximately 8:00am and remained aloft until approximately 1:45pm.

Wind on February 24, 2021 was approximately 5mph between 8am and 11am, increasing to approximately 8mph between 11am and 12:45am. The balloon remained stable at or near the intended altitude for most of the test duration. Increasing winds resulted in a small degree of balloon blowdown (estimated to be less than 10 feet) near the end of the float period.

The balloon test was conducted during winter leaf-off season to represent the worst-case (i.e., most exposed) visual condition. Project visibility will be substantially less during summer leaf-on season.

While the balloon was in the air a visual analyst drove and walked public roads to inventory those areas where viewshed mapping identified potential Facility visibility. Photographs were taken from 83 locations within the study area.

Photographs were taken using a Canon 6D Mark II digital single lens reflex (“DSLR”) 26-mega pixel camera with a lens setting of 50mm to minimize optical distortion and best represent human eyesight. The precise coordinates of each photo location were recorded in the field using a handheld global positioning system (GPS) unit. Prior to field reconnaissance, the coordinates of the proposed telecommunications tower were programmed into a handheld GPS unit as a “waypoint.” The “waypoint indicator” function of the GPS (arrow pointing along a calculated bearing) was used to assist the visual analyst in determining the direction of the tower site from each photo location in cases where the balloon was not visible through or above intervening vegetation.

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<sup>2</sup> At the time of the balloon test the proposed tower height was established at 100 feet above grade. All photo simulations provided in this VRA are adjusted to accurately depict the currently proposed tower height of 110 feet plus the 14-foot and 24-foot tall whip antennas mounted at the 110 foot elevation.

Photo locations are identified on Figures A1 and A2. Photographs taken from each location are provided in Appendix B. Balloon visibility as observed in the field (either visible above trees, seasonally visible through trees or not visible) is indicated for each photo location.

### **VISUAL RESOURCES**

Northford Center Historic District – The Northford Center Historic District is listed on the National Register of Historic Places. The district generally follows the upper Farm River Valley in North Branford. The District consists of two principal streets: Middletown Avenue (State Route 17), the former Middletown Turnpike that runs alongside the river for almost two miles; and portions of Old Post Road. These roads diverge in the institutional center in the southern part of this linear district, with Old Post Road rising steeply before leveling off to rejoin Middletown Avenue. They also are connected by Maltby Lane near the center of the district. The district boundary is identified in Figures A1 and A2.

The district contains 106 resources, of which 85 contribute to its architectural and historic character. Although most of the contributing resources are houses and associated outbuildings, the district also includes two churches, a schoolhouse, a library, and a small triangular green, the site of a war memorial, at the southern intersection of the two major roads (see Northford Center Historic District report for additional information).

50 photos taken during the balloon visibility test are located within or immediately adjacent to the Northford Center Historic District. (see Appendix B Photos 01-50).

Viewshed analysis and the balloon visibility test demonstrate that the Facility will not be visible above intervening vegetation from any location within the Northford Center Historic District. Seasonal views through existing deciduous branches and stems may occur from approximately 800 linear feet of Old Post Road in the vicinity of the Center for Autism Spectrum & Development Disorders (26 Old Post Road). Highly filtered seasonal views may also occur along a 1,200-foot segment of Middletown Avenue (State Route 17) north of the Northford Square retail plaza. Such views will be substantially or completely screened during summer leaf-on season.

Residential Areas - Within ½ mile of the Facility residential development is largely clustered in planned single-family residential neighborhoods and road frontage properties. Dense woodland and well landscaped understory areas commonly limit views from residential properties to the immediate foreground. From most residential properties, views of the Facility will be substantially or fully screened by intervening dense mature woodland vegetation – even during winter leaf-off-season.

Nearby residential streets within ½ mile of the Facility generally include Clintonville Road, Woodhouse Avenue, Greenmeadow Drive, Pistapaug Road, Birchwood Road, Old Post Road and

Middletown Avenue. Portions of the Montgomery Village residential subdivision and the Totoket Woods Apartment complex are also within ½ mile of the Facility. Views from most residential properties are substantially or completely screened by existing woodland vegetation. Viewshed analysis identifies several small areas where a portion of the Facility may be visible above intervening vegetation. Such views are not common.

Limited seasonal views through existing deciduous branches and stems may occur from residential properties generally within 1,000 feet of the Facility. Such views will be substantially or completely screened by intervening deciduous vegetation during summer leaf-on season.

Public Roadways - Approximately 56 miles of public roadways are within the 2-mile study area. Middletown Avenue (State Route 17) is the most heavily travelled roadway with an average daily traffic volume (AADT) of approximately 11,400 vehicles per day at the intersection of Old Post Road in the hamlet of Northford.

Approximately 5 miles of public roadways are within ½-mile of the Facility. Viewshed analysis identified theoretical views of the Facility above intervening vegetation along approximately 1,170 linear feet (4%) of roadway within this ½-mile radius. Field observation conducted during the balloon visibility test identified approximately 1.1 miles of public roadway within the ½ mile radius where limited seasonal visibility of the Facility through intervening deciduous branches and stems may occur during winter leaf-off season. When visible, views from roadways will be brief and intermittent through roadside vegetation or between structures. Visibility during summer leaf-on season will be substantially or completely screened by roadside deciduous vegetation. Appendix B contains numerous photographs taken during the balloon test documenting this limited degree of Facility visibility from public roadways.

Given the complex visual stimuli encountered by motorists travelling in a moving vehicle, even if the Facility is visible it is likely viewer recognition of the Facility would be limited. As the tendency of motorists is to focus down the road peripheral views of the Facility may largely go unnoticed by most travelers.

### **PHOTO SIMULATIONS**

To illustrate how the Facility will appear photo simulations were prepared from eight (8) affected photo locations. Photo simulations were developed by superimposing a rendering of a three-dimensional computer model of the proposed Facility into the base photograph taken from each corresponding visual receptor. The three-dimensional computer model was developed using *3D Studio Max Design*® software (3D Studio Max).

Simulated perspectives (camera views) were matched to the corresponding base photograph for each simulated view by replicating the precise coordinates of the field camera position (as recorded by handheld GPS) and the focal length of the camera lens used (e.g., 50mm).

Precisely matching these parameters assures scale accuracy between the base photograph and the subsequent simulated view. The camera's elevation (Z) value is derived from digital elevation model (DEM) data plus the camera's height above ground level. The camera's target position was set to match the bearing of the corresponding existing condition photograph as recorded in the field. With the existing conditions photograph displayed as a "viewport background," and the viewport properties set to match the photograph's pixel dimensions, minor camera adjustments were made (horizontal and vertical positioning, and camera roll) to align the horizon in the background photograph with the corresponding features of the 3D model.

To verify the camera alignment, elements visible within the photograph (e.g., existing buildings, utility poles, topography, etc.) were identified and digitized from digital orthophotos as needed. Each element was assigned a Z value based on DEM data and then imported to 3D Studio Max. A 3D terrain model was also created (using DEM data) to replicate the existing local topography. The digitized elements were then aligned with corresponding elements in the photograph by adjusting the camera target. If necessary, slight camera adjustments were made for accurate alignment.

A daylight system was created matching the exact date and time of each baseline photograph to assure proper shading and shadowing of modeled elements.

Once the camera alignment was verified, a to-scale 3D model of the proposed 110-foot-tall stealth monopine style telecommunications tower was merged into the model space. The 3D model of Facility was constructed in sufficient detail to accurately convey visual character and reveal impacts. The scale, alignment, elevations and location of the visible elements of the proposed tower are true to the conceptual design. Post production editing (i.e., airbrush out portion of tower that falls below or behind foreground topography and vegetation) was completed using Adobe Photoshop software. The methodology accurately represents the location, height and visual character of the proposed tower.

Alternative Tower Designs – Supplemental photo simulations are included for each location to illustrate the alternative brown color monopole to test the effectiveness of using a natural color scheme to blend a traditional monopole tower into the landscape setting.

Photo simulations are provided in Appendix C.



## SUMMARY AND CONCLUSION

The Facility involves the construction of a wireless telecommunications structure consisting of a 110-foot-tall stealth monopine type tower designed to support up to four antenna levels. The stealth monopine tower design will include a dense non-uniform branching pattern that will help to blend the structure with the visual characteristics of the surrounding woodland landscape. The stealth monopine will not include topping branches as a means to minimize the tower height.

The Facility is located within a densely wooded area off of Clintonville Road the Town of North Branford, CT. The Facility is bordered on all sides by dense woodland which provides a substantial visual screening from off-site vantage points.

The study area is characterized by a hilly and often steeply sloped landscape with large areas of undeveloped woodland and areas of low to moderate density (1/2 to 10+ acre) single family residential development. Residential neighborhoods are commonly wooded, often with well landscaped understory areas that generally limit views to the immediate foreground. Along roadways, mature trees commonly extend to road edges preventing long distance vistas.

Viewshed Analysis Summary - Of the 8,040 acres within the 2-mile study area, a view of the proposed telecommunications tower is theoretically possible from approximately 39 acres (0.5%). Of the 502 acres within 1/2-mile of the Facility, a view of the proposed tower is possible from approximately 10 acres (2%).

Visibility from Residential Neighborhoods and Local Roads - Residential development is generally clustered in planned single-family residential neighborhoods or road frontage properties. Residential properties are often well landscaped with mature deciduous and evergreen trees and understory vegetation which limit views to the immediate foreground. From most residential properties, views of the Facility will be substantially of fully screened by intervening dense mature vegetation – even during winter leaf-off-season.

Of the 5 miles of public roads within ½ mile of the Facility, potential project direct views above intervening trees are found along approximately 1,170 linear feet (4%). Affected areas are brief road segments with intermittent glimpses views between existing roadside trees.

Visibility from the Northford Center Historic District – The Facility will not be visible above intervening vegetation from any location within the Northford Center Historic District. Seasonal views through existing deciduous stems and branches will occur from approximately 800 linear feet of Old Post Road in the vicinity of the Center for Autism Spectrum & Development Disorders (26 Old Post Road). Highly filtered seasonal views were also found along a 1,200-foot segment of Middletown Avenue (State Route 17) north of the Northford Square retail plaza. Such views will be substantially or completely screened during summer leaf-on season.

## Alternative Tower Designs

- Proposed Stealth Monopine - The Facility involves the construction of a wireless telecommunications structure consisting of a 110-foot-tall stealth monopine type tower with a dense non-uniform branching pattern that will help to blend the structure with the surrounding woodland landscape. As the Facility is most commonly viewed through existing deciduous vegetation or low to the woodland horizon the stealth monopine is a highly effective in minimizing visual contrast.
- Brown Monopole. In lieu of the proposed stealth monopine type tower photo simulations were prepared illustrating the visual characteristics of a traditional monopole tower design painted in an earth tone color scheme to minimize visual contrast by blending with the natural colors of the surrounding forest.

Because the tower remains below, or close to the tree line, existing woodland vegetation substantially filters views of all, or most of the vertical height of the tower. Intervening tree stems and branches effectively interrupt the vertical form of the traditional monopole substantial minimizing its visual contrast. Use of an earth tone paint color consistent with the surrounding woodland further minimizes the visual contrast of the built structure.

Conclusion - Viewshed analysis, the balloon visibility test/photo documentation and subsequent photo simulation demonstrates the Facility will be fully screened from a large majority of the surrounding landscape by intervening vegetation.

Of the 8,040 acres within the 2-mile study area, a view of the proposed telecommunications tower is theoretically possible from approximately 56 acres (0.7%). Of the 502 acres within 1/2-mile of the Facility, a view of the proposed tower is possible from approximately 51 acres (10%). Of this, approximately 39 acres falls within undeveloped agricultural fields or meadows (e.g., areas not regularly visited by the public). Just 12 acres within a ½ mile radius (2%) falls within developed areas.


From most affected vantage points Facility views will be filtered through intervening deciduous stems and branches during winter leaf-off season. Such views will be substantially or completely screened during summer leaf-on season. In the limited areas where the Facility is visible above existing vegetation the tower remains low to the tree line and generally indistinct.

The Facility will not be visible above intervening vegetation from any location within the Northford Center Historic District.

Based on this degree of Facility visibility, the potential project visibility is not of a size or extent that it would constitute an unacceptable magnitude. Nor does the Facility affect a sufficient

number of public viewers or geographic area where the Facility can reasonably be deemed to be visually important. As such the proposed Project will not result in an adverse visual impact.

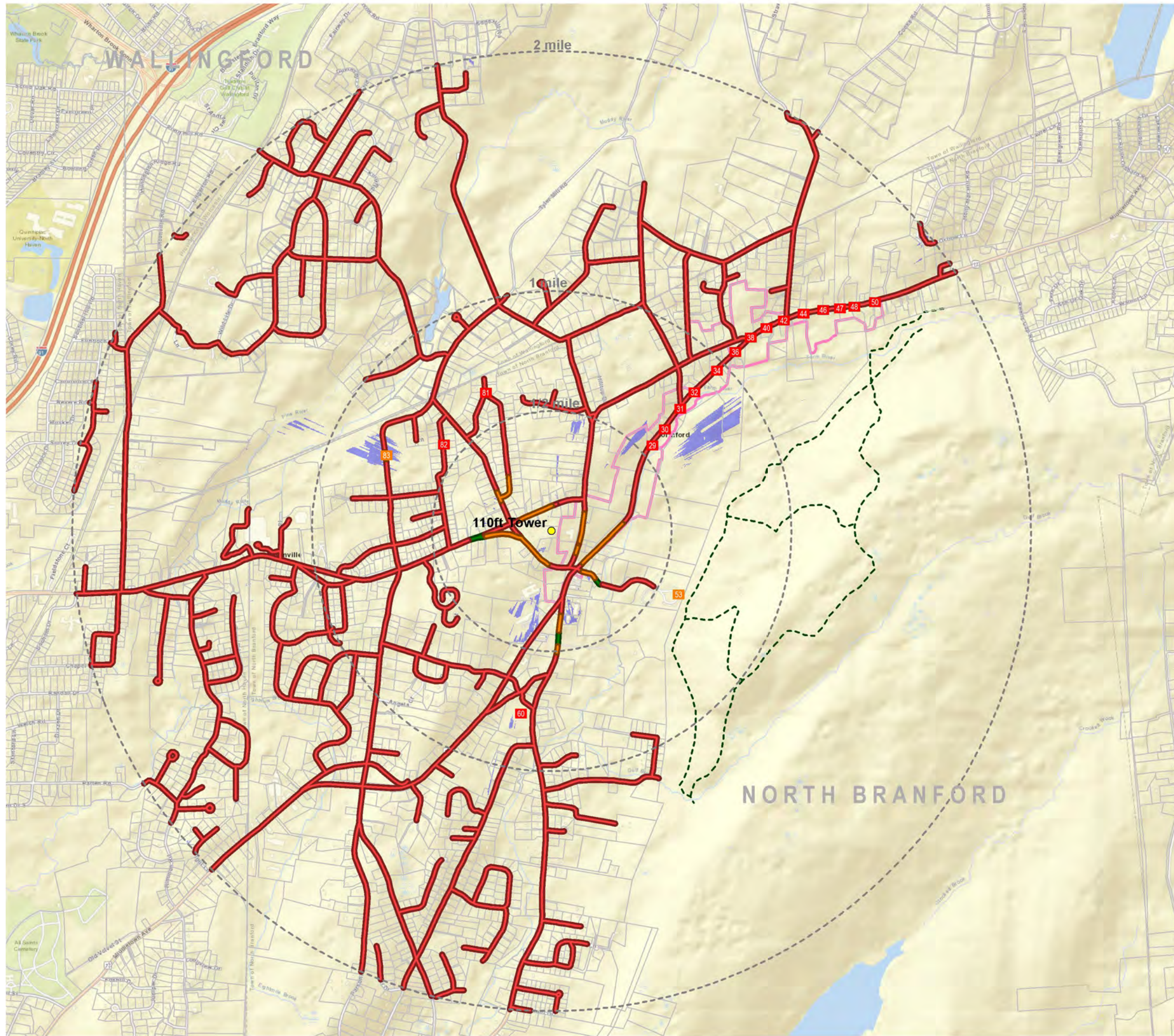
Submitted by:

A handwritten signature in black ink, appearing to read 'M. Allen', is written over a horizontal line.

Matthew W. Allen, RLA

# APPENDIX A

## Viewshed Maps



**LEGEND**

Land Cover Viewshed Area (110ft Tower)  
(Includes existing vegetation and structures)

**Scenic Resources**

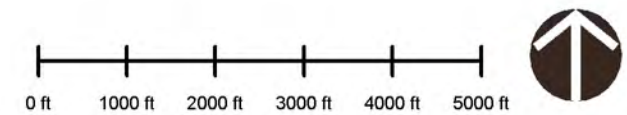
Northford Center Historic District  
-- Trail

**Photo Locations/Balloon Visibility**  
(see Figure A2 for locations within 1/2 mile radius)

Balloon not visible  
Balloon seasonally visible through trees  
Balloon visible above trees

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. The location and height of vegetated areas and buildings is based on 2016 Lidar data acquired from Connecticut DEEP.



**Figure A1**  
**LAND COVER VIEWSHED MAP - 2 MILE RADIUS**



**LEGEND**

Land Cover Viewshed Area (110ft Tower)  
(Includes existing vegetation and structures)

**Scenic Resources**

Northford Center Historic District  
-- Trail

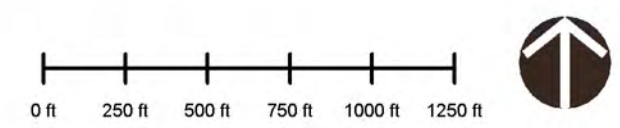
**Photo Locations/Balloon Visibility**

Balloon not visible  
Balloon seasonally visible through trees  
Balloon visible above trees

V Photo Simulation

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. The location and height of vegetated areas and buildings is based on 2016 Lidar data acquired from Connecticut DEEP.



**Figure A2**  
**LAND COVER VIEWSHED MAP - 1/2 MILE RADIUS**

# APPENDIX B

## Photo Log



**Existing View**

Photo	Location	Distance to Site	Visibility
01	Northford Center Historic District - Saint Andrews Episcopal Church	1,370 ft	Not Visible



**Existing View**

Photo	Location	Distance to Site	Visibility
02	Northford Center Historic District - Middletown Avenue near #1386	1,280 ft	Not Visible

**PHOTO LOG**

**Figure B1**





Existing View

Photo	Location	Distance to Site	Visibility
03	Northford Center Historic District - Middletown Avenue Traffic Island	1,140 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
04	Northford Center Historic District - Middletown Avenue Traffic Island	1,060 ft	Not Visible

PHOTO LOG

Figure B2



Existing View

Photo	Location	Distance to Site	Visibility
05	Northford Center Historic District - Middletown Avenue at Northford Store	1,080 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
06	Northford Center Historic District - Middletown Avenue near #1409	1,040 ft	Not Visible

PHOTO LOG

Figure B3



Existing View

Photo	Location	Distance to Site	Visibility
07	Northford Center Historic District - Middletown Avenue near Mansfield Drive	990 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
08	Northford Center Historic District - Clintonville Road near #250	760 ft	Not Visible

PHOTO LOG

Figure B4



Existing View

Photo	Location	Distance to Site	Visibility
09	Northford Center Historic District - Northford Congregational Church	790 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
10	Northford Center Historic District - Old Post Road near Edward Smith Library	770 ft	Not Visible

PHOTO LOG

Figure B5



Existing View

Photo	Location	Distance to Site	Visibility
11	Northford Center Historic District - Old Post Road near #19	690 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
12	Northford Center Historic District - Old Post Road near #23	660 ft	Not Visible

PHOTO LOG

Figure B6



Existing View

Photo	Location	Distance to Site	Visibility
13	Northford Center Historic District - Old Post Road near ACES	640 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
14	Northford Center Historic District - Old Post Road near ACES	680 ft	Seasonal

PHOTO LOG

Figure B7



Existing View

Photo	Location	Distance to Site	Visibility
15	Northford Center Historic District - Old Post Road near #49	800 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
16	Northford Center Historic District - Old Post Road near #58	860 ft	Not Visible

PHOTO LOG

Figure B8



Existing View

Photo	Location	Distance to Site	Visibility
17	Northford Center Historic District - Old Post Road near #58	900 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
18	Northford Center Historic District - Old Post Road at Pistapaug Road	980 ft	Not Visible

PHOTO LOG

Figure B9





Existing View

Photo	Location	Distance to Site	Visibility
19	Northford Center Historic District - near Edward Smith Library	1,060 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
20	Northford Center Historic District - Middletown Ave at Northford Square	990 ft	Seasonal

PHOTO LOG

Figure B10



Existing View

Photo	Location	Distance to Site	Visibility
21	Northford Center Historic District - Middletown Ave near Edward Smith Library	1,030 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
22	Northford Center Historic District - Middletown Ave near #1438	1,040 ft	Seasonal

PHOTO LOG

Figure B11



Existing View

Photo	Location	Distance to Site	Visibility
23	Northford Center Historic District - Middletown Ave near Post Office	1,090 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
24	Northford Center Historic District - Middletown Ave near #1446	1,270 ft	Seasonal

PHOTO LOG

Figure B12



Existing View

Photo	Location	Distance to Site	Visibility
25	Northford Center Historic District - Middletown Ave near #1448	1,340 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
26	Northford Center Historic District - Middletown Ave near #1452	1,540 ft	Not Visible

PHOTO LOG

Figure B13



Existing View

Photo	Location	Distance to Site	Visibility
27	Northford Center Historic District - Middletown Ave near #1514	2,280 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
28	Northford Center Historic District - Middletown Ave at Rosabianca Vineyards	2,560 ft	Not Visible

PHOTO LOG

Figure B14



Existing View

Photo	Location	Distance to Site	Visibility
29	Northford Center Historic District - Middletown Ave at Rosabianca Vineyards	2,880 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
30	Northford Center Historic District - Middletown Ave near #1572	3,220 ft	Not Visible

PHOTO LOG

Figure B15



Existing View

Photo	Location	Distance to Site	Visibility
31	Northford Center Historic District - Middletown Ave at Maltby Lane	3,880 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
32	Northford Center Historic District - Middletown Ave near #1565	4,350 ft	Not Visible

PHOTO LOG

Figure B16



Existing View

Photo	Location	Distance to Site	Visibility
33	Northford Center Historic District - Middletown Ave near #1635	4,800 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
34	Northford Center Historic District - Middletown Ave near #1639	5,050 ft	Not Visible

PHOTO LOG

Figure B17





Existing View

Photo	Location	Distance to Site	Visibility
35	Northford Center Historic District - Middletown Ave near #1647	5,300 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
36	Northford Center Historic District - Middletown Ave near #1659	5,620 ft	Not Visible

PHOTO LOG

Figure B18



Existing View

Photo	Location	Distance to Site	Visibility
37	Northford Center Historic District - Middletown Ave near Old Post Road	5,870 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
38	Northford Center Historic District - Middletown Ave at Old Post Road	6,080 ft	Not Visible

PHOTO LOG

Figure B19



Existing View

Photo	Location	Distance to Site	Visibility
39	Northford Center Historic District - Middletown Ave near Farmington Drive	6,280 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
40	Northford Center Historic District - Middletown Ave near #1693	6,480 ft	Not Visible

PHOTO LOG

Figure B20



Existing View

Photo	Location	Distance to Site	Visibility
41	Northford Center Historic District - Middletown Ave near #1703	6,690 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
42	Northford Center Historic District - Middletown Ave near #1709	6,870 ft	Not Visible

PHOTO LOG

Figure B21



Existing View

Photo	Location	Distance to Site	Visibility
43	Northford Center Historic District - Middletown Ave near #1713	7,090 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
44	Northford Center Historic District - Middletown Ave near #1739	7,300 ft	Not Visible

PHOTO LOG

Figure B22



**Existing View**

Photo	Location	Distance to Site	Visibility
45	Northford Center Historic District - Middletown Ave near #1743	7,560 ft	Not Visible



**Existing View**

Photo	Location	Distance to Site	Visibility
46	Northford Center Historic District - Middletown Ave near #1775	7,780 ft	Not Visible

**PHOTO LOG**

**Figure B23**



**Existing View**

Photo	Location	Distance to Site	Visibility
47	Northford Center Historic District - Middletown Ave near #1775	7,990 ft	Not Visible



**Existing View**

Photo	Location	Distance to Site	Visibility
48	Northford Center Historic District - Middletown Ave near #1775	8,270 ft	Not Visible

**PHOTO LOG**

Figure B24



Existing View

Photo	Location	Distance to Site	Visibility
49	Northford Center Historic District - Middletown Ave near #1795	8,580 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
50	Northford Center Historic District - Middletown Ave near #1796	8,700 ft	Not Visible

PHOTO LOG

Figure B25





Existing View

Photo	Location	Distance to Site	Visibility
51	Mansfield Drive at Northford Square	1,800 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
52	Mansfield Drive near #21	1,500 ft	Year Round

PHOTO LOG

Figure B26



Existing View

Photo	Location	Distance to Site	Visibility
53	Totoket Woods	3,100 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
54	Middletown Avenue at Rite Aid Pharmacy	1,200 ft	Not Visible

PHOTO LOG

Figure B27



Existing View

Photo	Location	Distance to Site	Visibility
55	Forest Road near Ardsley Avenue	1,480 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
56	Northford Center Parking Lot	1,770 ft	Year Round

PHOTO LOG

Figure B28



Existing View

Photo	Location	Distance to Site	Visibility
57	Forest Road at Northford Center	1,700 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
58	Forest Road near #809	2,480 ft	Year Round

PHOTO LOG

Figure B29



Existing View

Photo	Location	Distance to Site	Visibility
59	Forest Road near #809	2,630 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
60	Northford Cemetery	4,090 feet	Not Visible

PHOTO LOG

Figure B30



Existing View

Photo	Location	Distance to Site	Visibility
61	Totoket Valley Elementary School	1,760 ft	Year Round



Existing View

Photo	Location	Distance to Site	Visibility
62	Stanley Williams Community Center	2,100 ft	Year Round

PHOTO LOG

Figure B31



Existing View

Photo	Location	Distance to Site	Visibility
63	Clintonville Road near #250	720 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
64	Clintonville Road near #250	670 ft	Seasonal

PHOTO LOG

Figure B32



Existing View

Photo	Location	Distance to Site	Visibility
65	Clintonville Road near #250	630 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
66	Clintonville Road near #246	600 ft	Seasonal

PHOTO LOG

Figure B33





**Existing View**

Photo	Location	Distance to Site	Visibility
67	Montgomery Drive near #28	2,510 ft	Not Visible



**Existing View**

Photo	Location	Distance to Site	Visibility
68	Clintonville Road near Pistapaug Road	1,580 ft	Year Round

**PHOTO LOG**

Figure B34



Existing View

Photo	Location	Distance to Site	Visibility
69	Clintonville Road near Pistapaug Road	1,440 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
70	Woodhouse Avenue at Pistapaug Road	950 ft	Not Visible

PHOTO LOG

Figure B35



Existing View

Photo	Location	Distance to Site	Visibility
71	Pistapaug Road near #34	700 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
72	Pistapaug Road near #42	520 ft	Seasonal

PHOTO LOG

Figure B36



Existing View

Photo	Location	Distance to Site	Visibility
73	Pistapaug Road near #67	640 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
74	Pistapaug Road near #75	720 ft	Not Visible

PHOTO LOG

Figure B37



Existing View

Photo	Location	Distance to Site	Visibility
75	Pistapaug Road near #77	860 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
76	Glen Meadow Road at Woodhouse Avenue	1,340 ft	Seasonal

PHOTO LOG

Figure B38



Existing View

Photo	Location	Distance to Site	Visibility
77	Glen Meadow Road near #37	1,280 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
78	Glen Meadow Road near #41	1,360 ft	Seasonal

PHOTO LOG

Figure B39



Existing View

Photo	Location	Distance to Site	Visibility
79	Glen Meadow Road at near #47	1,450 ft	Seasonal



Existing View

Photo	Location	Distance to Site	Visibility
80	Glen Meadow Road near #93	2,480 ft	Not Visible

PHOTO LOG

Figure B40



Existing View

Photo	Location	Distance to Site	Visibility
81	Glen Meadow Road at Conifer Drive	3,360 ft	Not Visible



Existing View

Photo	Location	Distance to Site	Visibility
82	Birchwood Drive near #187	3,060 ft	Not Visible

PHOTO LOG

Figure B41





**Existing View**

Photo	Location	Distance to Site	Visibility
83	Village Street near #535	4,030 ft	Seasonal

PHOTO LOG

Figure B42

# APPENDIX C

## Photo Simulations

# SARATOGA ASSOCIATES

Landscape Architects, Architects,  
Engineers, and Planners, P.C.

January 19, 2022

Ray Vergati  
Homeland Towers  
9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810

Re: VRA Supplement - Proposed Wireless Telecommunications Facility  
North Branford Site (CT021), 222 Clintondale Road, Northford, CT 06472

Dear Mr. Vergati:

As you know, Saratoga Associates previously prepared a Visual Resource Assessment (VRA) dated September 1, 2021. The VRA includes photo simulations illustrating how the Facility will appear from eight (8) affected locations. You recently modified the application to reposition the proposed tower and associated compound 45± feet to the southeast from the original location.

To consider the potential effect of this minor project modification on the visual character of the area, the eight (8) photo simulations included in the VRA have been updated to reflect the currently proposed condition. The attached revised photo simulations replace the corresponding visualizations contained in Appendix C of the September 1, 2021 VRA.

The minor relocation of the Facility 45± feet to the southeast does not alter the findings of the VRA. In fact, the relocation moves the tower further from residential properties on Pistapaug Road resulting in increased visual screening provided by intervening woodland vegetation. As evidenced by the attached photo simulations tower visibility from Pistapaug Road (photo 73) and views from Glen Meadow Road (photo 76) are noticeably reduced due to increased intervening vegetation resulting from the tower repositioning.

Thank you for your attention to this matter.



Matthew W. Allen, RLA  
Principal

**SARATOGA ASSOCIATES**

Landscape Architects, Architects, Engineers, and Planners, P.C



Photo 14 - Northford Center Historic District - Old Post Road Near ACES  
EXISTING CONDITION

Photograph Information

Date: February 24, 2021  
Time: 10:19 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 46.1184" N  
72° 47' 26.6460" W  
Distance to Tower: 680 Feet



Photo 14 - Northford Center Historic District - Old Post Road Near ACES  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B2

PHOTO SIMULATIONS (revised tower location)

Visual Resource Assessment

**North Branford (CT-021)**

**Wireless Telecommunications Facility**

222 Clintonville Road  
 Northford, CT 06472



Photograph Information

Date: February 24, 2021  
 Time: 10:19 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 46.1184" N  
 72° 47' 26.6460" W  
 Distance to Tower: 680 Feet



Photo 14 - Northford Center Historic District - Old Post Road Near ACES  
PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B3

PHOTO SIMULATIONS (revised tower location)

Visual Resource Assessment

North Branford (CT-021)

Wireless Telecommunications Facility

222 Clintonville Road  
Northford, CT 06472

Photograph Information

Date: February 24, 2021  
Time: 10:19 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 46.1184" N  
72° 47' 26.6460" W  
Distance to Tower: 680 Feet



Photo 20 - Northford Center Historic District - Middletown Road at Northford Square  
EXISTING CONDITION

Figure B4  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 10:51 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 38.7060" N  
72° 47' 26.0736" W  
Distance to Tower: 990 Feet



Photo 20 - Northford Center Historic District - Middletown Road at Northford Square  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B5

PHOTO SIMULATIONS (revised tower location)

Visual Resource Assessment

North Branford (CT-021)

Wireless Telecommunications Facility

222 Clintonville Road  
 Northford, CT 06472



Photograph Information

Date:	February 24, 2021	Photo Location:	41° 23' 38.7060" N
Time:	10:51 AM		72° 47' 26.0736" W
Focal Length:	50 mm	Distance to Tower:	990 Feet
Camera:	Canon EOS 6D MarkII		

*This photograph was taken using a 50mm normal angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*





Photo 20 - Northford Center Historic District - Middletown Road at Northford Square  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B6

PHOTO SIMULATIONS (revised tower location)

Visual Resource Assessment

North Branford (CT-021)

Wireless Telecommunications Facility

222 Clintonville Road  
 Northford, CT 06472

Photograph Information

Date: February 24, 2021  
 Time: 10:51 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 38.7060" N  
 72° 47' 26.0736" W  
 Distance to Tower: 990 Feet



Photo 24 - Northford Center Historic District - Middletown Road #1446  
EXISTING CONDITION

Figure B7  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 10:41 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 43.8737" N  
72° 47' 18.8739" W  
Distance to Tower: 1,270 Feet



Photo 24 - Northford Center Historic District - Middletown Road #1446  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B8  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 10:41 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 43.8737" N  
 72° 47' 18.8739" W  
 Distance to Tower: 1,270 Feet



Photo 24 - Northford Center Historic District - Middletown Road #1446  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B9  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 10:41 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 43.8737" N  
 72° 47' 18.8739" W  
 Distance to Tower: 1,270 Feet



Photo 58 - Forest Road near #809  
EXISTING CONDITION

Figure B10  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 11:23 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 20.9796" N  
72° 47' 33.4932" W  
Distance to Tower: 2,480 Feet



Photo 58 - Forest Road near #809  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B11  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:23 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 20.9796" N  
 72° 47' 33.4932" W  
 Distance to Tower: 2,480 Feet



Photo 58 - Forest Road near #809  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B12  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:23 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 20.9796" N  
 72° 47' 33.4932" W  
 Distance to Tower: 2,480 Feet



Photo 65 - Clintonville Road near #250  
EXISTING CONDITION

Figure B13

PHOTO SIMULATIONS (revised tower location)

Visual Resource Assessment

**North Branford (CT-021)**

**Wireless Telecommunications Facility**

222 Clintonville Road  
Northford, CT 06472

Photograph Information

Date: February 24, 2021  
Time: 11:39 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 40.2576" N  
72° 47' 40.0884" W  
Distance to Tower: 630 Feet





Photo 65 - Clintonville Road near #250  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B14  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:39 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 40.2576" N  
 72° 47' 40.0884" W  
 Distance to Tower: 630 Feet



Photo 65 - Clintonville Road near #250  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B15  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:39 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 40.2576" N  
 72° 47' 40.0884" W  
 Distance to Tower: 630 Feet



Photo 68 - Clintonville Road near Pistapaug Road  
EXISTING CONDITION

Figure B16  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date:	February 24, 2021	Photo Location:	41° 23' 44.1763" N
Time:	11:49 AM		72° 47' 55.9857" W
Focal Length:	50 mm	Distance to Tower:	1,580 Feet
Camera:	Canon EOS 6D MarkII		



Photo 68 - Clintonville Road near Pistapaug Road  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B17  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:49 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 44.1763" N  
 72° 47' 55.9857" W  
 Distance to Tower: 1,580 Feet



Photo 68 - Clintonville Road near Pistapaug Road  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B18  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 11:49 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 44.1763" N  
 72° 47' 55.9857" W  
 Distance to Tower: 1,580 Feet



Photo 73 - Pistapaug Road near #67  
EXISTING CONDITION

Figure B19  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 9:37 AM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 51.5256" N  
72° 47' 33.5940" W  
Distance to Tower: 640 Feet



Photo 73 - Pistapaug Road near #67  
 PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B20  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 9:37 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 51.5256" N  
 72° 47' 33.5940" W  
 Distance to Tower: 640 Feet



Photo 73 - Pistapaug Road near #67  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B21  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 9:37 AM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 51.5256" N  
 72° 47' 33.5940" W  
 Distance to Tower: 640 Feet





Photo 76 - Glen Meadow Road at Woodhouse Avenue  
EXISTING CONDITION

Figure B22  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 12:14 PM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 52.7208" N  
72° 47' 50.1936" W  
Distance to Tower: 1,340 Feet



Photo 76 - Glen Meadow Road at Woodhouse Avenue  
PROPOSED CONDITION - BROWN MONOPOLE 110FT

Figure B23  
PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
Time: 12:14 PM  
Focal Length: 50 mm  
Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 52.7208" N  
72° 47' 50.1936" W  
Distance to Tower: 1,340 Feet



Photo 76 - Glen Meadow Road at Woodhouse Avenue  
 PROPOSED CONDITION - ALTERNATIVE MONOPINE 110FT

Figure B24  
 PHOTO SIMULATIONS (revised tower location)

Photograph Information

Date: February 24, 2021  
 Time: 12:14 PM  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 23' 52.7208" N  
 72° 47' 50.1936" W  
 Distance to Tower: 1,340 Feet