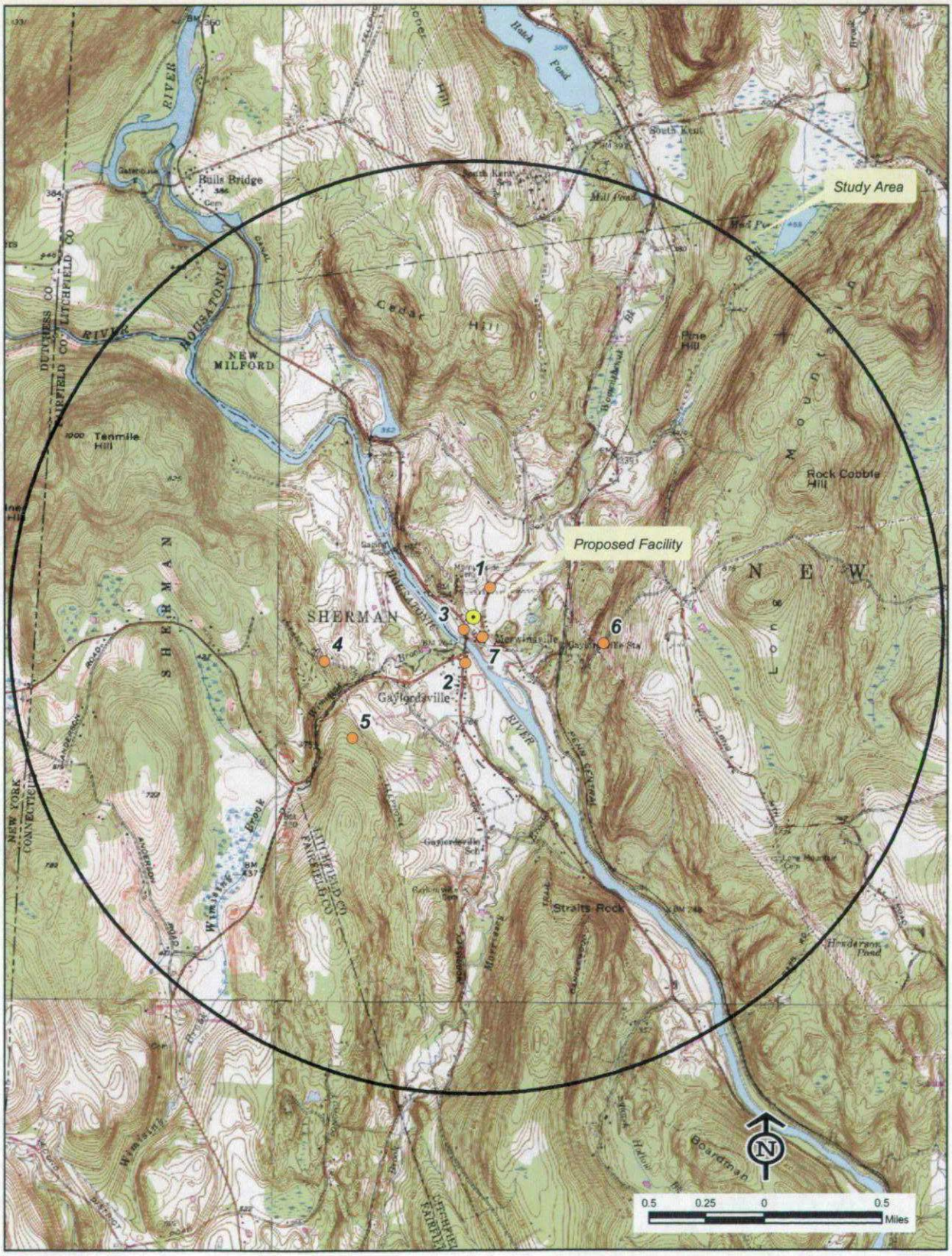
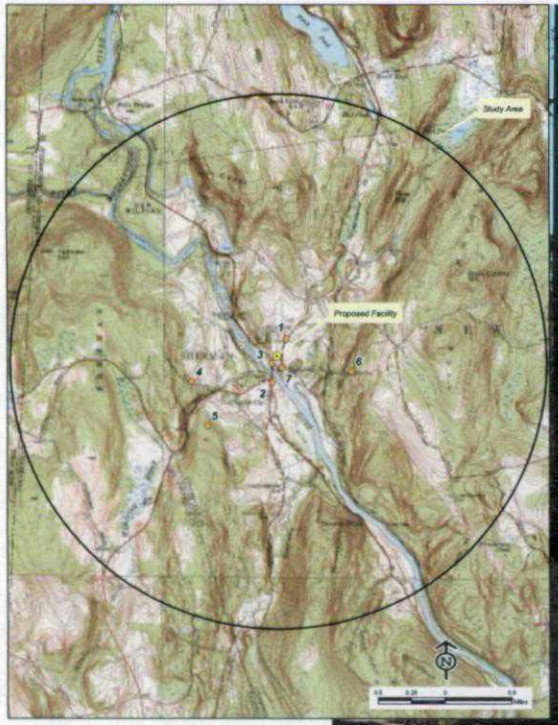
Photolog Documentation

Town of
New Milford
Connecticut



Photographic Documentation and Simulation *View 1 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

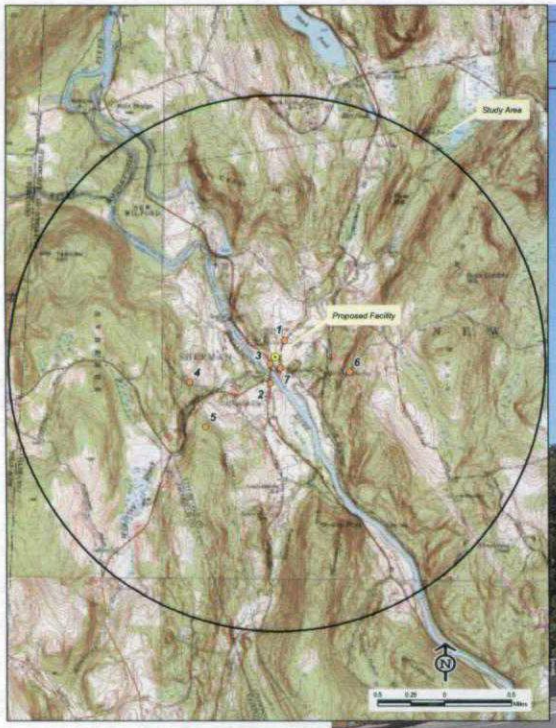
PHOTO TAKEN FROM SOUTH KENT ROAD AT MORNINGSIDE CEMETERY, LOOKING SOUTHWEST

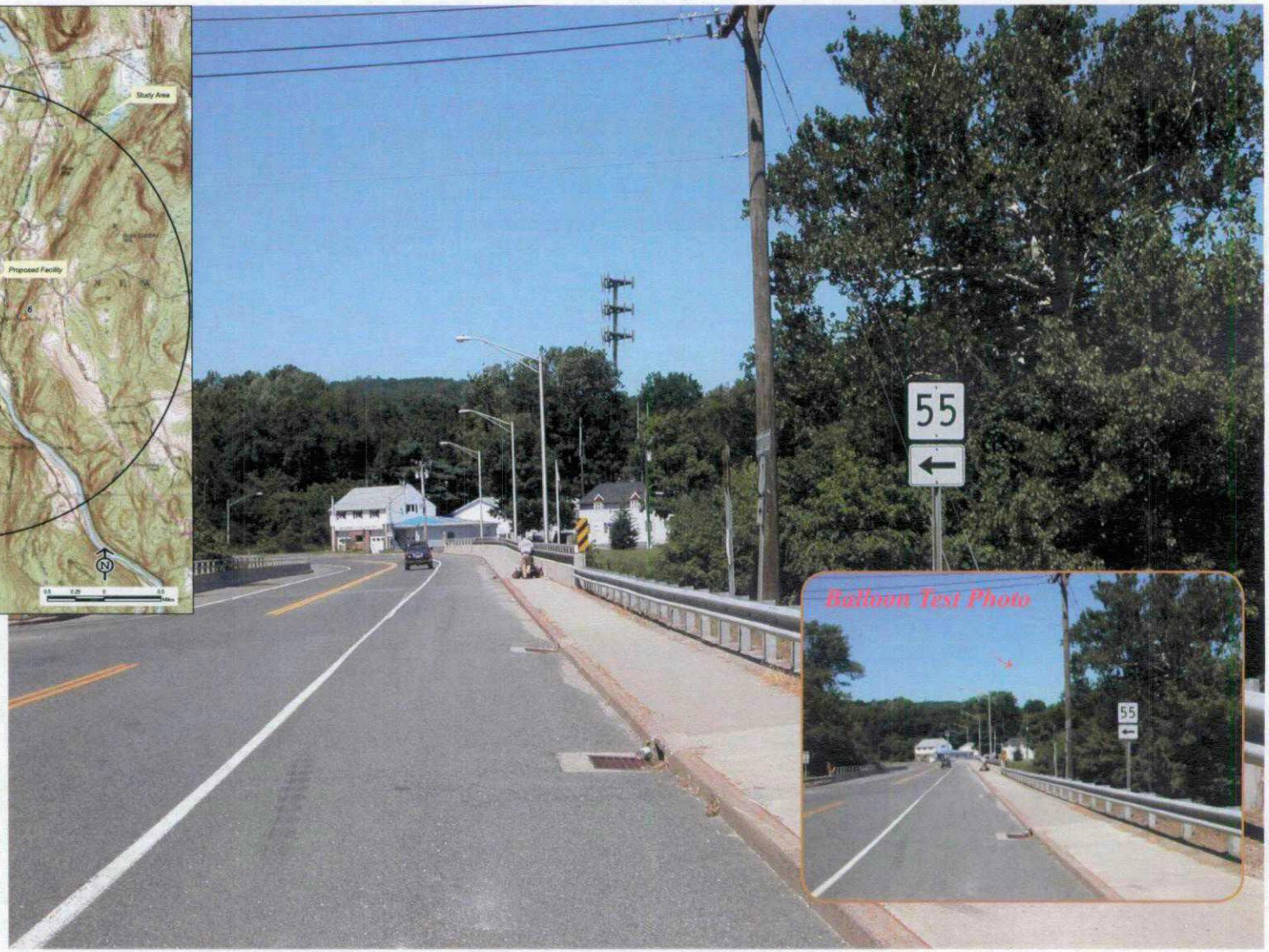
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.14 MILE +/-

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 2 Monopole*

Town of
New Milford
Connecticut





New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

PHOTO TAKEN FROM ROUTE 7 SOUTH OF ROUTE 55, LOOKING NORTHEAST

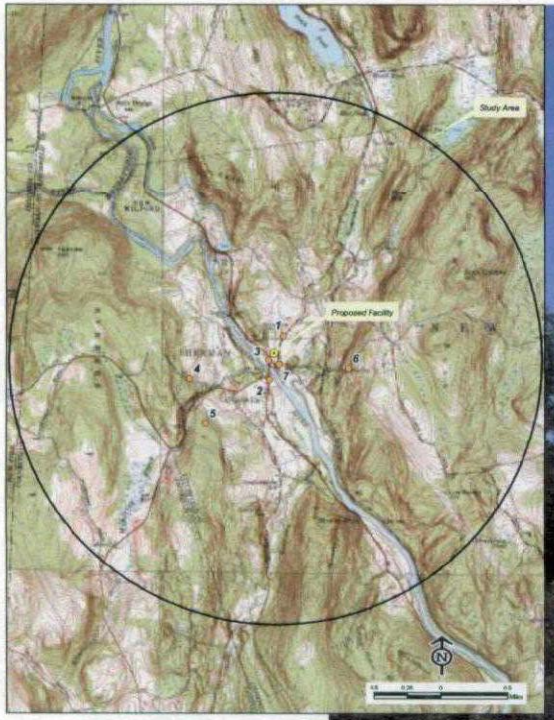
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.20 MILE +/-

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 3 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

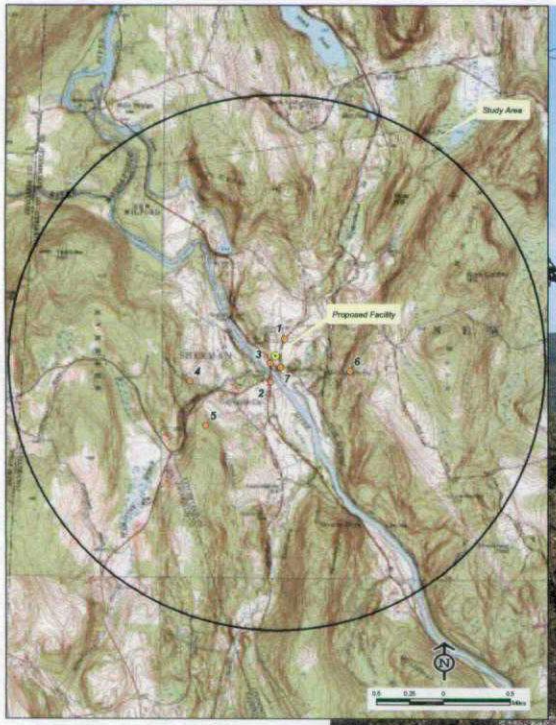
PHOTO TAKEN FROM ROUTE 7 GAYLORDSVILLE VOL. FIRE DEPARTMENT (HOST PROPERTY), LOOKING NORTHEAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.07 MILE +/-

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 4 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

PHOTO TAKEN FROM EVANS HILL ROAD ADJACENT TO HOUSE #5, LOOKING NORTHEAST

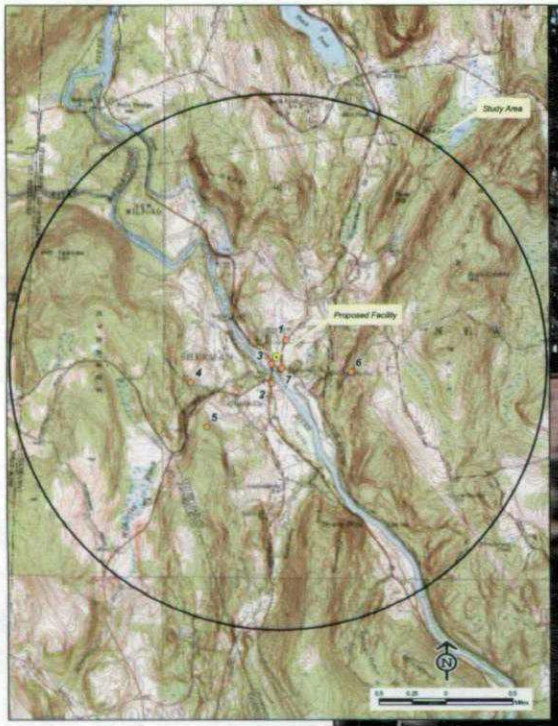
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.66 MILE +/-

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 5 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

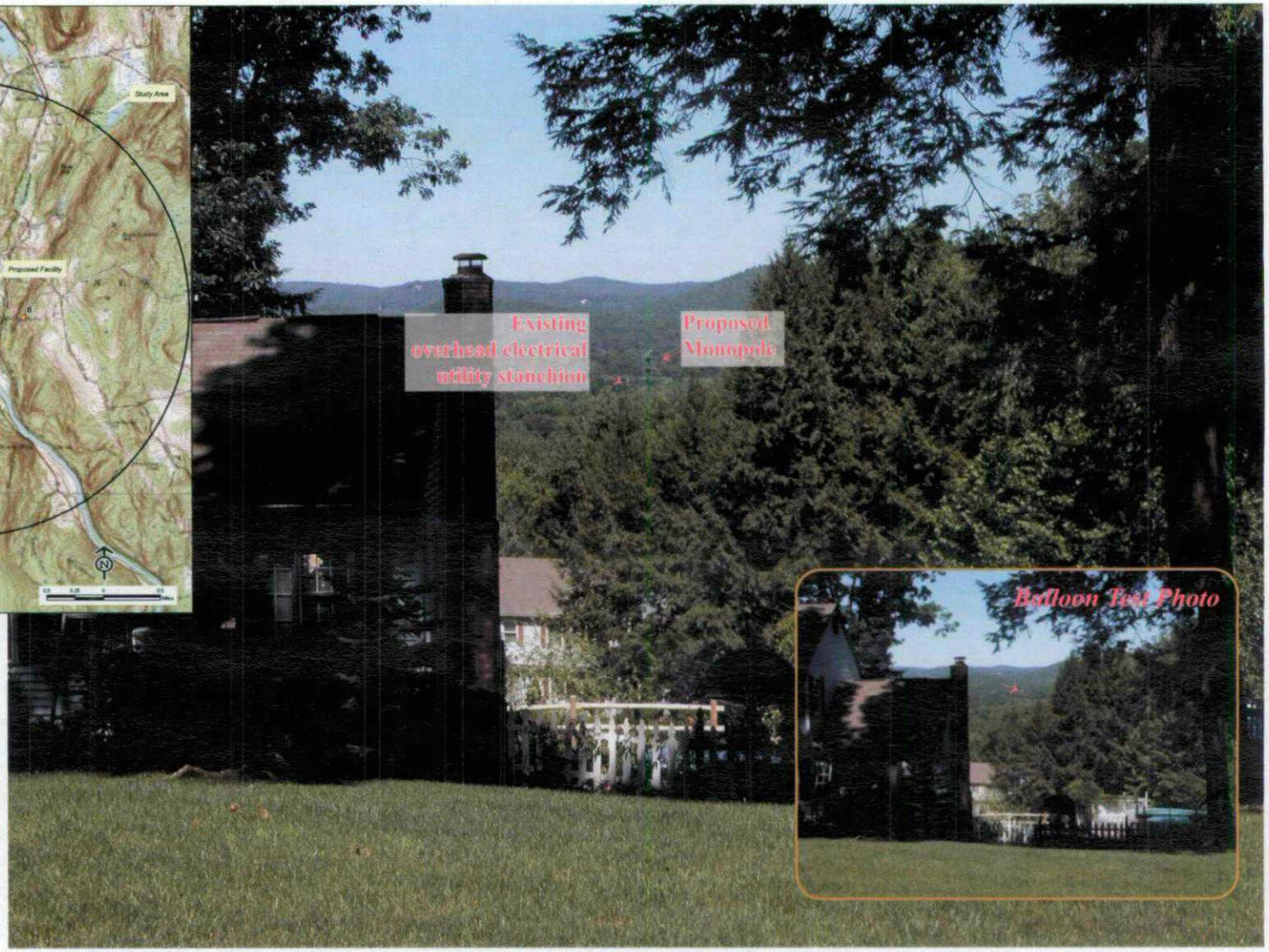


PHOTO TAKEN FROM HEMLOCK LANE ADJACENT TO HOUSE #9, LOOKING NORTHEAST

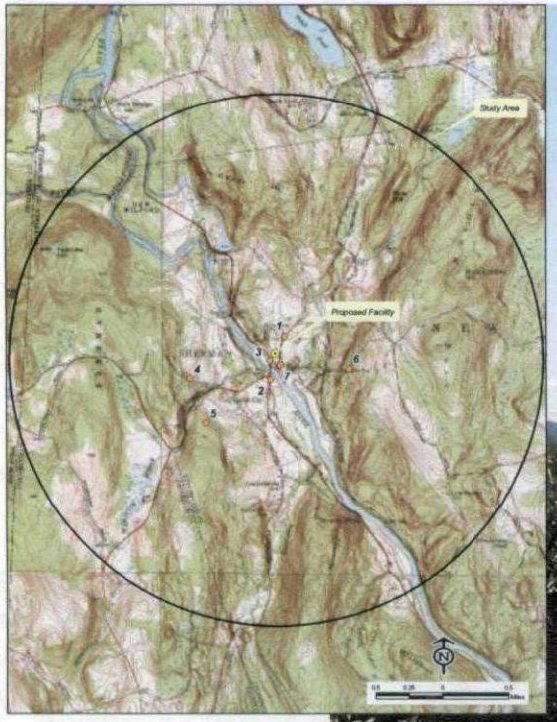
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.73 MILE +/-

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 6 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

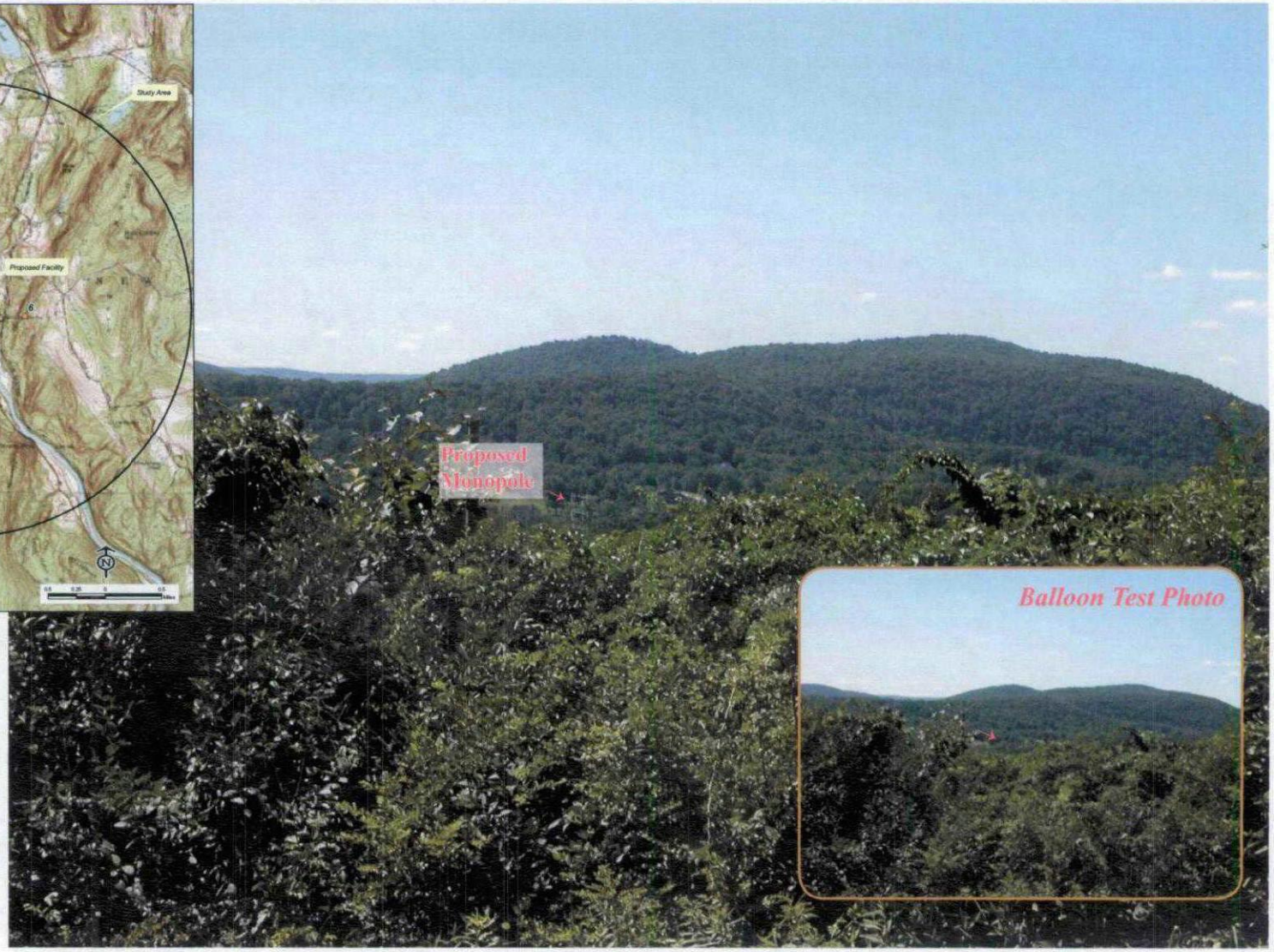


PHOTO TAKEN FROM FRONT OF THE MOUNTAIN ROAD AT EXISTING OVERHEAD ELECTRICAL TRANSMISSION RIGHT-OF-WAY, LOOKING NORTHWEST

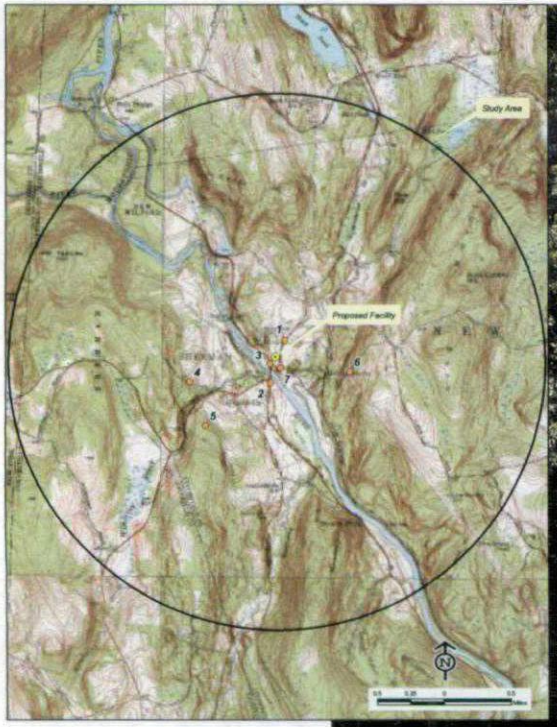
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.56 MILE +/-

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 7 Monopole*

Town of
New Milford
Connecticut



New Milford Northwest
700 Kent Road
Gaylordsville, CT

Monopole installation
with 3 carriers

PHOTO TAKEN FROM SOUTH KENT ROAD ADJACENT TO HOST PROPERTY, LOOKING NORTH

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.09 MILE +/-

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

ctmiddlefprior\40862.19\graphics\figures\40862.19_sims monopole.indd

Attachment B

Viewshed Map

Visual Resource Evaluation Report

Proposed Wireless Telecommunications Facility

New Milford Northwest
700 Kent Road
Town of New Milford, Connecticut

Prepared for verizon wireless

Prepared by **VHB/Vanasse Hangen Brustlin, Inc.**
54 Tuttle Place
Middletown, CT 06457

September 2006

Visual Resource Evaluation

Cellco Partnership LLC (dba Verizon Wireless) seeks approval from the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need associated with the construction of a wireless telecommunications facility ("Facility") to be located on property at 700 Kent Road (Route 7) in the Town of New Milford, Connecticut (identified herein as the "host property"). This Visual Resource Evaluation was conducted to evaluate the visibility of the proposed Facility within a two-mile radius ("Study Area").

Project Introduction

The proposed Facility includes the construction of a 120-foot tall monopole with the capacity to accommodate up to four antennae arrays with the associated ground equipment to be installed at the base of the tower structure, situated within a fenced-enclosed compound area. Currently, Verizon Wireless intends to occupy the top spot on the monopole, resulting in its antennae extending to approximately 123 feet above grade. The proposed project area is located at approximately 285 feet Above Mean Sea Level (AMSL). Access to the Facility will be provided via a proposed gravel driveway that would extend in a westerly direction from South Kent Road to the site area.

Site Description and Setting

Identified in the New Milford Tax Assessors records as Map 75/ Lot 32A, the host property consists of approximately 3.06 acres of land and is currently occupied by Gaylordsville Volunteer Fire Department building and associated parking area. The proposed Facility would be situated on an undeveloped portion of the host property, approximately 200 feet northeast of the Gaylordsville Volunteer Fire Department building (see Photolog Documentation map contained in Attachment A). Land use within the general vicinity of the proposed host property is comprised of medium- and low-density residential parcels, commercial properties, undeveloped woodlands and overhead electrical utility infrastructure. Segments of Route 7, Route 39 and Route 55, important regional state numbered routes, traverse the Study Area. In total, the Study Area features approximately 47 linear miles of roadways.

Approximately one third of the Study Area is located in the Town of Sherman, Connecticut. The Study Are also encompasses portions of the Town of Kent, Connecticut to the north and extends slightly into New York State to the west. The topography within the Study Area is characterized by a steep river valley associated with the Housatonic River. Ground elevations within the Study Area range from approximately 250 feet AMSL along the banks of the Housatonic River and rise to over 800 feet AMSL immediately east and west of the river valley. Ground elevations exceeding 1,000 feet AMSL can be found along the taller ridgelines within the Study Area further east and west of the proposed Facility. Overall, the Study Area contains approximately 154 acres of surface water, dominated in large measure by the Housatonic River which runs the entire length of the Study Area. The tree cover within the

Study Area consists mainly of mixed deciduous hardwood species. The tree canopy occupies approximately 6,400 acres of the 8,042-acre study area (80%). During the in-field activities associated with this analysis, an infrared laser range finder was used to accurately determine the average tree canopy height throughout the Study Area. Numerous trees were selected for measurement and the average tree canopy established, in this case 65 feet.

■

METHODOLOGY

In order to better represent the visibility associated with the Facility, VHB uses a two-fold approach incorporating both a predictive computer model and in-field analysis. The predictive model is employed to assess potential visibility throughout the entire Study Area, including private property and/or otherwise inaccessible areas for field verification. A "balloon float" and Study Area drive-through reconnaissance are also conducted to obtain locational and height representations, back-check the initial computer model results and provide documentation from publicly accessible areas. Results of both activities are analyzed and incorporated into the final viewshed map. A description of the methodologies used in the analysis is provided below.

Visibility Analysis

Using ESRI's ArcView® Spatial Analyst, a computer modeling tool, the areas from which the top of the Facility is expected to be visible are calculated. This is based on information entered into the computer model, including Facility height, its ground elevation, the surrounding topography and existing vegetation. Data incorporated in the model includes 7.5 minute digital elevation models ("DEMs") and a digital forest layer for the project area. The DEMs were produced by the United States Geological Survey ("USGS") in 1982 at a 30 meter resolution. The forest layer was derived through on-screen digitizing in ArcView® GIS from 2004 digital orthophotos with a 0.5 foot pixel resolution.

Once the data are entered, a series of constraints are applied to the computer model to achieve an estimate of where the Facility will be visible. Initially, only topography was used as a visual constraint; the tree canopy is omitted to evaluate all areas of potential visibility without any vegetative screening. Although this is an overly conservative prediction, the initial omission of these layers assists in the evaluation of potential seasonal visibility of the proposed Facility. A conservative tree canopy height of 50 feet is then used to prepare a preliminary viewshed map for use during the Study Area reconnaissance. The average height of the tree canopy is determined in the field using a hand-held infra-red laser range finder. The average tree canopy height is incorporated into the final viewshed map; in this case, 65 feet was identified as the average tree canopy height. The forested areas within the Study Area were then overlaid on the DEM with a height of 65 feet added and the visibility calculated. As a final step, the forested areas are extracted from the areas of visibility, with the assumption that a person standing among the trees will not be able to view the Facility

beyond a distance of approximately 500 feet. Depending on the density of the vegetation in these areas, it is assumed that some locations within this range will provide visibility of at least portions of the Facility based on where one is standing.

Also included on the map is a data layer, obtained from the Connecticut State Department of Environmental Protection ("CTDEP"), which depicts various land and water resources such as state parks and forests, recreational facilities, dedicated open space and CTDEP boat launches among other categories. This layer is useful in identifying potential visual impacts to any sensitive receptors that may be located within the Study Area. In addition, a review of the *Connecticut Walk Book, 18th Edition,* indicates that portions of the Housatonic Range Trail, part of the Connecticut Blue Blaze trail system, traverses the southern portion of the Study Area. Segments of the Trail contained within the Study Area were digitized and incorporated into the viewshed map. Lastly, based on both a review of published information and discussions with municipal officials in New Milford, Kent and Sherman, it was determined that there are several state and/or locally designated scenic roadways located within the Study Area. These roadways are depicted on the attached viewshed map and include a segment of Route 7 north of the New Milford town line, Front of the Mountain Road, portions of Long Mountain Road and Newtown Road.

A preliminary viewshed map (using topography and a conservative tree canopy height of 50 feet) is generated for use during the in-field activity in order to confirm that no significant land use changes have occurred since the aerial photographs used in this analysis were produced and to verify the results of the model in comparison to the balloon float. Information obtained during the reconnaissance is then incorporated into the final visibility map.

Balloon Float and Study Area Reconnaissance

On August 9, 2006 Vanasse Hangen Brustlin Inc., (VHB) conducted a "balloon float" at the proposed Facility site to further evaluate the potential viewshed within the Study Area. The balloon float consisted of raising and maintaining an approximate four-foot diameter, helium-filled weather balloon at the proposed site location at a height of 120 feet. Once the balloon was secured at a height of 120 feet, VHB personnel drove the public road system in the study area to inventory those areas where the balloon was visible. During the balloon float, the temperature was approximately 85 degrees Fahrenheit with calm wind conditions.

Photographic Documentation

Once the balloon was secured at a height of 120 feet, VHB staff conducted a drive-by reconnaissance along the roads located within the Study Area with an emphasis on nearby residential areas and other potential sensitive receptors in order to evaluate the results of the preliminary viewshed map and to verify where the balloon was, and was not, visible above

and/or through the tree canopy. The balloon was photographed from seven vantage points where it was observed above the tree canopy to document the actual view towards the proposed Facility. The locations and orientations of the photos are described below:

1. View from South Kent Road at Morningside Cemetery, looking southwest.
2. View from Route 7 south of Route 55, looking northeast.
3. View from Route 7 at Gaylordsville Vol. Fire Department (host property), looking northeast.
4. View from Evans Hill Road adjacent to house #5, looking northeast.
5. View from Hemlock Lane adjacent to house #9, looking northeast.
6. View from Front of the Mountain Road at existing overhead electrical transmission right-of-way, looking northwest.
7. View from South Kent Road adjacent to host property, looking north.

Photographs from the view points listed above were taken with a Nikon Digital Camera COOLPIX 5700, which has a lens focal length equivalent to a 35 mm camera with a 38 to 115 mm zoom. "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.[1]" The optical zoom lens for the Nikon COOLPIX was set at a range of 50 mm to 70 mm for the purposes of this Visual Resource Evaluation.

The locations of the photographic points are recorded in the field using a hand held GPS receiver and are subsequently plotted on the maps contained in the attachments to this document.

Photographic Simulation

A photographic simulation was generated for each of the seven representative locations where the balloon was visible during the balloon float. The photographic simulations represent a scaled depiction of the proposed Facility from these locations. The height of the Facility is determined based on the location of the balloon in the photograph and a proportional monopole image is simulated into the photographs. The simulations are contained in Attachment A.

CONCLUSIONS

Based on this analysis, areas from where the proposed 120-foot tall Facility would be visible above the tree canopy comprise approximately 63 acres, or less than one percent of the 8,042-acre Study Area. Generally, as depicted on the viewshed map (provided in attachment B), the majority of the visibility associated with the proposed Facility is limited to open areas on

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

the host property; an approximate 0.35-mile segment of Route 7 south of the proposed Facility; and west of the proposed Facility over open undeveloped land associated with a private golf course approximately 0.75-mile to the west. Limited views of the proposed Facility may also be achieved from Front of the Mountain Road adjacent to the existing electrical utility right-of-way. No views are anticipated from the segments of the Housatonic Range Trail that are located within the Study Area. Other areas of potential visibility occur on portions of private properties and as such could not be confirmed during the balloon float VHB estimates that approximately 14 residences will have year round views of the proposed Facility from select portions of their respective properties. The topographic relief and dense tree canopy contained within the Study Area serve to effectively minimize the potential visual effects of the proposed Facility. In addition, the height of the proposed Facility (only 120 feet AMSL) helps to further minimize potential visual effects. The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 12 acres and include select portions of Route 7 and South Kent Road adjacent to the host property as well as an area along Front of the Mountain Road approximately 0.50 mile from the proposed Facility. VHB estimates that seasonal views of the proposed Facility would be achieved from approximately 8 properties within the Study Area.

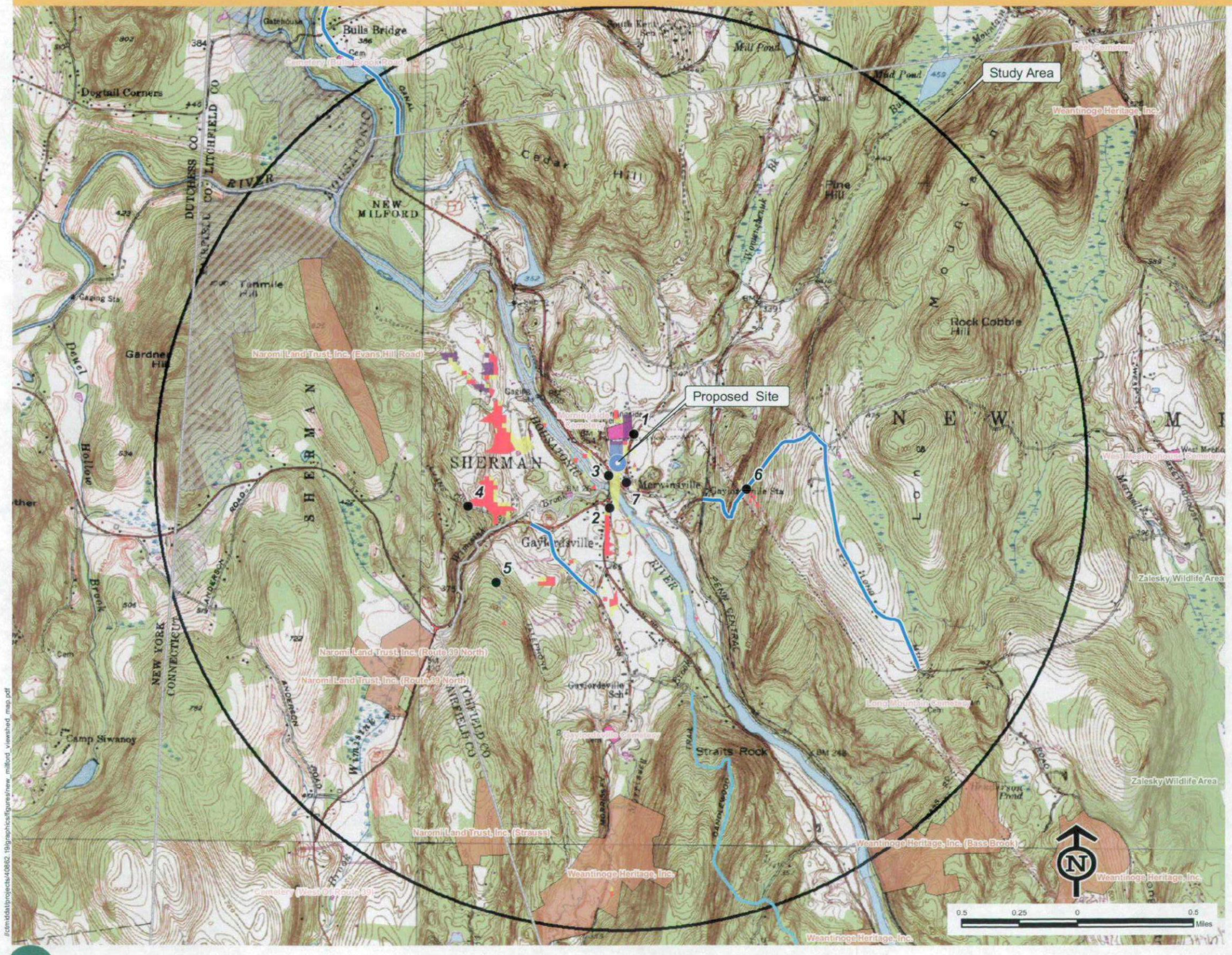
Attachment A

Photolog Documentation Map, Balloon Float Photographs, and Photographic Simulations

Viewshed Map

Topography and Forest Cover as Constraints

Town of New Milford Connecticut



/cdm/data1/projects/40862.19/graphics/figures/new_milford_viewshed_map.pdf

Proposed Verizon Wireless Telecommunications Facility New Milford Northwest 700 Kent Road New Milford, Connecticut

NOTE:
- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 120 feet.
- Existing tree canopy height estimated at 65 feet.

DATA SOURCES:
- 7.5 minute digital elevation model (DEM) with 30 meter resolution produced by the USGS, 1982
- Forest areas derived from 2004 digital orthophotos with 0.5-foot pixel resolution; digitized by VHB, 2006
- Base map comprised of Dover Plains, Kent, New Milford and Pawling USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, 2003
- Scenic Roads layer derived from available State and Local listings.

Map Compiled August 2006

Legend

Proposed Monopole Location (Includes area of visibility approximately 500 feet around facility)

Photos - August 9, 2006
- Balloon visible above the trees
- Anticipated Seasonal Visibility (Approximately 12 Acres)

Approx. % of Tower Visible (Year-Round)
- Upper 25% to Tree Line View - 22 Acres
- 50% - 30 Acres
- 75%- 8 Acres
- Entire Facility Visible - 3 Acres

Total Year-Round Visibility Approximately 63 Acres

Protected Properties (Municipal)
- Cemetery
- Preservation
- Conservation
- Existing Preserved Open Space
- Recreation
- General Recreation
- School
- Uncategorized

Protected Properties (CT DEP)
- State Forest
- State Park
- DEP Owned Waterbody
- State Park Scenic Reserve
- Historic Preserve
- Natural Area Preserve
- Fish Hatchery
- Flood Control
- Other
- State Park Trail
- Water Access
- Wildlife Area
- Wildlife Sanctuary

- DEP Boat Launches
- Scenic Road (State and Local)
- Housatonic Range Trail (CT Blue Blaze)
- Town Line
- Protected Properties (Federal)

VHB *Vanasse Hangen Brustlin, Inc.*
Transportation | Land Development | Environmental Services

verizonwireless