

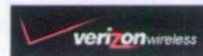
*Proposed Wireless  
Telecommunications Facility*

*Watertown West*

Two Candidate Site Locations  
Old Baird Road  
Watertown, Connecticut

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Prepared for



Prepared by

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

August 2007

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## Visual Resource Evaluation

Cellco Partnership (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 in Watertown, Connecticut. As part of the approval process, Verizon Wireless has chosen two potential site locations for further evaluation. These site locations are referred to herein as Candidate A and Candidate B. Both Candidate A and Candidate B are located on separate and abutting properties off Old Baird Road ("host properties"). This Comparative Visual Resource Evaluation was conducted to evaluate the visibility of the Candidate locations within a two-mile radius ("Study Area") and present the findings in a comparative format.

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## Project Introduction

Candidate A would include the construction of a 150-foot tall monopole and Candidate B would include the construction of a 160-foot tall monopole. Associated ground equipment would be installed within a fence-enclosed compound area at the base of the tower structure. According to information provided by the project engineers, URS Corporation, the proposed Candidate A project area is located at approximately 774 feet Above Mean Sea Level (AMSL) while the Candidate B project area is located at roughly 760 feet AMSL. Access to Candidate A would follow an existing woods road (requiring improvements) located on its host property that extends in a northerly direction from Old Baird Road. Access to Candidate B would also follow an existing woods road located on its host property (also to be improved) that extends in a northerly direction from a paved parking area located to the south of the proposed Facility site.

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## Site Description and Setting

Candidate A would be located on a wooded portion of its host property adjacent to the remains of an abandoned residential dwelling. Candidate B is located on municipally-owned property that is currently occupied by the Town of Watertown's solid waste transfer station and animal shelter. The project area would be located on an undeveloped, mainly wooded portion of the host property, roughly 300 feet northwest of the existing animal shelter building. The two Candidate sites are located approximately 430 feet apart from one another. A photograph of each proposed project area is included in Attachment A. Attachment A also contains a map that depicts the locations of the proposed Facilities and the limits of the Study Area. Land use within the general vicinity is comprised of Watertown's solid waste transfer station and animal shelter, medium density residential development, active agricultural land, Morehouse Pond and Lake Winnemaug. Segments of Route 6 and Route 63, key regional state numbered roadways, traverse portions of the Study Area. Overall, the Study Area includes approximately 78 linear miles of roadways.

Approximately one third of the Study Area is located in the Town of Woodbury. The topography in the Study Area is generally characterized by rolling hills that range in elevation from roughly 400 feet AMSL to approximately 850 feet AMSL. The tree cover

within the Study Area consists mainly of mixed deciduous hardwood species. The tree canopy occupies approximately 4,463 acres of the 8,042-acre study area (55%). 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. In addition, the Study Area contains approximately 155 acres of surface water, dominated in large measure by Lake Winnemaug located to the southeast of the Candidate site locations.

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## 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.

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### 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 Facilities would 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. Lastly, in order to calculate the approximate amount of the monopole structure that may be visible above the tree canopy, this process was repeated incrementally and the results combined into a single thematic data layer. This analysis is conducted in part to provide both a quantitative and qualitative measure of the potential visibility associated with a given tower structure(s).

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, based on both a review of published information and discussions with municipal officials in Watertown and Woodbury, it was determined that there are no state- or locally designated scenic roadways located within the Study Area.

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.

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### **Balloon Float and Study Area Reconnaissance**

On July 19, 2006 and August 1, 2007 Vanasse Hangen Brustlin Inc., (VHB) conducted "balloon floats" at the Candidate A and Candidate B project areas, respectively, to further evaluate the potential viewshed within the Study Area. The balloon floats consisted of raising and maintaining an approximate four-foot diameter, helium-filled weather balloon at the proposed site location at a height of 150 feet above ground level ("AGL") for Candidate A and 160 feet AGL for Candidate B. Once the balloons were aloft, 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. During both balloon floats, weather conditions were sunny with temperatures of approximately 85 degrees Fahrenheit and calm winds.

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## Photographic Documentation

During the balloon float, VHB personnel drove the public road system in the study area to inventory those areas where the balloons were visible. The balloons were photographed from several vantage points where it was observed above the tree canopy to document the actual view towards the proposed Facility. The locations of the photos are described below:

1. View from Lake Winnemaug Road adjacent to house #509.
2. View from Lake Winnemaug Road east of Sperry Road.
3. View from Lake Winnemaug Road at Northgate Road.
4. View from Lake Winnemaug Road.
5. View from Lake Winnemaug Road at Marc Drive.
6. View from West Meadows Road adjacent to house #42.
7. View from Lake Winnemaug Road adjacent to house #569.
8. View from Farmdale Road adjacent to house #90.
9. View from Hamilton Avenue at Old Baird Road.
10. View from Westgate Road adjacent to house #166.

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." 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.

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## Photographic Simulation

A photographic simulation was generated for the ten representative locations where at least one of the balloons was visible during the balloon floats. The photographic simulations represent a scaled depiction of the proposed monopole 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.

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<sup>1</sup> Warren, Bruce. *Photography*, West Publishing Company, Eagan, MN, c. 1993, (page 70).

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**CONCLUSIONS**

Attachment B of this report contains three viewshed maps, including a comparative map where the potential visibility for Candidate A and Candidate B are depicted; a viewshed map that depicts the approximate amount of a proposed monopole that would extend above tree line from visible locations associated with Candidate A; and a viewshed map that depicts the approximate amount of a proposed monopole that would extend above tree line from visible locations associated with Candidate B.

Based on this analysis, areas from where Candidate A and Candidate B would be visible above the tree canopy comprise approximately 116 acres and 107 acres, respectively, covering just over one percent of the 8,042-acre Study Area for each site location. As depicted on the comparative viewshed map, the overall visibility between the two Candidates is fairly similar. The main areas of visibility occur to the south and southwest of the Candidate sites over the southern half of Lake Winnemauug, Winnemauug Lake Road and the adjacent open agricultural fields where ground elevations exceed 750 feet AMSL. Candidate A would also be visible from select portions of Farmdale Road to the southeast and Westgate Road to the northeast. Year-round visibility associated with Candidate B also extends further east to select portions of Winnemauug Lake Road and West Meadows Road and to the southeast along Hamilton Avenue near Old Baird Road. From these areas, most of which are located over one mile from the proposed project areas, views are anticipated to be generally silhouetted against the sky as the proposed monopoles at each location would extend above the surrounding tree line. VHB estimates that approximately 16 and 18 residences for Candidate A and Candidate B, respectively, could have year round views of the proposed Facility from select portions of their properties. In general, the areas of visibility identified in this analysis for both Candidate sites occur in locations where little or no vegetative screening affords open, unobstructed views in the direction of the proposed Facility. As noted above, this is particularly true along portions of Lake Winnemauug Road and the Lake Winnemauug area in general. The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 48 acres for Candidate A and 39 acres for Candidate B. These areas mostly limited to the host properties and their immediate vicinities. Other areas of anticipated seasonal visibility for Candidate A are located to the south along Hamilton Avenue and to the southeast along Lake Winnemauug Road. VHB estimates that approximately 10 additional residences may achieve limited, seasonal views from select portions of their properties of Candidate A. Candidate B is expected be seasonally visible from select portions of roughly eight additional residential properties.

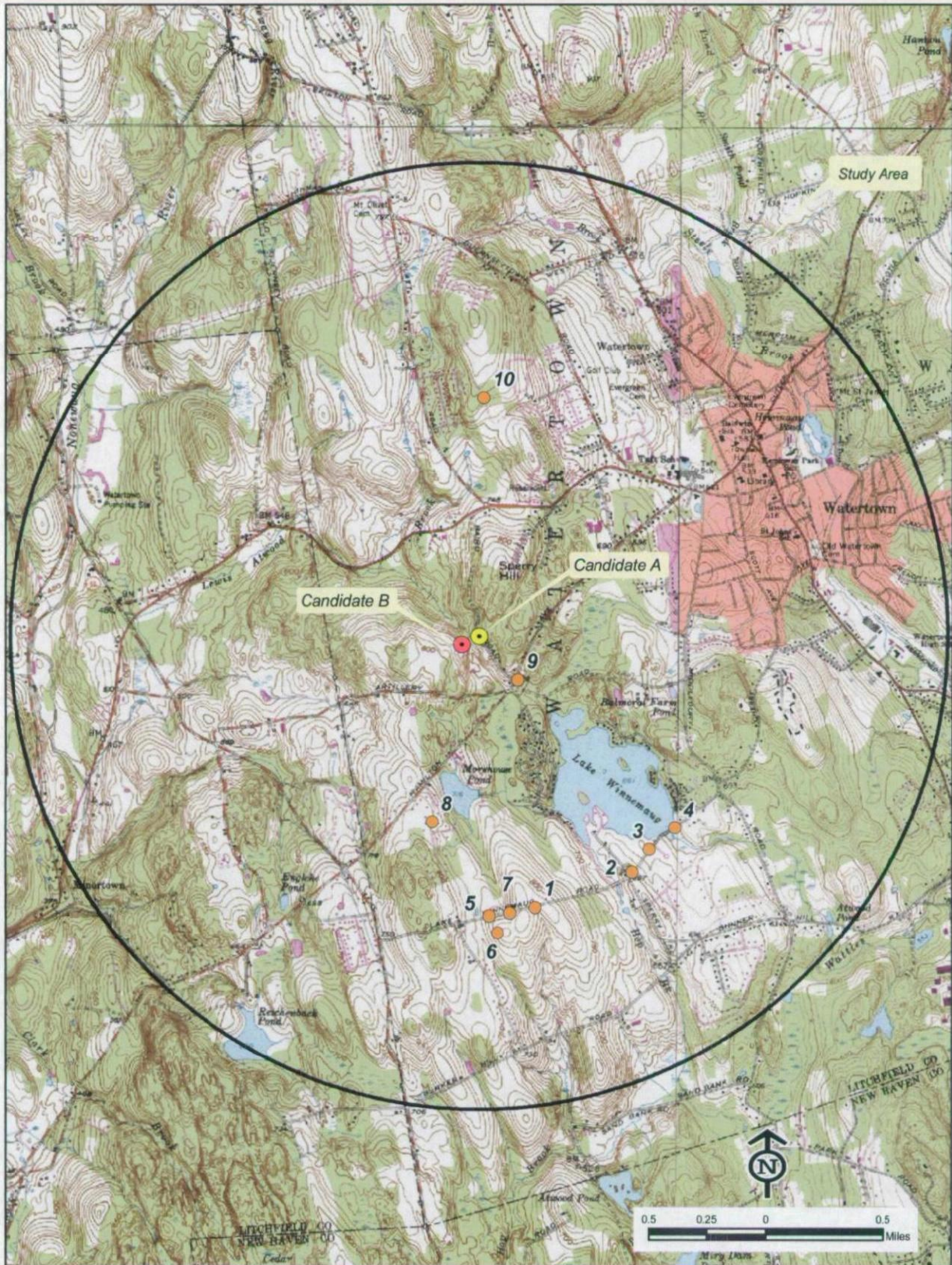
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## Attachment A

# Photolog Documentation Map, Project Area Photographs, Balloon Float Photographs, and Photographic Simulations

# Photolog Documentation

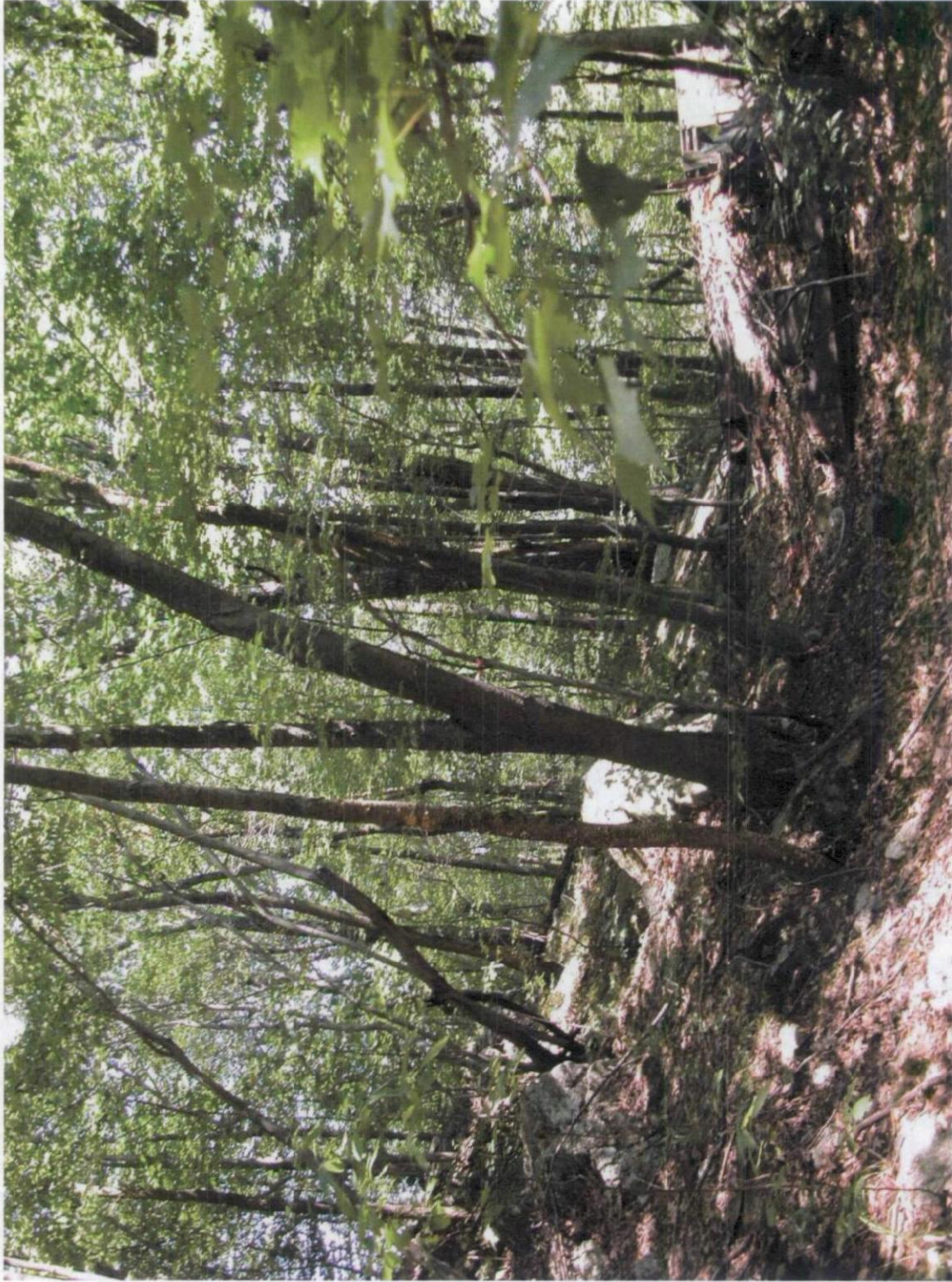
Town of  
**Watertown**  
Connecticut



ctmddat/crcj/41240\_12/graphics/figures/41240\_12\_photolog.mxd



# Photographic Documentation - Proposed Compound Area



Candidate A  
Watertown West  
Old Baird Road  
Watertown, CT

PROPOSED PROJECT AREA - CANDIDATE A



**VHB** Yonasse Hangan Brustlin, Inc.

# Photographic Documentation - Proposed Compound Area



Candidate B  
Watertown West  
Old Baird Road  
Watertown, CT

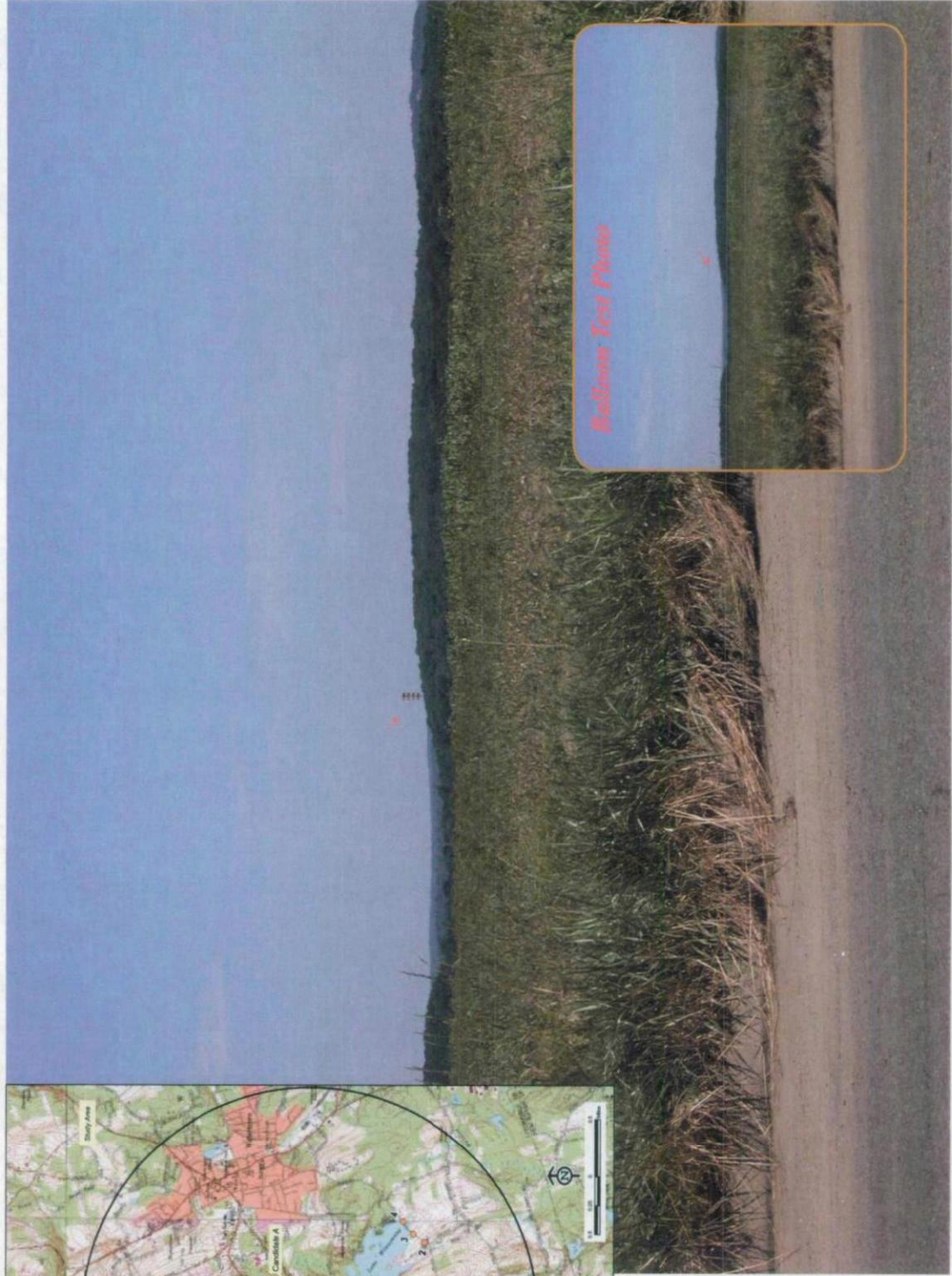
**PROPOSED PROJECT AREA - CANDIDATE B**



# Photographic Documentation and Simulation View 1 - Candidate A



Watertown West  
Old Baird Road  
Watertown, CT



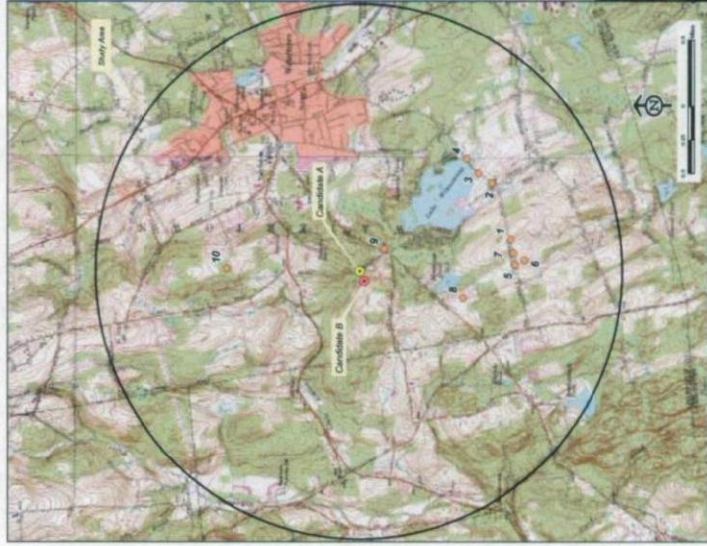
**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD ADJACENT TO HOUSE #509, LOOKING NORTH - CANDIDATE A AND CANDIDATE B ARE VISIBLE**

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.16 MILES +/-

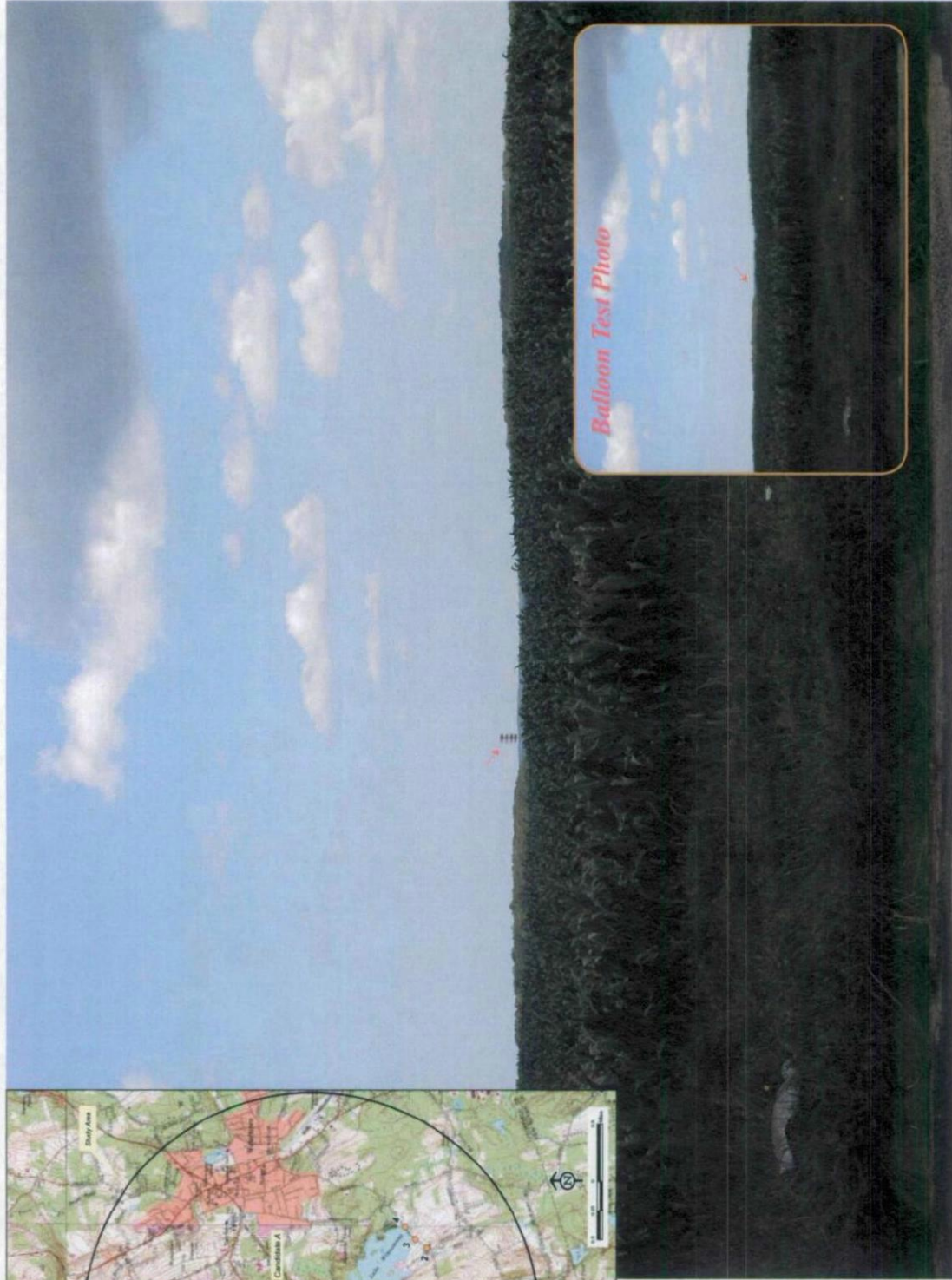
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.18 MILES +/-



Photographic Documentation and Simulation *View 1 - Candidate B*



Watertown West  
Old Baird Road  
Watertown, CT



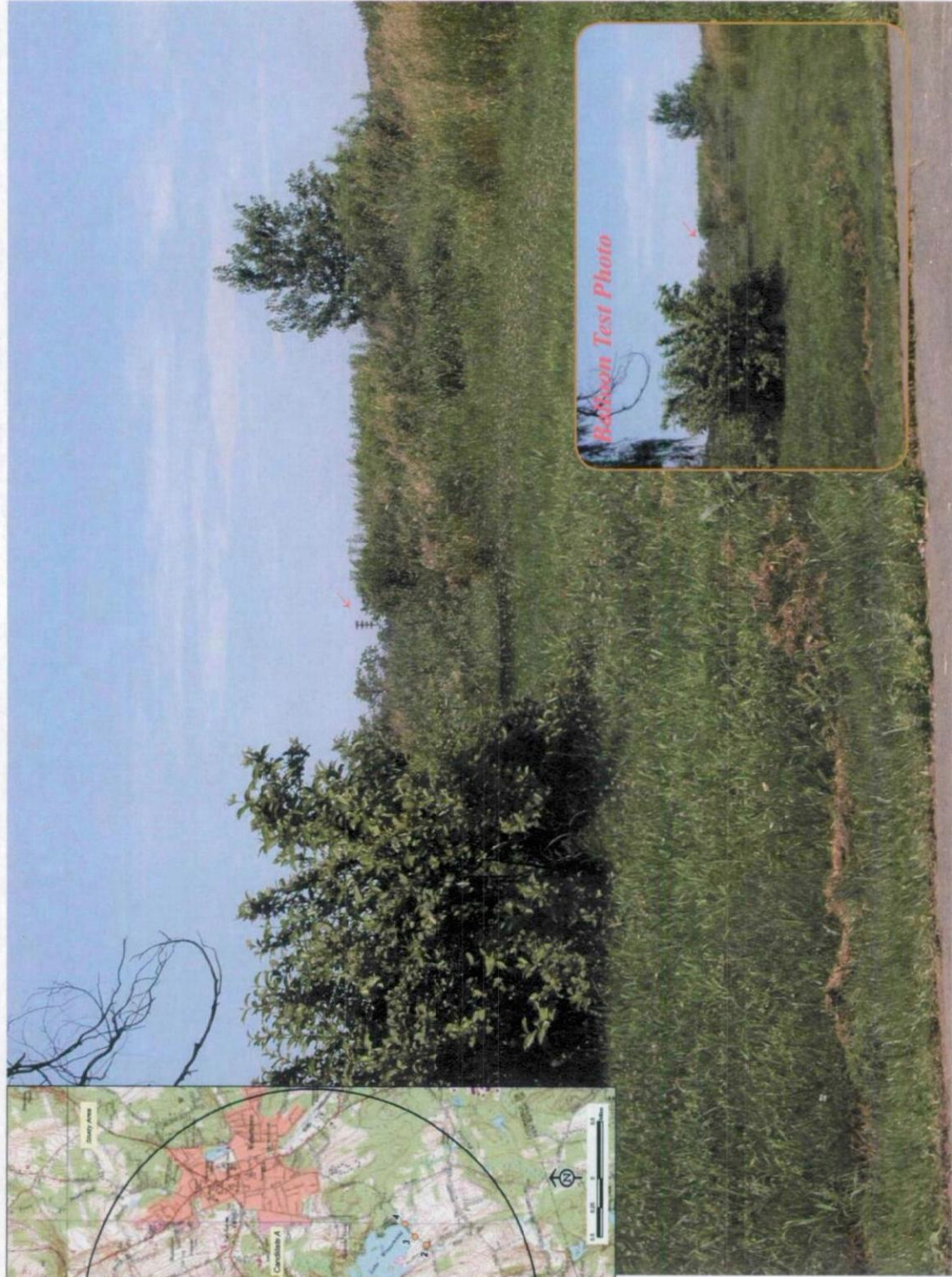
*Balloon Test Photo*

**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD ADJACENT TO HOUSE #509, LOOKING NORTH - CANDIDATE A AND CANDIDATE B ARE VISIBLE**  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.16 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.18 MILES +/-

# Photographic Documentation and Simulation View 2 - Candidate A



Watertown West  
Old Baird Road  
Watertown, CT



**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD EAST OF SPERRY ROAD, LOOKING NORTHWEST - CANDIDATE A IS VISIBLE; CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION**

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.20 MILES +/-

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.23 MILES +/-



**HHB** Vanasse Hangen Brustlin, Inc.

# Photographic Documentation and Simulation View 3 - Candidate B

Town of  
**Watertown**  
Connecticut



Watertown West  
Old Baird Road  
Watertown, CT



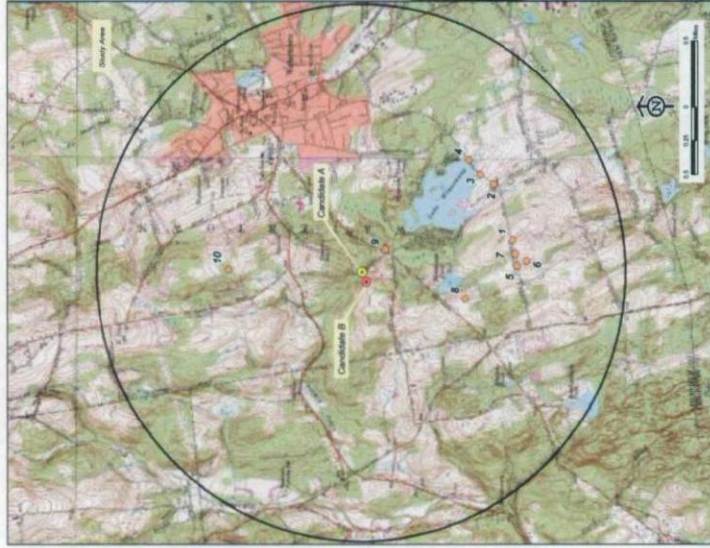
*Balloon Test Photo*

**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD AT NORTHGATE ROAD, LOOKING NORTHWEST - CANDIDATE B IS VISIBLE; CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION**  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.12 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.22 MILES +/-

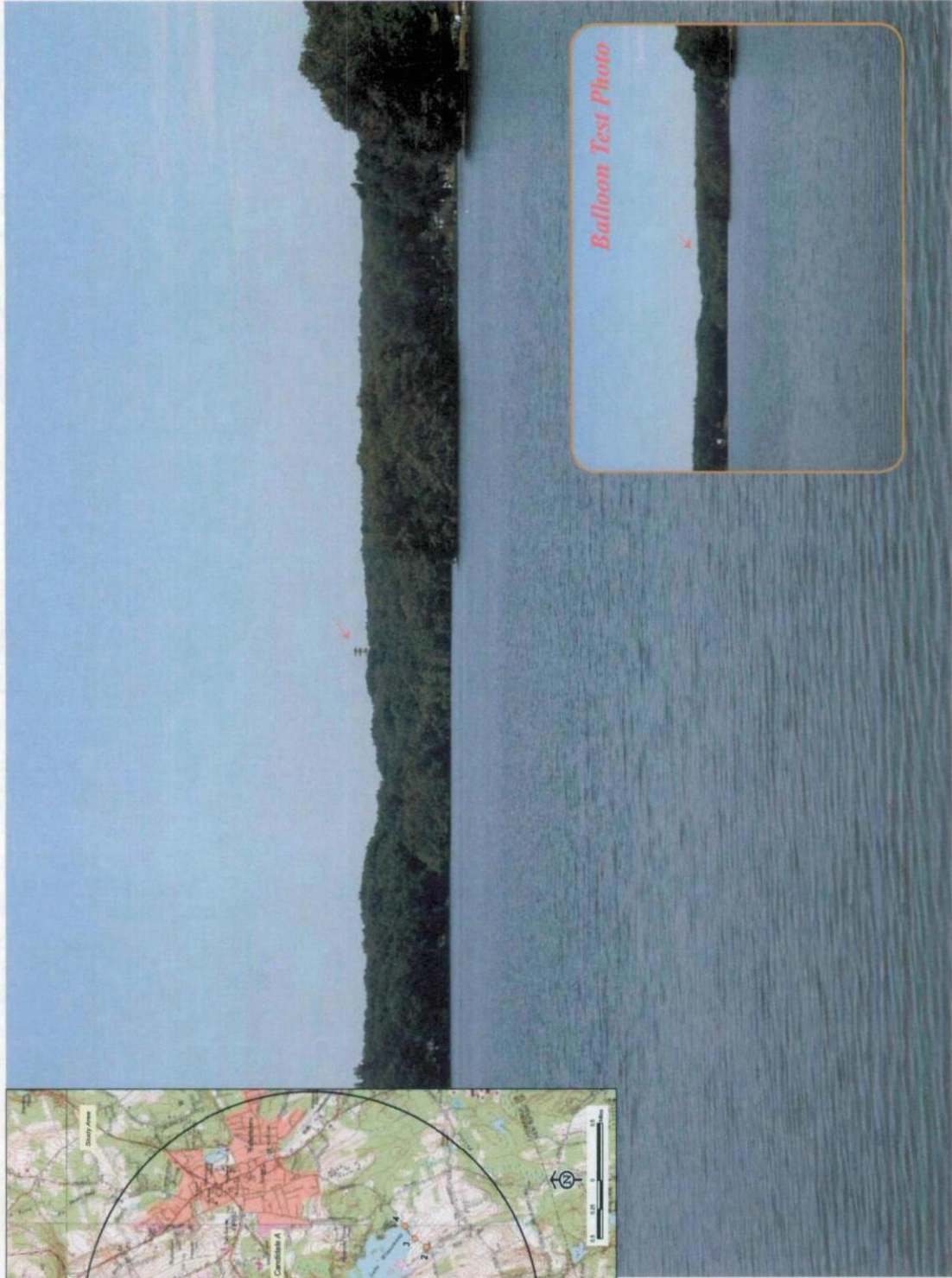


# Photographic Documentation and Simulation View 4 - Candidate A

Town of  
**Watertown**  
Connecticut



Watertown West  
Old Baird Road  
Watertown, CT



**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD, LOOKING NORTHWEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE**

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.17 MILES +/-

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.23 MILES +/-

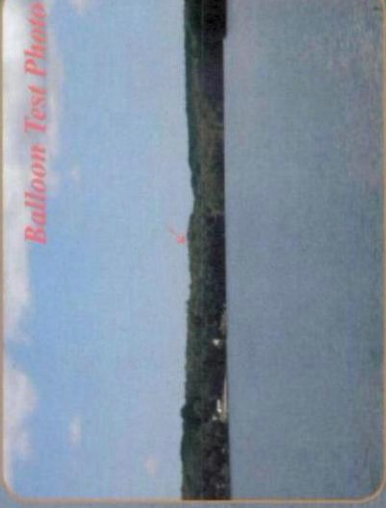
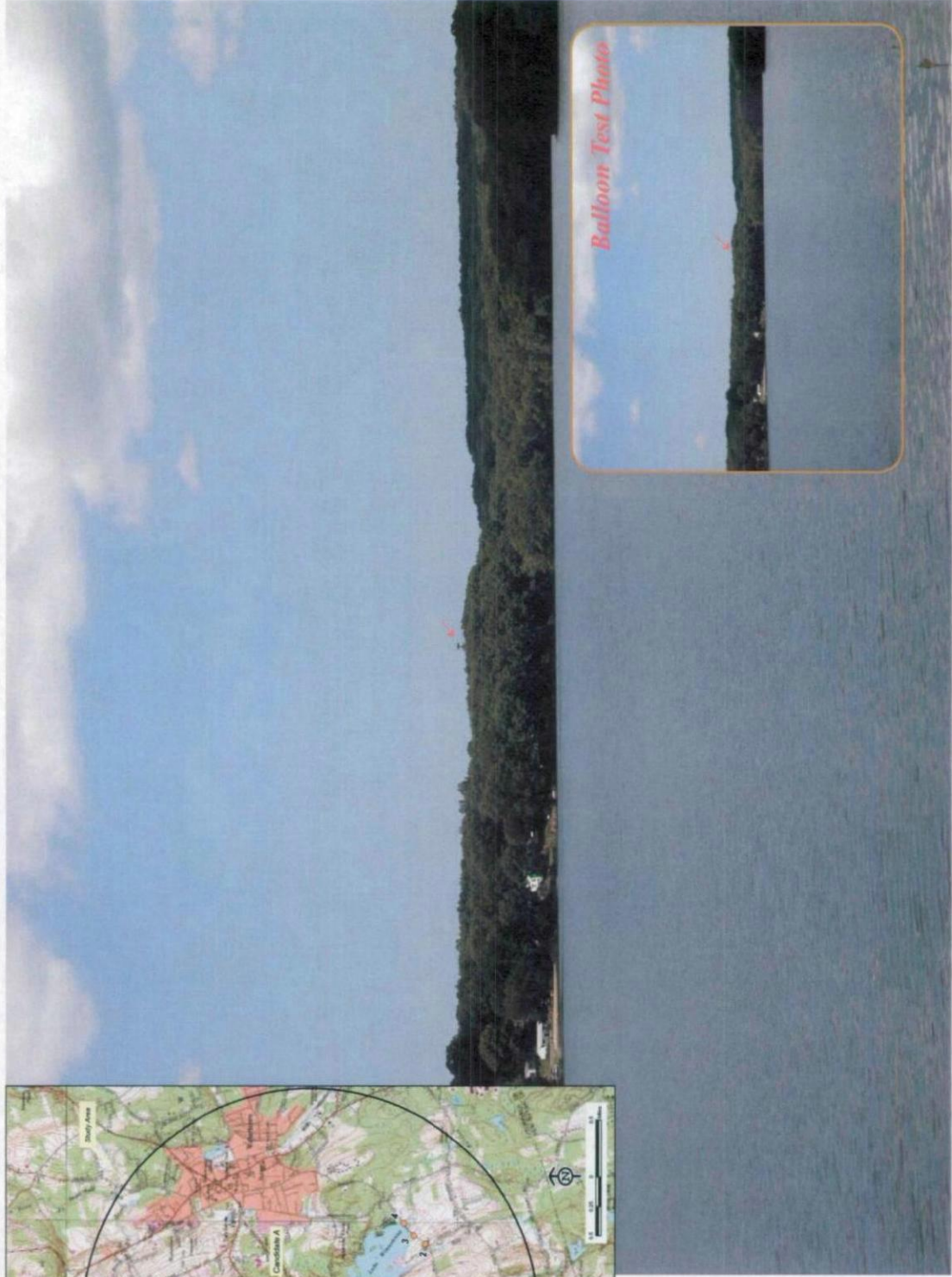


**VHB** Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation View 4 - Candidate B



Watertown West  
Old Baird Road  
Watertown, CT



**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD, LOOKING NORTHWEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE**

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.17 MILES +/-

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.23 MILES +/-

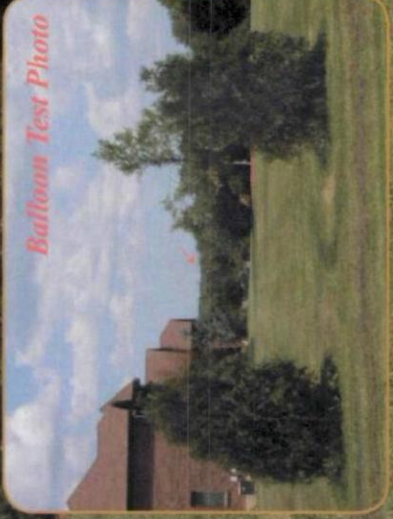
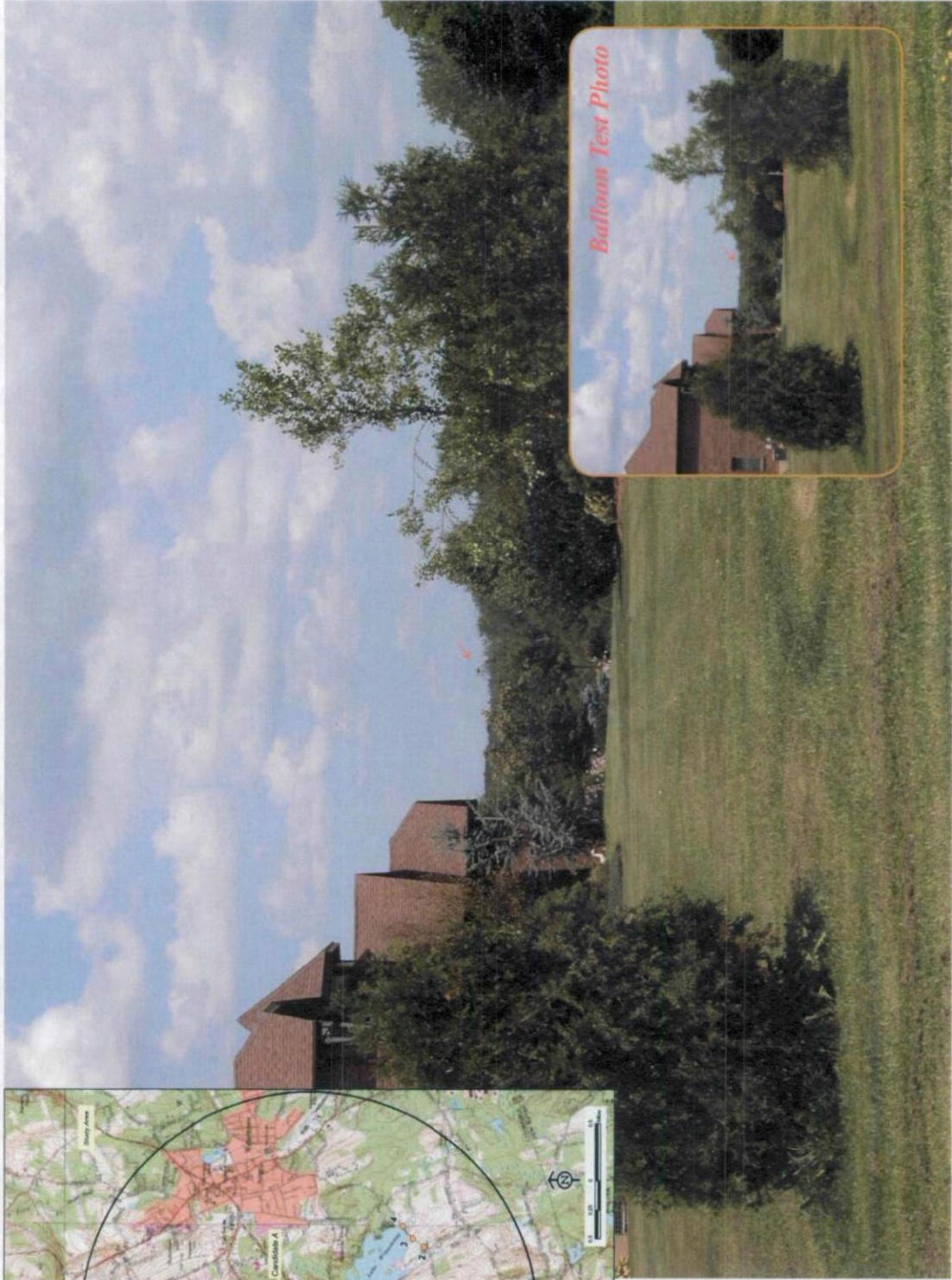




# Photographic Documentation and Simulation View 5 - Candidate B



Watertown West  
Old Baird Road  
Watertown, CT

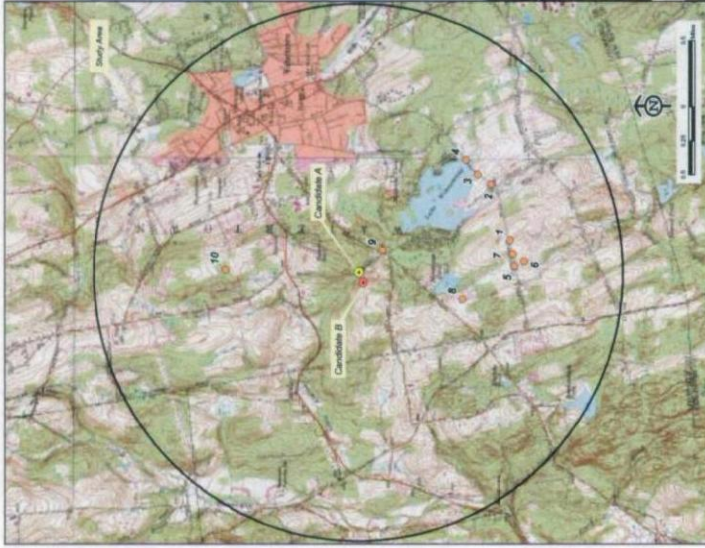


**PHOTO TAKEN FROM LAKE WINNEMAUG ROAD AT MARC DRIVE, LOOKING NORTH - CANDIDATE B IS VISIBLE; CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION**  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.16 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.17 MILES +/-

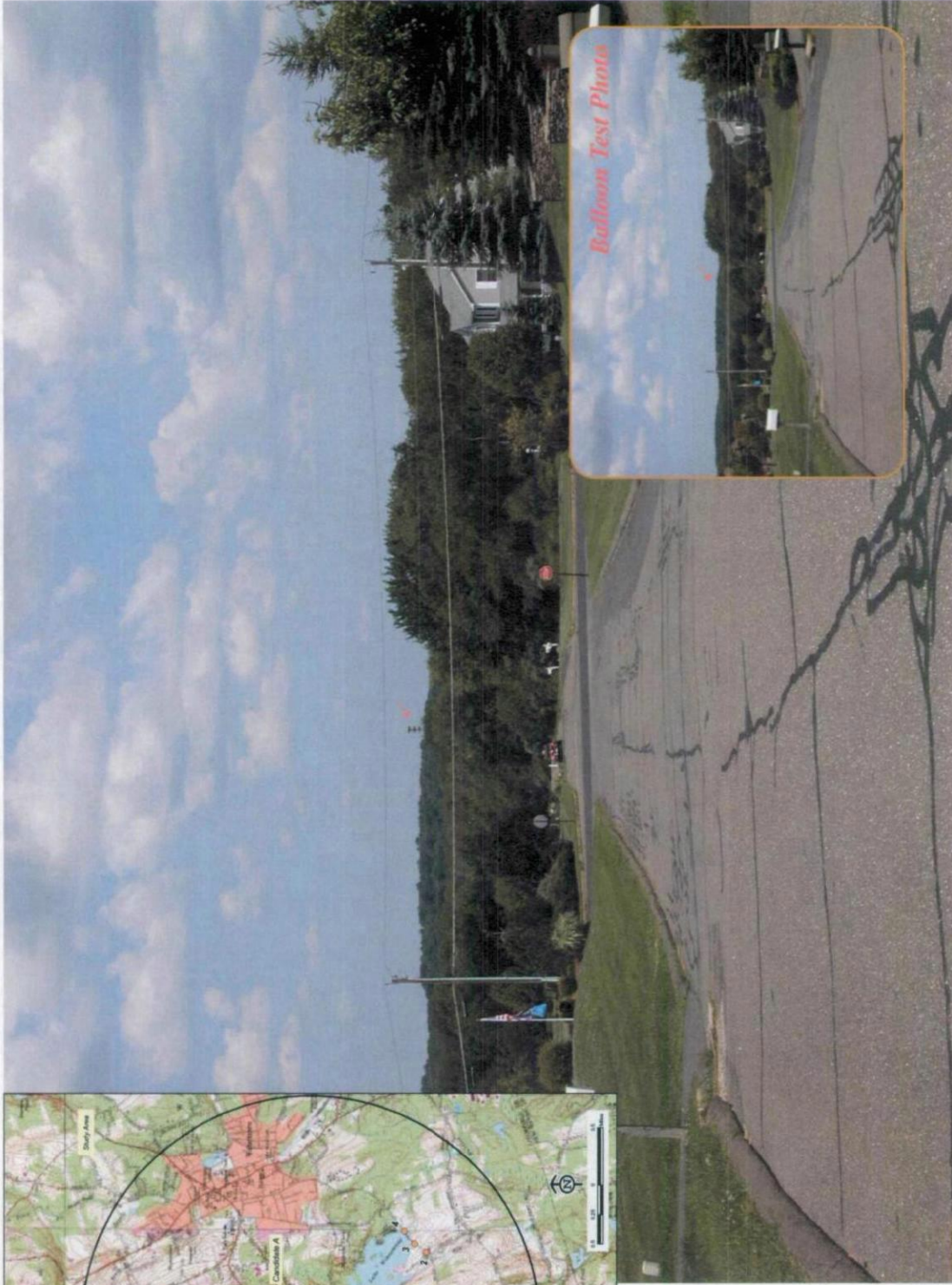


# Photographic Documentation and Simulation View 6 - Candidate B

Town of  
**Watertown**  
Connecticut



Watertown West  
Old Baird Road  
Watertown, CT



**PHOTO TAKEN FROM WEST MEADOWS ROAD ADJACENT TO HOUSE #42, LOOKING NORTH - CANDIDATE B IS VISIBLE; CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION**  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.25 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.24 MILES +/-



# Photographic Documentation and Simulation View 7 - Candidate B

Town of  
**Watertown**  
Connecticut



Watertown West  
Old Baird Road  
Watertown, CT

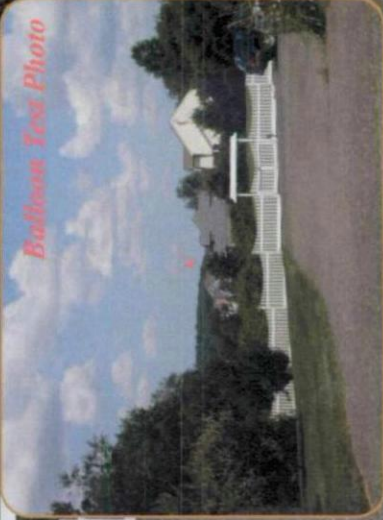
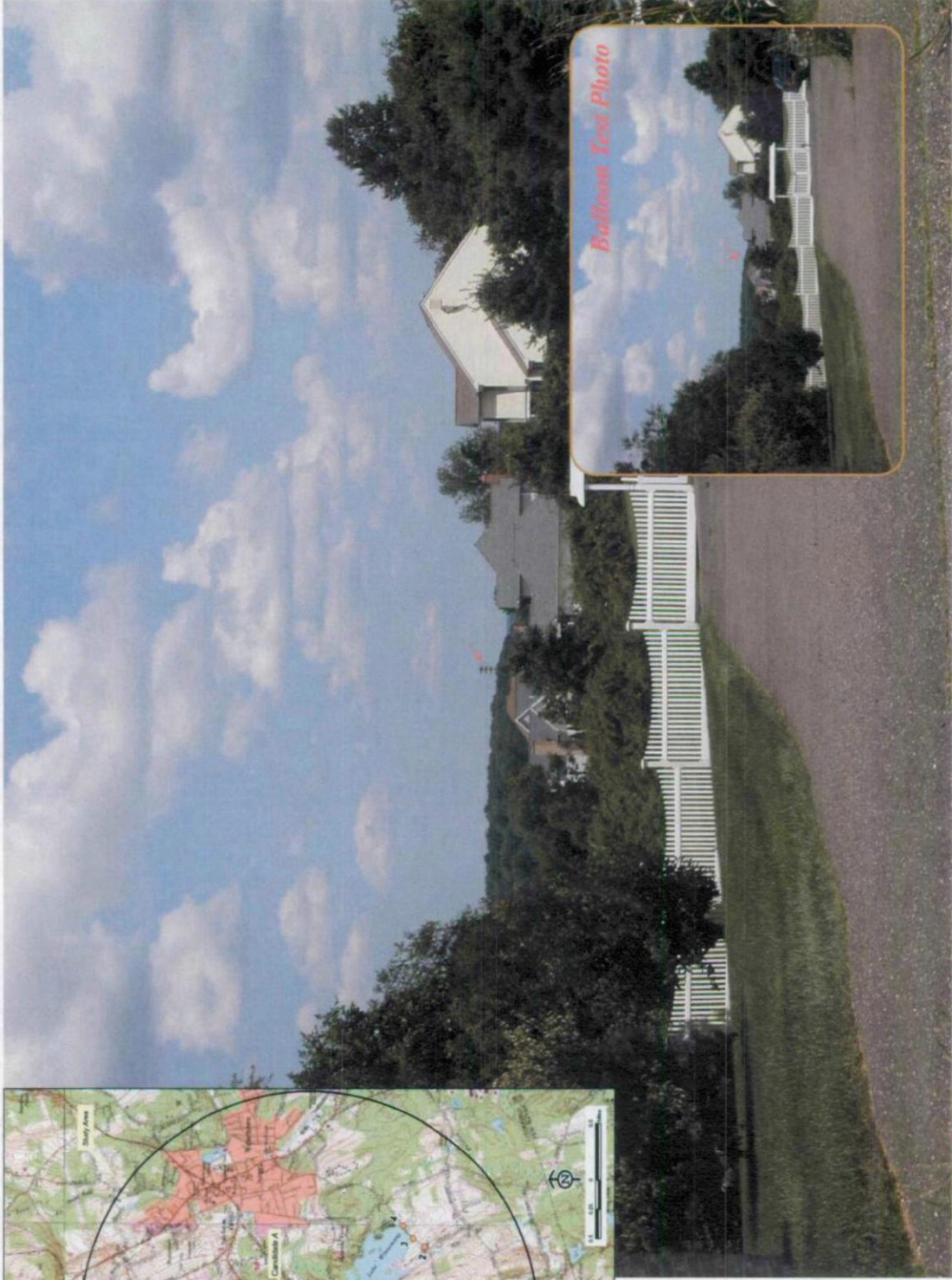


PHOTO TAKEN FROM LAKE WINNEMAUG ROAD ADJACENT TO HOUSE #569, LOOKING NORTH - CANDIDATE B IS VISIBLE; CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.19 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.18 MILES +/-



# Photographic Documentation and Simulation View 8 - Candidate A

Town of  
**Watertown**  
Connecticut



Watertown West  
Old Baird Road  
Watertown, CT

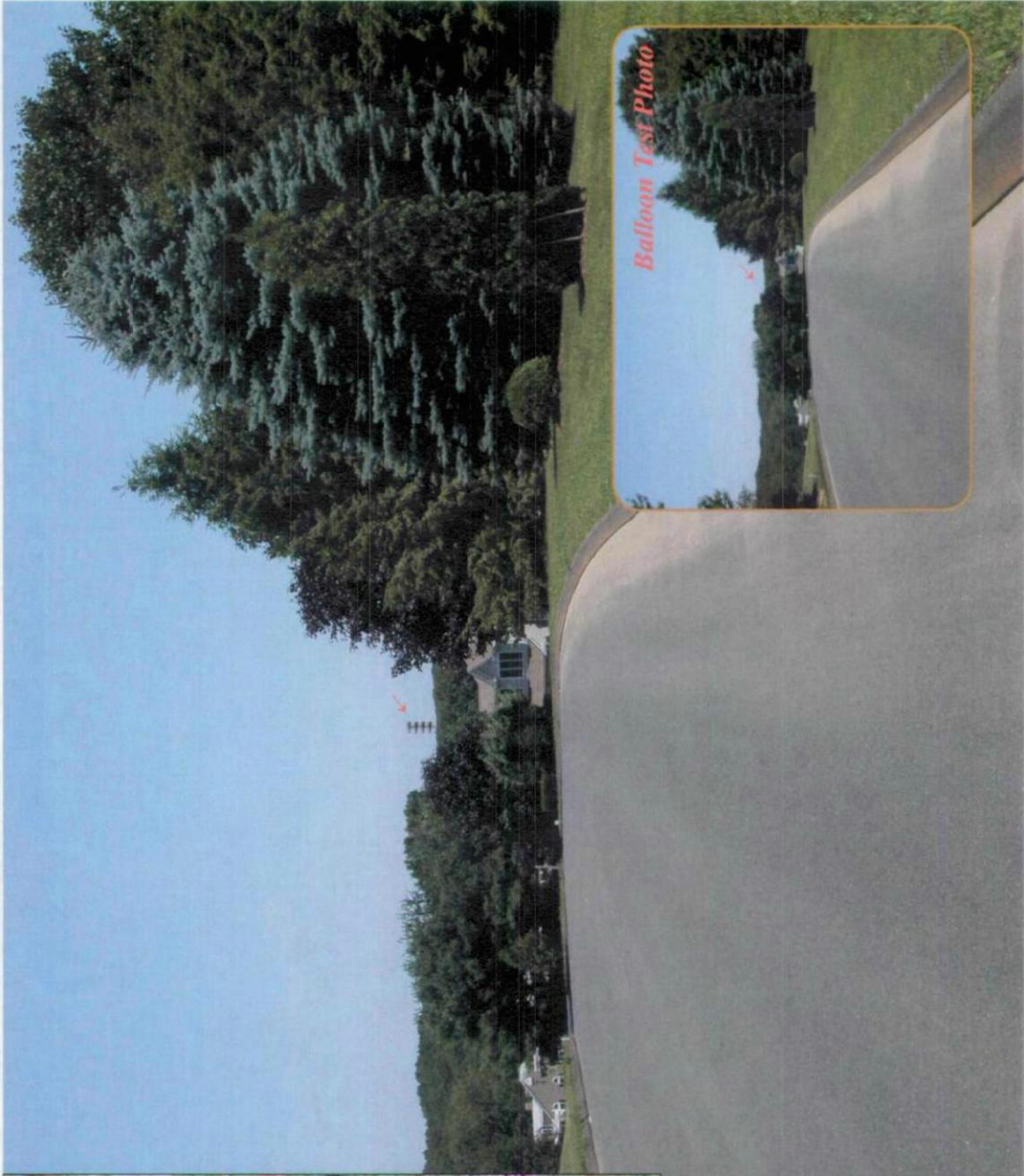


PHOTO TAKEN FROM FARMDALE ROAD ADJACENT TO HOUSE #90, LOOKING NORTHEAST - CANDIDATE A IS VISIBLE;  
CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 0.81 MILE +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 0.73 MILE +/-



*View 9 - Candidate B*

Photographic Documentation and Simulation



Watertown West  
Old Baird Road  
Watertown, CT



PHOTO TAKEN FROM HAMILTON AVENUE AT OLD BAIRD ROAD, LOOKING NORTHWEST - CANDIDATE B IS VISIBLE;  
CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 0.23 MILE +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 0.20 MILE +/-

# Photographic Documentation and Simulation View 10 - Candidate A



Watertown West  
Old Baird Road  
Watertown, CT

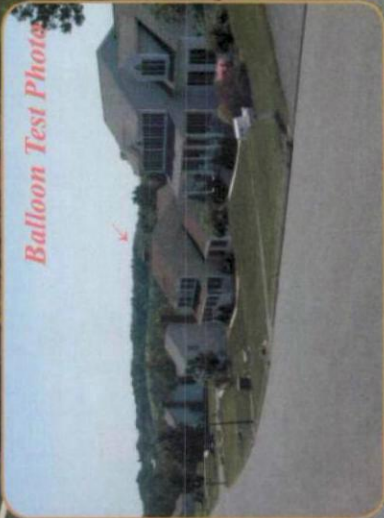
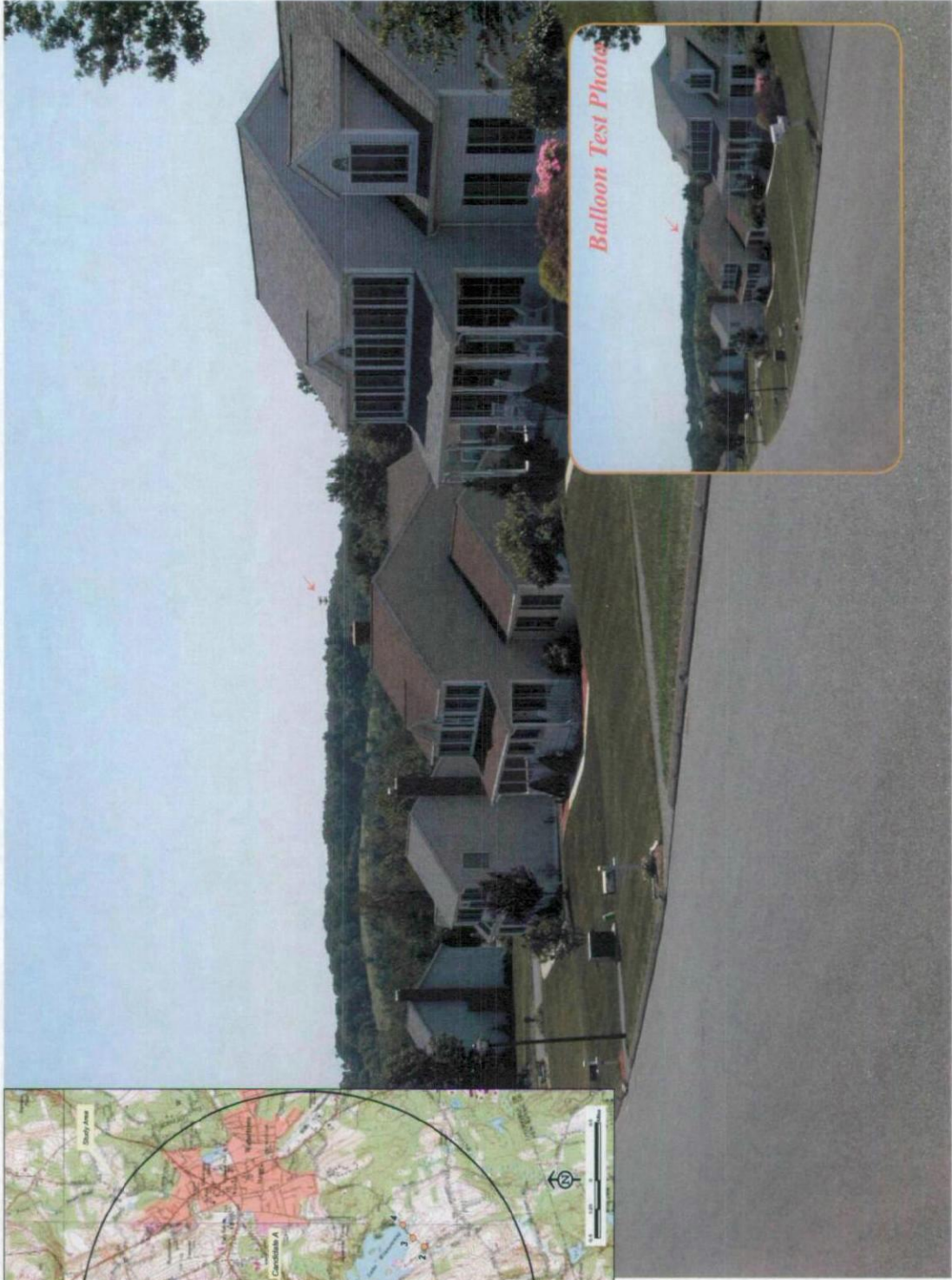


PHOTO TAKEN FROM WESTGATE ROAD ADJACENT TO HOUSE #166, LOOKING SOUTH - CANDIDATE A IS VISIBLE;  
CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE A SITE IS 1.01 MILES +/-  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED CANDIDATE B SITE IS 1.04 MILES +/-

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# Attachment B

## Viewshed Maps

**Watertown West  
Two Proposed Verizon Wireless  
Candidate Site Locations:  
Site A and Site B  
Old Baird Road  
Watertown, Connecticut**

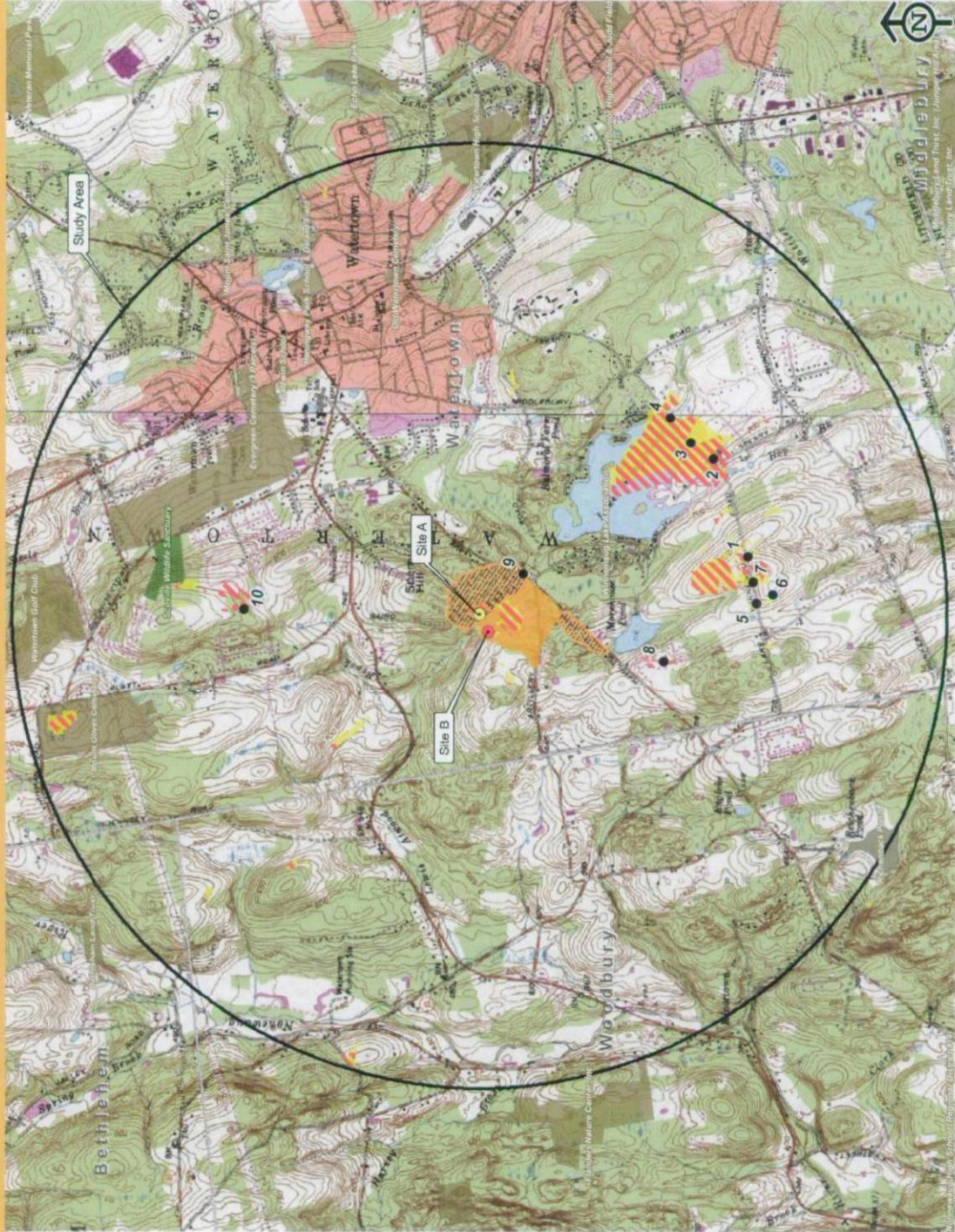
**NOTE:**

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility heights are 150 (Site A) and 160 feet (Site B).
- Existing tree canopy height estimated at 65 feet.
- Study Area consists of a two mile radius around the proposed Facility and includes 8,042 acres of land

**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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, May, 2007
- Scenic Roads layer derived from available State and Local listings.
- Results for Candidate B are preliminary pending balloon float and in-field reconnaissance.

Map Compiled August, 2007



**Legend**

- Two Candidate Site Locations (Includes area of visibility approximately 500 feet around facility)
- Photos - July 19, 2006
- Balloon visible above the trees
- Candidate A Year-Round Visibility (Approximately 116 Acres)
- Candidate A Anticipated Seasonal Visibility (Approximately 49 Acres)
- Candidate B Anticipated Seasonal Visibility (Approximately 39 Acres)
- Candidate B Year-Round Visibility (Approximately 107 Acres)
- Protected Properties (Municipal)
  - Cemetery
  - Preservation
  - Conservation
  - Existing Preserved Open Space
  - Recreation
  - General Recreation
  - School
  - Uncategorized
- Protected Properties (Federal)
  - 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
- Protected Properties (State and Local)
  - DEP Boat Launches
  - Scenic Road (State and Local)
  - Town Line

Scale: 0.0 0.25 0.5 0.75 1.0 Miles



## Watertown West Proposed Verizon Wireless Candidate Site A Old Baird Road Watertown, Connecticut

### NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 150 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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP May, 2007
- Scenic Roads layer derived from available State and Local listings.

Map Compiled August, 2007



### Legend

Proposed Monopole Location (Includes area of visibility approximately 500 feet around facility)	Protected Properties (CT DEP)
Photos - July 19, 2006	State Forest
Anticipated Seasonal Visibility (Approximately 49 Acres)	State Park
Tree Line View - 33 Acres	DEP Owned Waterbody
Upper 25% - 62 Acres	State Park Scenic Reserve
50% - 17 Acres	Historic Preserve
Entire Facility Visible - 4 Acres	Natural Area Preserve
	Fish Hatchery
	Flood Control
	Other
	State Park Trail
	Water Access
	Wildlife Area
	Wildlife Sanctuary
	Protected Properties (Federal)
	DEP Boat Launches
	Scenic Road (State and Local)
	Town Line
	Protected Properties (Municipal)
	Cemetery
	Preservation
	Conservation
	Existing Preserved Open Space
	Recreation
	General Recreation
	School
	Uncategorized

## Watertown West Proposed Verizon Wireless Candidate Site B Old Baird Road Watertown, Connecticut

### NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 160 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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, May 2007
- Scenic Roads layer derived from available State and Local listings.

Map Compiled August, 2007



**Legend**

- Proposed Monopole Location (includes area of visibility approximately 500 feet around facility)
- Photos - July 19, 2006
- Anticipated Seasonal Visibility (Approximately 39 Acres)
- Approx. % of Monopole Visible (Year Round)
  - Tree Line View - 52 Acres
  - Upper 25% - 47 Acres
  - 50% - 6 Acres
  - Entire Facility Visible - 2 Acres
- Total Year-Round Visibility Approximately 107 Acres
- Protected Properties (Municipal)
  - Cemetery
  - Preservation
  - Existing Preserved Open Space
  - Recreation
  - General Recreation
  - School
  - Uncategorized
- Protected Properties (Federal)
  - DEF Boat Launches
  - Scenic Road (State and Local)
  - Town Line
- Protected Properties (CT DEP)
  - State Forest
  - State Park
  - DEF Owned Waterbody
  - State Park Scenic Reserve
  - Historic Preserve
  - Natural Areas Preserve
  - Fish Hatchery
  - Flood Control
  - Other
  - State Park Trail
  - Water Access
  - Wildlife Area
  - Wildlife Sanctuary

Scale: 0 0.2 0.4 Miles

# Comparative Viewshed Map

## Site A and Site B

## Town of Watertown Connecticut

### Watertown West Two Proposed Verizon Wireless Candidate Site Locations: Site A and Site B Old Baird Road Watertown, Connecticut

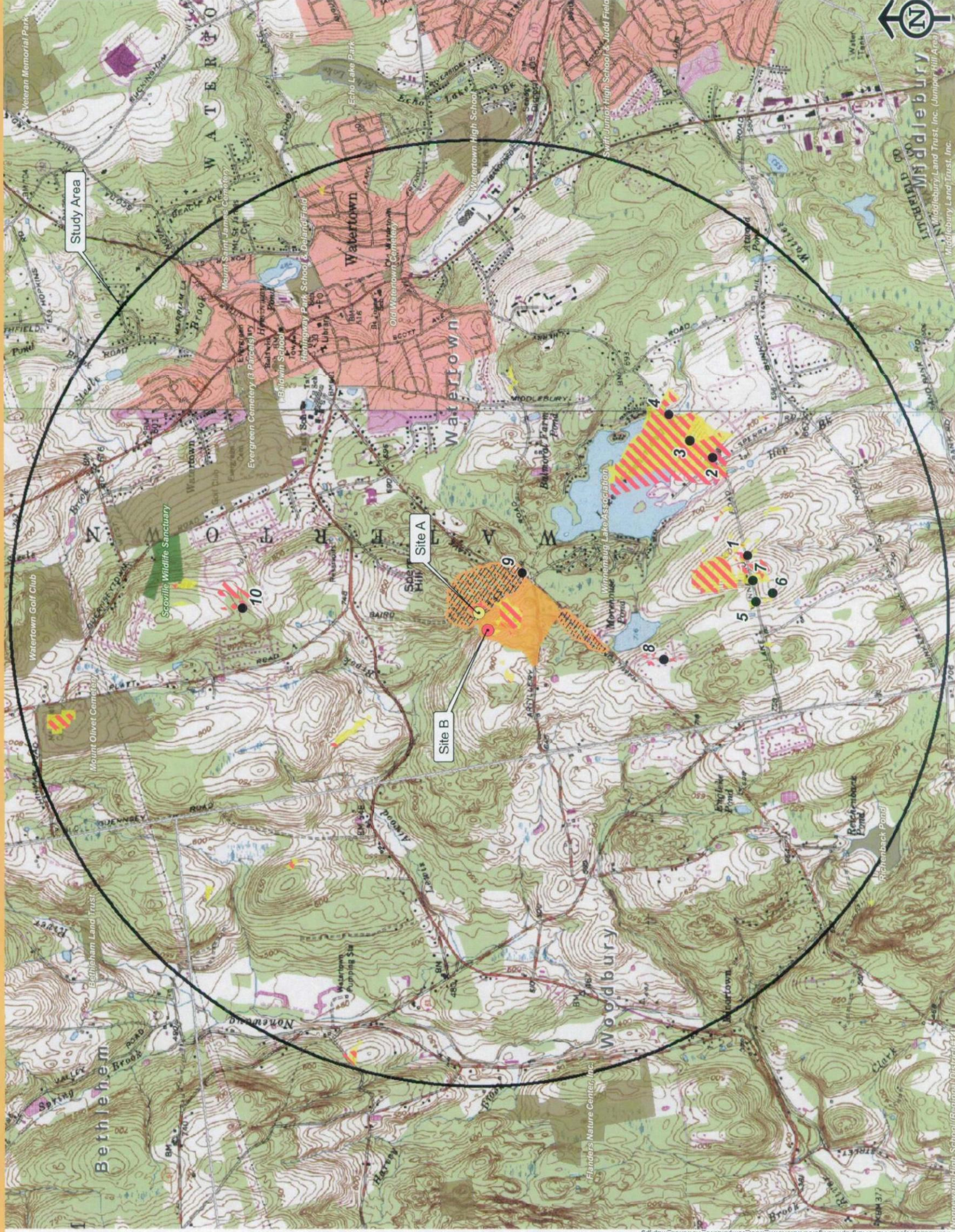
**NOTE:**

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility heights are 150 (Site A) and 160 feet (Site B).
- Existing tree canopy height estimated at 65 feet.
- Study Area consists of a two mile radius around the proposed Facility and includes 8,042 acres of land

**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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, May, 2007
- Scenic Roads layer derived from available State and Local listings.
- Results for Candidate B are preliminary pending balloon float and in-field reconnaissance.

Map Compiled August, 2007



**Legend**

- Two Candidate Site Locations (Includes area of visibility approximately 500 feet around facility)
- Photos - July 19, 2006
- Balloon visible above the trees
- ▨ Candidate A Year-Round Visibility (Approximately 116 Acres)
- ▨ Candidate A Anticipated Seasonal Visibility (Approximately 49 Acres)
- ▨ Candidate B Anticipated Seasonal Visibility (Approximately 39 Acres)
- ▨ Candidate B Year-Round Visibility (Approximately 107 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
- ▨ Protected Properties (Federal)
- ★ DEP Boat Launches
- ▨ Scenic Road (State and Local)
- ▨ Town Line





## Watertown West Proposed Verizon Wireless Candidate Site A Old Baird Road Watertown, Connecticut

### NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 150 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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, May, 2007
- Scenic Roads layer derived from available State and Local listings.

Map Compiled August, 2007

### Legend

- Proposed Monopole Location (Includes area of visibility approximately 500 feet around facility)
- Photos - July 19, 2006
- Anticipated Seasonal Visibility (Approximately 49 Acres)
- 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

### Approx. % of Monopole Visible (Year Round)

- Tree Line View - 33 Acres
- Upper 25% - 62 Acres
- 50% - 17 Acres
- Entire Facility Visible - 4 Acres

### Total Year-Round Visibility Approximately 116 Acres

- Protected Properties (Municipal)
  - Cemetery
  - Preservation
  - Conservation
  - Existing Preserved Open Space
  - Recreation
  - General Recreation
  - School
  - Uncategorized
- Protected Properties (Federal)
  - DEP Boat Launches
  - Scenic Road (State and Local)
  - Town Line



## Watertown West Proposed Verizon Wireless Candidate Site B Old Baird Road Watertown, Connecticut

### NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 160 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 Waterbury (1984) and Woodbury (1984) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP, May 2007
- Scenic Roads layer derived from available State and Local listings.

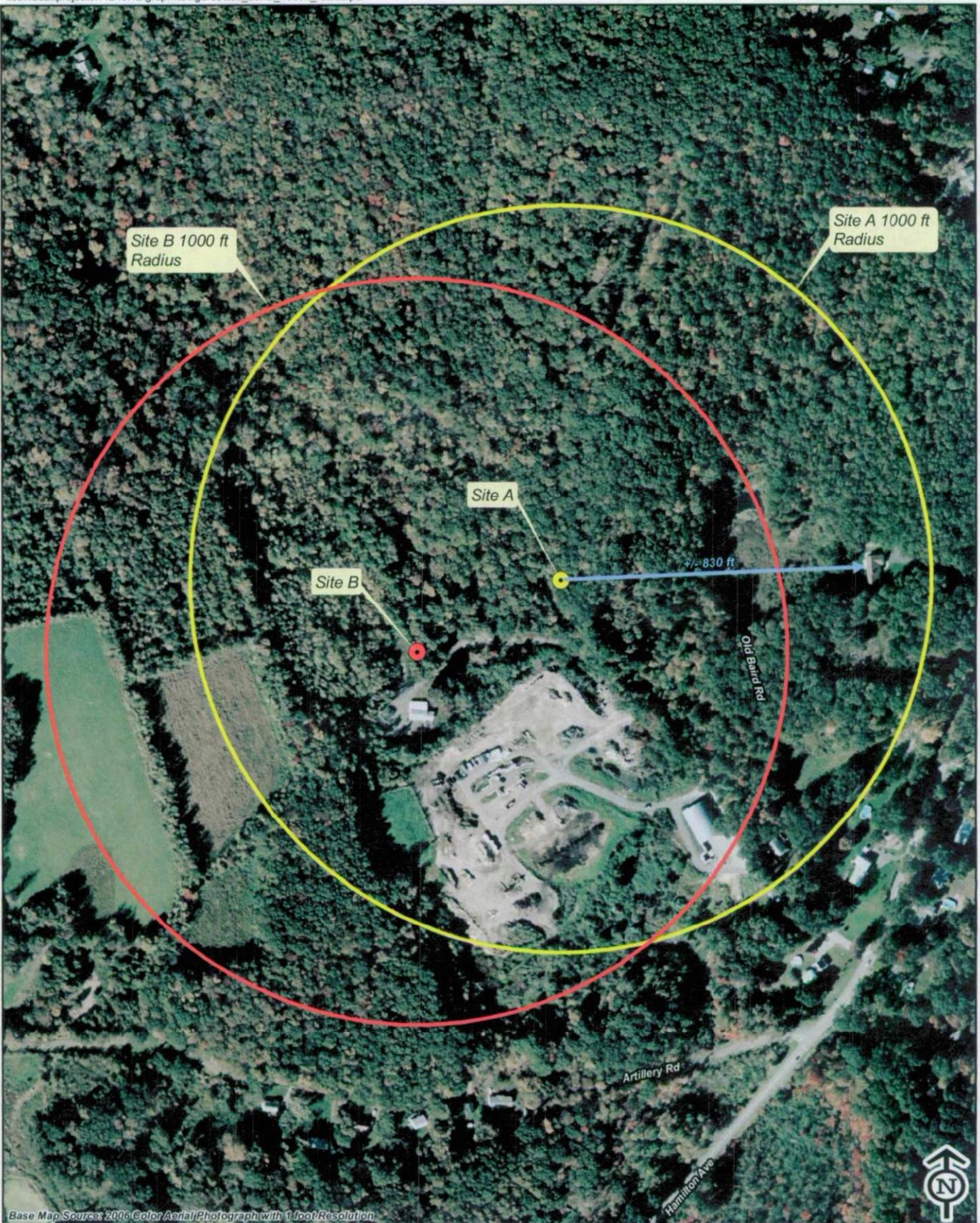
Map Compiled August, 2007

### Legend

Proposed Monopole Location (Includes area of visibility approximately 500 feet around facility)	Protected Properties (CT DEP)
Photos - July 19, 2006	State Forest
Anticipated Seasonal Visibility (Approximately 39 Acres)	State Park
Tree Line View - 52 Acres	DEP Owned Waterbody
Upper 25% - 47 Acres	State Park Scenic Reserve
50% - 6 Acres	Historic Preserve
Entire Facility Visible - 2 Acres	Natural Area Preserve
	Fish Hatchery
	Flood Control
	Other
	State Park Trail
	Water Access
	Wildlife Area
	Wildlife Sanctuary
	Protected Properties (Federal)
	DEP Boat Launches
	Scenic Road (State and Local)
	Town Line
Protected Properties (Municipal)	
Cemetery	
Preservation	
Existing Preserved Open Space	
Recreation	
General Recreation	
School	
Uncategorized	

Total Year-Round Visibility  
Approximately 107 Acres





Base Map Source: 2006 Color Aerial Photograph with 1 foot Resolution



Quadrangle Location

\* Note: Site A and Site B are located approximately 400 feet apart

**Vanasse Hangen Brustlin, Inc.**

USGS Topographic Map  
Proposed Verizon Wireless  
Telecommunications Facility

Two Proposed Verizon Wireless  
Candidate Site Locations:  
Site A and Site B  
Old Baird Road  
Watertown, Connecticut

