

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

RE: APPLICATION BY T-MOBILE
NORTHEAST, LLC FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED
FOR A TELECOMMUNICATIONS FACILITY
AT 232 SHORE ROAD IN THE TOWN
OF OLD LYME, CONNECTICUT

DOCKET NO. 391

Date: January 22, 2010

PRE-FILED TESTIMONY OF MICHAEL P. LIBERTINE

Q1. Please state your name and profession.

A1. Michael P. Libertine and I am the Director of Environmental Services employed by Vanasse Hangen Brustlin, Inc. ("VHB"). VHB is located at 54 Tuttle Place in Middletown, Connecticut. My responsibilities at VHB include managing and overseeing the environmental science and engineering projects, including telecommunications projects, undertaken by VHB's Middletown office.

Q2. What kind of services does VHB provide?

A2. Among many other services, VHB provides a full array of services for the permitting of telecommunications facilities, including visual impact analyses, wetlands compliance and environmental assessments under the National Environmental Policy Act of 1969 ("NEPA").

Q3. Please summarize your professional background in telecommunications.

A3. I have a B.S. in natural resources management from the University of Connecticut and a B.A. in marketing from Stonehill College. I am also a Licensed Environmental Professional in Connecticut. I have served as the project manager for more than 1,600 environmental site assessments and field investigations for property transfers in Connecticut, Rhode Island, New Hampshire, Massachusetts, New Jersey, New York, Florida and Canada.

My background includes eighteen years of consulting in the environmental field. The scope of my consulting services includes visual resource analyses, environmental assessments for NEPA compliance, site screenings, land use evaluations, wetland assessments, vegetative surveys and noise analyses. I have assisted in the permitting of over 500 telecommunications projects in New England over the past eleven years. My responsibilities include the coordination and oversight of site screenings and environmental assessments in accordance with the NEPA, visual impact analyses and regulatory permitting support.

Q4. What services did VHB provide T-Mobile regarding the proposed Facility?

A4. T-Mobile retained VHB to perform a Visual Resource Evaluation ("Evaluation") and provide a Visual Resource Evaluation Report ("VRE Report"), a wetlands compliance analysis and a coastal consistency analysis for the proposed telecommunications facility at 232 Shore Road, Old Lyme, Connecticut (the "Facility"). I oversaw these activities associated with the proposed Facility.

Q5. Please describe the process for conducting the Visual Resource Evaluation.

A5. The Evaluation consists of a predictive computer model and in-field analysis. The predictive computer model assesses the potential visibility of the Facility within a two mile radius ("Study Area"), including private property and/or otherwise inaccessible areas for field verification. The in-field analysis consists of a "balloon float" and drive through reconnaissance of the Study Area. This in-field investigation allows VHB to obtain location and height representations, back-check the initial predictive computer model results and assess the visibility of the proposed Facility from areas accessible to the public. VHB assesses the results of the predictive computer model and the in-field analysis and incorporates these results into the final viewshed map. In this case, VHB had the opportunity to review in-field conditions via a balloon float on May 5, 2009. The completed VRE Report and viewshed map are included in Exhibit M of the Application.

Q6. Please describe how VHB prepared the viewshed analysis for the VRE Report.

A6. VHB uses a computer modeling tool called ERSI's ArcView® Spatial Analyst, to calculate the areas within the Study Area where the Facility would be visible. This software is based upon data such as the height of the Facility, the Facility's ground elevation, the surrounding topography and existing vegetation. VHB first constructs a digital elevation model, which is derived from Connecticut LiDAR-based digital elevation data produced by the University of Connecticut Center for Land Use Education and Research, to develop a three dimensional topographic layer of the Study Area. A forest canopy layer is then created by hand-tracing (digitizing) mature trees and woodland

areas (as depicted on 2006 aerial photographs), converting this into a geographic data layer, and assigning an average height value. During the initial analysis, VHB omits the tree canopy so the only visual constraint is topography. This initial analysis provides a reference point useful in understanding areas that may provide direct lines of sight and determining seasonal visibility fluctuations. Subsequent to the initial analysis, VHB adds the existing vegetation data (in this case, a height of 60 feet was assigned to this data layer). Please note that the view shed map originally submitted in the Application incorrectly lists the average tree canopy height at an estimated 50 feet; the correct value is approximately 60 feet. We have provided a revised map with this corrected information as an attachment to this filing. VHB also includes an additional data layer, obtained from the Connecticut State Department of Environmental Protection, depicting significant resource areas such as State forests and parks, recreational facilities, registered historic sites, open space lands and other sensitive visual receptors. VHB depicts on the view shed map any state-or locally-designed scenic roads and Connecticut blue-blazed hiking trails that exist in the Study Area.

Q7. Please describe how VHB conducted the balloon float.

A7. On May 5, 2009, VHB raised and maintained a four-foot diameter helium filled weather balloon at the location of the proposed Facility at a height of 100 feet to conduct the initial in-field analysis. After stabilizing the balloon, VHB traveled the local public thoroughfares within the Study Area to verify the computer generated viewshed map and inventory areas of visibility. In conducting the drive-by reconnaissance, VHB focused its evaluation on nearby residential areas and other potential sensitive visual

receptors. While the balloon was aloft, VHB took photographs from a variety of locations, settings and vantage points to assist in evaluating where the balloon was visible. VHB also recorded the latitude and longitude of each photograph using a handheld global positioning system (GPS) receiver unit. The photographs were taken using a NIKON D-80 digital camera body and NIKON eighteen to 135 millimeter lens. VHB set the lens to fifty millimeters, which most accurately represents the unaided human eye.

Q8. How did VHB select the locations for the photographs during the in-field investigation?

A8. VHB selected several of the photograph locations using a preliminary version of the viewshed map to identify areas adjacent to public roads within the Study Area from where the proposed Facility might be visible. VHB selects other locations based on in-field observations made during the time of the balloon float.

Q9. Please describe the estimated visibility of the proposed Facility.

A9. The areas from which the Facility would be partially visible year round comprise approximately 1,817 acres. Approximately 97 percent of this area (1,773 acres) consists of open water on the Long Island Sound, over 0.5 mile away and beyond, where any views of the Facility would be limited to the top of the monopole among surrounding vegetation. Aside from these more distant, open water views, some areas near the Facility would have year round partial views, including portions of Shore Road, Otter Rock Road, Hawks Nest Road and Washington Avenue. These views would mostly be limited to areas within approximately 0.25 mile of the Facility. Overall, the

Facility would be partially visible to twenty-one residential properties within the Study Area, all within 0.5 mile of the Facility, including three on Otter Rock Road, three on Hawks Nest Road, six on Washington Avenue, four on Shore Road (Route 156), two on Corsino Avenue and three on Pond Road. Areas of seasonal visibility would comprise approximately fifty-five acres, which are confined to the Property and those within the immediate vicinity of the Facility. Approximately fourteen residential properties would have seasonal views of the Facility along select portions of Center Beach Road, Hawks Nest Road, Washington Avenue and Columbus Avenue.

Q10. Please describe any features that would reduce the potential visual impact of the proposed Facility.

A10. The generally rolling topography and forested nature of the site vicinity help to reduce the potential visual impacts of the proposed Facility. The existing vegetation in the Study Area consists of mixed deciduous hardwood species with an average estimated height of sixty feet. The tree canopy covers nearly 3,804 acres of the 8,042 acre Study Area — with 2,605 acres of the Study Area consisting of surface water, mainly portions of Long Island Sound.

The Facility is set back approximately 900 feet from Shore Road, with significant screening provided by dense stands of mature trees, limiting most of nearby views to the upper ten to twenty feet of the Facility. Beyond the abutting rail road tracks, there is a large track of undeveloped forest located immediately to the north and the east of the site of the proposed Facility. Residential development is limited to Otter Rock Road to the west and areas to the southeast, all at distances at or greater than 0.25 mile from the site. Ultimately, the majority of views would be confined to the immediate vicinity of

the Facility, and of the top ten to 25 feet of the monopole, because of the relatively low height of the tower and the existing mature vegetation.

Q11. Will the proposed Facility have any visual impact on any sensitive visual receptors such as scenic, historic or recreational sites, hiking trails or parks?

A11. No, the proposed Facility would not be visible from scenic, historic or recreational areas, hiking trails or parks.


Michael P. Libertine

Sworn and subscribed to before me this
22nd day of January, 2010.



Notary Public
My Commission expires

KRISTINE M. PAUL
NOTARY PUBLIC
MY COMMISSION EXPIRES JAN. 31, 2014

ATTACHMENT A

Viewshed Analysis
Proposed T-Mobile Wireless
Telecommunications Facility
CTNL803
232 Shore Road
Old Lyme, Connecticut

NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 100 feet.
- Existing tree canopy height estimated at 60 feet.
- Study Area is comprised of a two-mile radius surrounding the proposed facility and includes 8,042 acres of land.

DATA SOURCES:

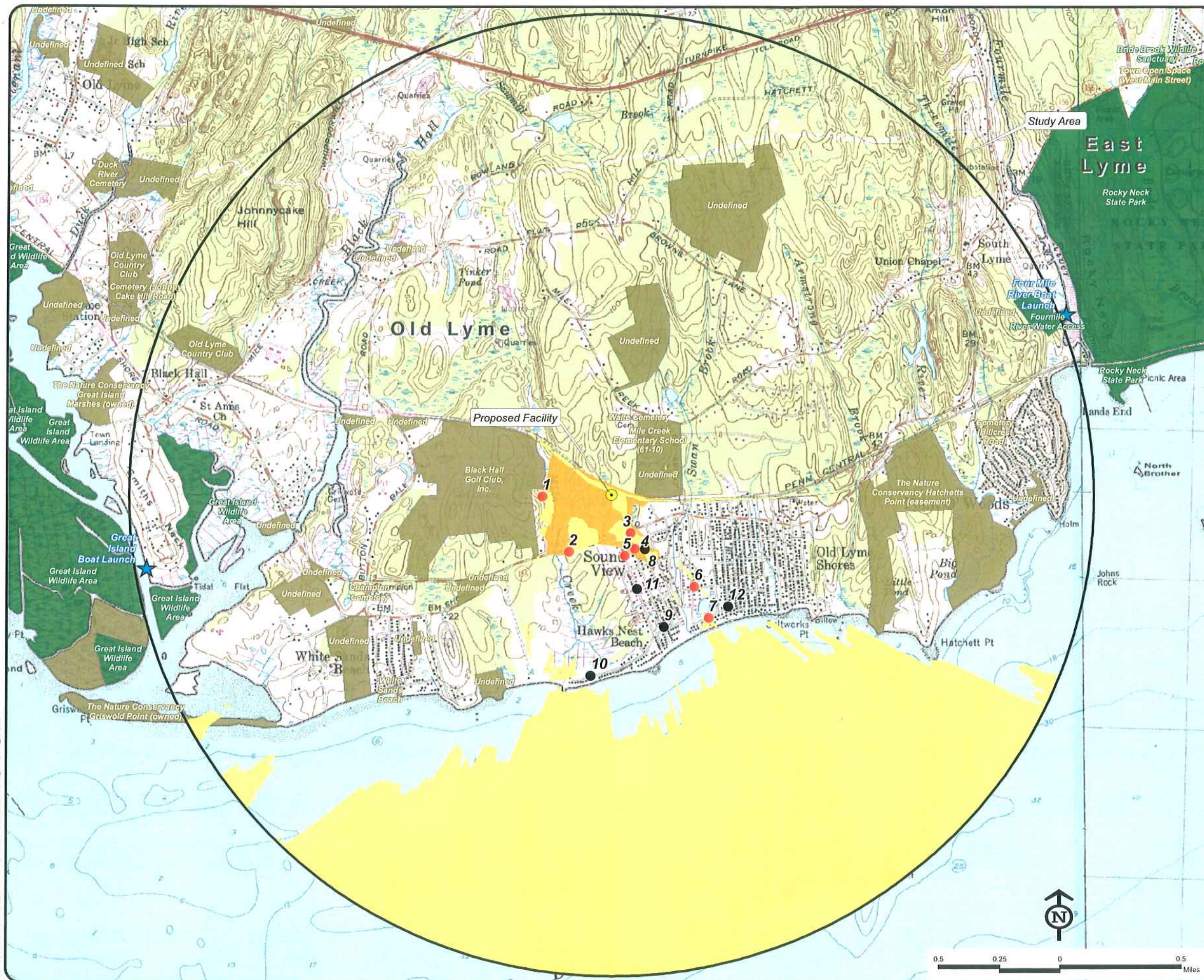
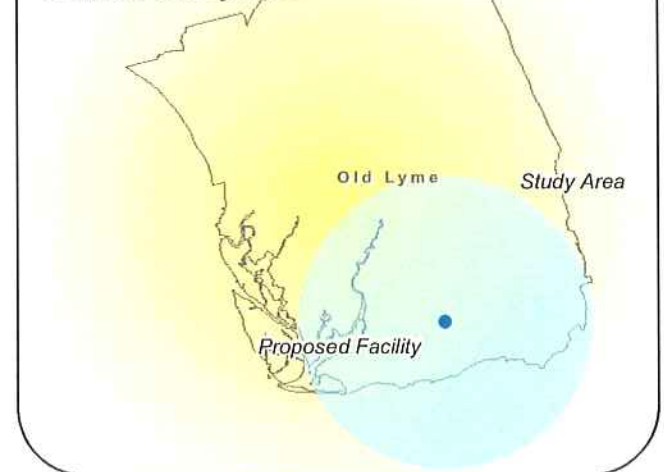
- Digital elevation model (DEM) derived from Connecticut LIDAR-based Digital Elevation Data (collected in 2000) with a 10-foot spatial resolution produced by the University of Connecticut and the Center for Land Use Education and Research (CLEAR); 2007
- Forest areas derived from 2006 digital orthophotos with 1-foot pixel resolution; digitized by VHB, 2009
- Base map comprised of Old Lyme (1970) and Niantic (1983) USGS Quadrangle Maps
- Protected municipal and private open space properties and federal protected properties and data layers provided by CT DEP, 1997
- Protected CT DEP properties data layer provided by CT DEP, May 2007
- CT DEP boat launches data layer provided by CT DEP, 1994
- Scenic Roads layer derived from available State and Local listings.

Map Compiled July, 2009

Legend

- | | |
|--|-------------------------------------|
| Tower Location | CT DEP Protected Properties (2007) |
| Photographs - May 5, 2009 | State Forest |
| Balloon is not visible | State Park |
| Balloon visible above trees | DEP Owned Waterbody |
| Year-Round Visibility (Approximately 1817 acres) | State Park Scenic Reserve |
| Seasonal Visibility (Approximately 55 acres) | Historic Preserve |
| Protected Municipal and Private Open Space Properties (1997) | Natural Area Preserve |
| Cemetery | Fish Hatchery |
| Preservation | Flood Control |
| Conservation | Other |
| Existing Preserved Open Space | State Park Trail |
| Recreation | Water Access |
| General Recreation | Wildlife Area |
| School | Wildlife Sanctuary |
| Uncategorized | Federal Protected Properties (1997) |
| | CT DEP Boat Launches (1994) |
| | Scenic Road (State and Local) |
| | Town Line |

Inset Map
Town of Old Lyme



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