CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

Connecticut Siting Council

APPLICATION OF CELLCO PARTNERSHIP
D/B/A VERIZON WIRELESS

TOWN OF WOODSTOCK

WOODSTOCK NORTHWEST FACILITY

DOCKET NO. _____

SEPTEMBER 30, 2008

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EXECUTIVE SUMMARY

Cellco Partnership d/b/a Verizon Wireless ("Cellco") proposes to construct a telecommunications tower and related facility on an approximately 39-acre wooded parcel located west of Sherman Road in the Town of Woodstock, Connecticut (the "Woodstock NW Facility"). The proposed Woodstock NW Facility will provide much needed coverage in the Town of Woodstock, particularly along the Routes 198, 197 and 171, as well as local roads in the area.

At this site Cellco intends to construct a 140-foot tall monopole tower. At the top of the tower Cellco will install twelve panel-type antennas (six cellular and six PCS). Cellco would also install a 12' x 30' equipment shelter located near the base of the tower to house its radio equipment and a back-up generator. Access to the Woodstock NW Facility would extend from Sherman Road over an existing gravel driveway, a distance of approximately 1,060 feet then over a new gravel driveway extension, an additional distance of approximately 220 feet.

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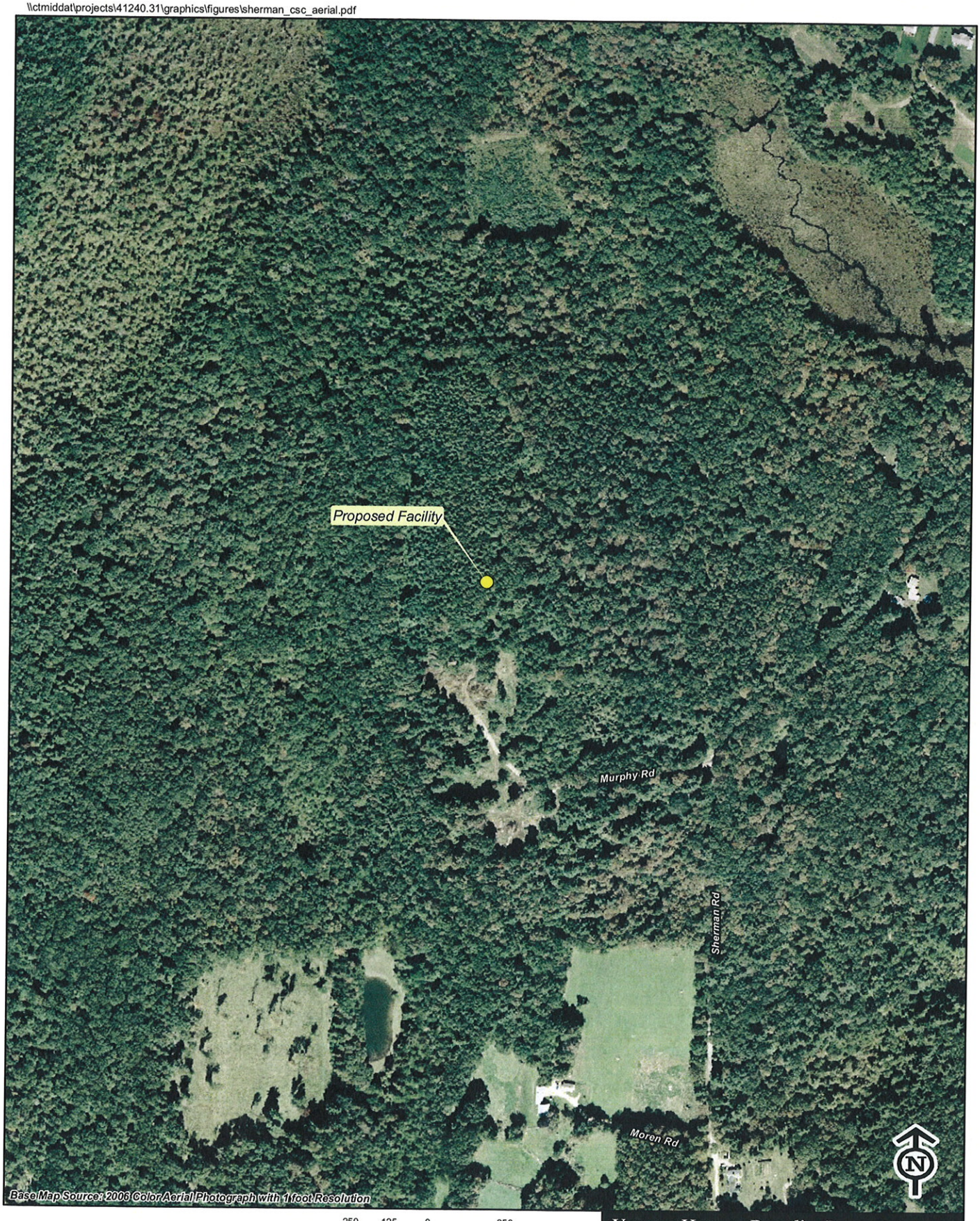

Vanasse Hangen Brustlin, Inc.

Quadrangle Location

2006 Aerial Photograph
Proposed Verizon Wireless
Telecommunications Facility
Woodstock Northwest
40 Sherman Road
Woodstock, Connecticut

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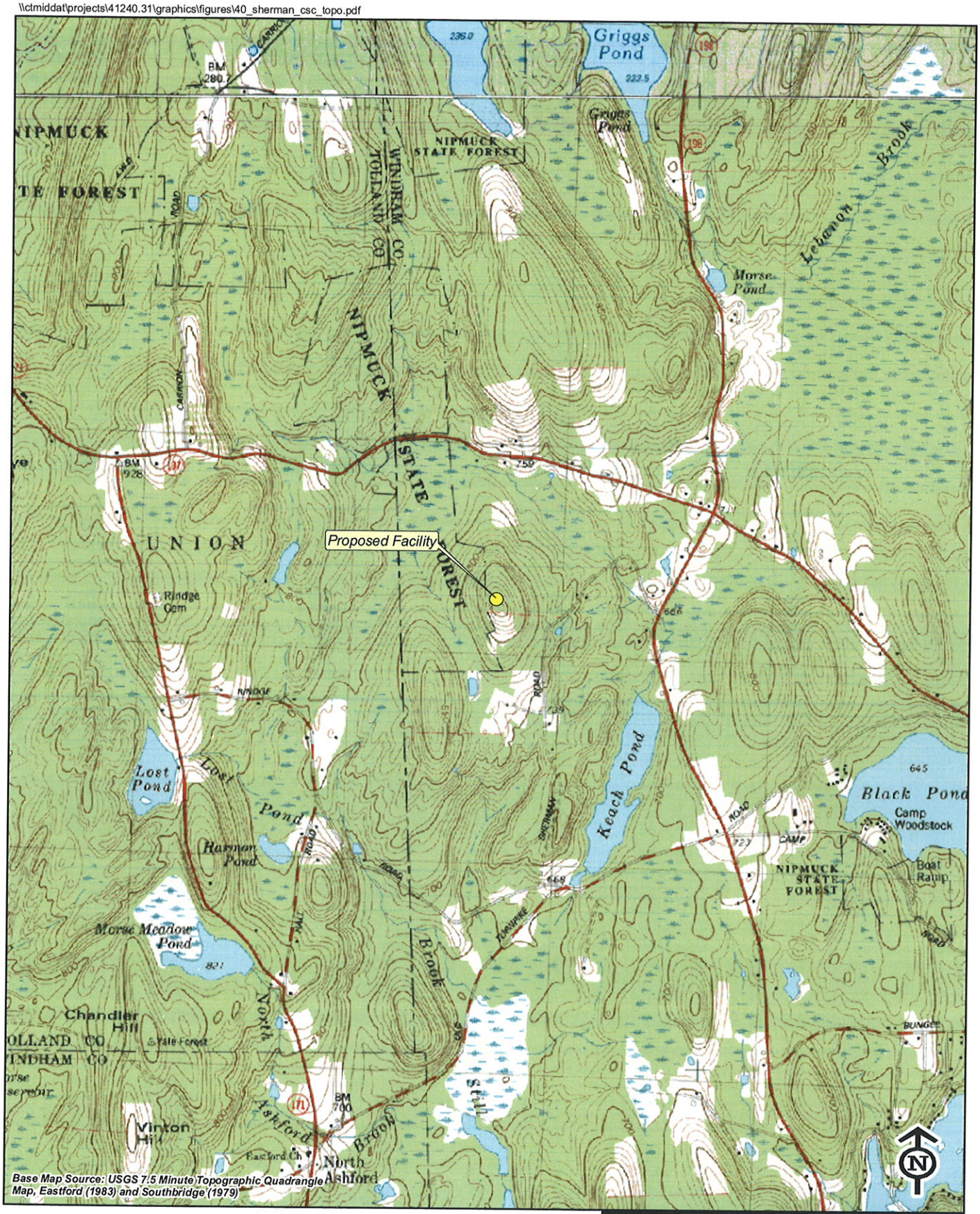


1,000 500 0 1,000 Feet

Quadrangle Location

Vanasse Hangen Brustlin, Inc.

USGS Topographic Map
Proposed Verizon Wireless
Telecommunications Facility
Woodstock Northwest
40 Sherman Road
Woodstock, Connecticut

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY OFF SHERMAN ROAD IN WOODSTOCK, CONNECTICUT	:	**DOCKET NO. ____**
	:	**SEPTEMBER 30, 2008**

APPLICATION FOR CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

I. INTRODUCTION

A. Authority and Purpose

This Application and the accompanying attachments (collectively, the "Application") is submitted by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"), pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes ("C.G.S."), as amended, and Sections 16-50j-1 et seq. of the Regulations of Connecticut State Agencies ("R.C.S.A."), as amended. The Application requests that the Connecticut Siting Council ("Council") issue Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance, and operation of a wireless telecommunications facility, in the northwesterly portion of the Town of Woodstock, Connecticut (the "Woodstock NW Facility"). The proposed Woodstock NW Facility would provide for much needed coverage along State Routes 198, 197 and 171, as well as local roads in the northwest portion of Woodstock. Cellco

currently offers minimal wireless coverage in the northwest portion of Woodstock extending into the area from its existing Woodstock North cell site at 1825 Route 198. Overall, Cellco maintains three cell sites in Woodstock. Cellco's "Woodstock" cell site consists of antennas at the 134-foot level on a 150-foot lattice tower at 87 West Quasset Road. Cellco's Coatney Hill cell site consists of antennas at the 167-foot level on a 190-foot monopole tower off Coatney Hill Road. Cellco's Woodstock North cell site consists of antennas at the 177-foot level on a 180-foot lattice tower at 1825 Route 198. The proposed Woodstock NW Facility will provide reliable service to a 2.63 mile portion of Route 198, a 5.1 mile portion of Route 197, a 4.05 mile portion of Route 171 and an overall area of 18.4 square miles at cellular frequencies; and a 2.03 mile portion of Route 198; a 3.35 mile portion of Route 197; a 1.96 mile portion of Route 171 and an overall area of 7.1 square miles Personal Communications System (PCS) frequencies.

The Woodstock NW Facility would be located within a 100' x 100' leased area in the central portion of a wooded 38.96-acre parcel located west of Sherman Road in Woodstock (the "Property").[1] This Property is located in the Town's Community District zone[2]. The property owner plans to construct a residence on the Property at some point in the future. In anticipation of the construction of this residence the owner constructed an access driveway to a point on the Property near the proposed cell site location.

Cellco proposes to construct a 140-foot self-supporting monopole telecommunications tower on the Property. At the top of the tower, Cellco would install a total of twelve (12) panel-type antennas (six cellular and six PCS) with their centerline at 137 feet above ground level

[1] The owner of the Property, Colin G. Hallquest owns several adjacent parcels along Sherman Road including his residential property at 40 Sherman Road. The proposed tower site, however, is located on a separate 38.96-acre parcel with frontage on and access to Sherman Road.

[2] With the exception of designated industrial areas located in the southerly portion of the Town, all property in the Town of Woodstock maintain the same Community District zoning designation.

("AGL"). The antennas would be attached to a triangular, low profile antenna platform. The top of Cellco's antennas will not extend above the height of the tower. Equipment associated with the antennas would be located in a 12' x 30' shelter installed near the base of the tower. Access to the cell site would extend from Sherman Road over an existing gravel access driveway, a distance of approximately 1,060 feet then over a new gravel driveway extension an additional distance of approximately 220 feet to the cell site. Minimal regrading of the existing driveway and the construction of a short driveway extension will be required to accommodate Cellco's needs. Both the tower and leased area will be designed to accommodate additional carriers. Prior to filing this Application, Cellco contacted representatives for Sprint/Nextel, T-Mobile and AT&T and alerted them of Cellco's intent to file this Application. To date, no other carrier has expressed any interest in sharing the Cellco tower.[3]

The equipment shelter would house Cellco's radio and related equipment, including (a) receiving, transmitting, switching, processing and performance monitoring equipment; and (b) automatic heating and cooling equipment. A diesel-fueled generator would also be installed within a portion of the equipment building for use during power outages and periodically for maintenance purposes. The 210 gallon diesel fuel tank is included as a part of the generator unit. The fuel tank is double-walled and maintains a leak detection monitoring system.

The tower and equipment shelter would be enclosed by an 8-foot high security fence and gate, which would be screened. Cellco's equipment building would be equipped with a silent intrusion and systems alarm and will be monitored on a 24-hour basis to receive and to respond to incoming alarms or other technical problems. The equipment building would remain unstaffed, except as required for maintenance. Once the cell site is operational, maintenance personnel will

[3] AT&T did express an interest in sharing Cellco's Woodstock NW cell site at the location proposed in Council Docket No. 350.

visit the cell site on a monthly basis. More frequent visits may be required if there are problems with the cell site equipment.

Included in this Application as Attachment 1 is a factual summary and project plans for the proposed Woodstock NW Facility. This summary, along with the other attachments submitted as part of this Application, contains all of the site-specific information required by statute and the regulations of the Council.

In accordance with Paragraph I(F) of the Council's "Application Guide" for Community Antenna Television and Telecommunication Towers, a copy of the Application Guide is included as Attachment 2. The Application Guide contains references to the specific pages of this Application and the attachments where the information required under Section VI of the Application Guide may be found.

B. The Applicant

Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, CT, 06108. Cellco is licensed by the Federal Communications Commission ("FCC") to operate a wireless telecommunications system in the State of Connecticut within the meaning of C.G.S. Section 16-50i(a)(6). Operation of the wireless telecommunications systems and related activities are Cellco's sole business in the State of Connecticut.

Cellco has extensive national experience in the development, construction and operation of wireless telecommunications systems and the provision of wireless telecommunications service to the public.

Correspondence and/or communications regarding this Application may be addressed to:

Sandy Carter, Regulatory Manager
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

A copy of all such correspondence or communications should also be sent to the applicant's attorneys:

Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
(860) 275-8200
Attention: Kenneth C. Baldwin, Esq.

C. Application Fee

The estimated total construction cost for the Woodstock NW Facility would be less than $5,000,000. Therefore, pursuant to Section 16-50v-1a(b) of the Regulations of Connecticut State Agencies, an application fee of $1,000 accompanies this Application in the form of a check payable to the Connecticut Siting Council.

II. SERVICE AND NOTICE REQUIRED BY C.G.S. SECTION 16-50*l*(b)

Copies of this Application have been sent by certified mail, return receipt requested, to municipal, regional, state and federal officials, pursuant to C.G.S. Section 16-50*l*(b). A certificate of service, along with a list of the parties served with a copy of the Application, is included as Attachment 3.

Notice of Cellco's intent to submit this Application was published on September 26 and 27, 2008, by Cellco in the *Norwich Bulletin* pursuant to C.G.S. Section 16-50*l*(b). A copy of the published legal notice is included as Attachment 4. A copy of the publisher's affidavit or certificate of publication will be submitted to the Council as soon as it is available.

Attachment 5 contains a certification that notices were sent to each person appearing of record as an owner of property that may be considered to abut the Property in accordance with C.G.S. Section 16-50*l*(b), as well as a list of the property owners to whom such notice was sent and a sample notice letter.

III. REQUIRED INFORMATION: PROPOSED WIRELESS FACILITY

The purpose of this section is to provide an overview and general description of the wireless facility proposed to be installed at the Property.

A. General Information

Prior to the 1980's, mobile telephone service was characterized by insufficient frequency availability, inefficient use of available frequencies and poor quality of service. These limitations generally resulted in problems of congestion, blocking of transmissions, interference, lack of coverage and relatively high cost. Consequently, the FCC, in its Report and Order released May 4, 1981 in FCC Docket No. 79-318, recognized the public need for technical improvement, wide-area coverage, high quality service and a degree of competition in mobile telephone service.

More recently, the federal Telecommunications Act of 1996 (the "Act") emphasized and expanded on these aspects of the FCC's 1981 decision. Among other things, the Act recognized an important nationwide public need for high-quality wireless telecommunication services of all varieties. The Act also expressly promotes competition and seeks to reduce regulation in all aspects of the telecommunications industry in order to foster lower prices for consumers and to encourage the rapid deployment of new telecommunications technologies.

Cellco's proposed Woodstock NW Facility would be part of the expanding wireless telecommunications network envisioned by the Act and has been developed to help meet these nationwide goals. In particular, Cellco's system has been designed, and the cell site proposed in this Application have been selected, so as to maximize the geographical coverage and quality of service while minimizing the total number of cell sites required.

Because the FCC and the United States Congress have determined that there is a pressing public need for high-quality wireless telecommunications service nationwide, the federal

government has preempted the determination of public need by states and municipalities, including the Council, with respect to public need for the service to be provided by the proposed facility. In addition, the FCC has promulgated regulations containing technical standards for wireless systems, including design standards, in order to ensure the technical integrity of each system and nationwide compatibility among all systems. State and local regulation of these matters is likewise preempted. The FCC has also exercised its jurisdiction over and preempted state and local regulation with respect to radio frequency interference issues by establishing regulations in this area as well.

Pursuant to FCC authorizations, Cellco has constructed and currently operates a wireless system throughout Connecticut. This system, together with Cellco's system throughout its east coast and nationwide markets, has been designed and constructed to operate as one integrated, contiguous system, consistent with Cellco's business policy of developing compatibility and continuity of service on a regional and national basis.

Included as Attachment 6 is a copy of the FCC's authorization issued to Cellco for its wireless service in Connecticut. The FCC's rules permit a licensee to modify its system, including the addition of new cell sites, without prior approval by the FCC, as long as the licensee's authorized service area is not enlarged. The Woodstock NW Facility proposed would not enlarge Cellco's authorized service area.

B. Public Need and System Design

1. Public Need

As noted above, the Act has pre-empted any state or local determination of public need for wireless services. In Windham County, Cellco holds an FCC License to provide PCS and cellular service. Pursuant to its FCC Licenses, Cellco has developed and continues to develop a network of cell sites to satisfy the demand for wireless service in the area. Cellco's network

currently provides service in Woodstock from its existing Woodstock, Woodstock North and Coatney Hill cell sites shown as existing coverage on the plots included behind Attachment 7. Even with these cell site locations, Cellco experiences significant coverage gap along the major roads in northwest Woodstock, including Routes 198, 197 and 171.

2. System Design and Equipment

a. System Design

Cellco's wireless system in general and the proposed Woodstock NW Facility, in particular, have been designed and developed to allow Cellco to achieve and to maintain high quality, reliable wireless service without interruption from dropped calls and interference.

The system design provides for frequency reuse and hand-off, is capable of orderly expansion and is compatible with other wireless systems. The resulting quality of service compares favorably with the quality of service provided by conventional wireline telephone service. The wireless system is designed to assure a true cellular configuration of base transmitters and receivers in order to cover the proposed service area effectively while providing the highest quality of service possible. Cell site transmissions are carefully tailored to the FCC's technical standards with respect to coverage and interference and to minimize the amount of power that is radiated.

Mobile telephone switching offices ("MTSOs") in Windsor and Wallingford are interconnected and operate Cellco's wireless systems in Connecticut as a single network, offering the subscriber uninterrupted use of the system while traveling throughout the State. This network is further interconnected with the local exchange company ("LEC") and inter-lata (long distance) carriers network.

Cellco has designed its wireless system in conformity with applicable standards and constraints for wireless systems. Cellco's system is also designed to minimize the need for additional cell sites in the absence of additional demand or unforeseen circumstances.

b. Cellular System Equipment

The key elements of the cellular system are the two MTSOs located in Windsor and Wallingford and the various connector cell sites around the state. Cellco's CDMA wireless networks are deployed on two platforms: the earlier AUTOPLEX system, using Series II base stations, and the newer FLEXENT CDMA system, using smaller, more compact modular base stations. Because the Series II base stations are no longer manufactured, the newer CDMA systems, using smaller, more compact modular base stations are used for all current installations.

The major electronic components of each cell site are radio frequency transmission and receiving equipment and cell site controller equipment. Cellco's cellular system uses Lucent Flexent® Modular Cell 4.0B cell site equipment to provide complete cell site control and performance monitoring. This equipment is capable of expanding in modules to meet system growth needs. The cell site equipment primarily provides for: message control on the calling channel; call setup and supervision; radio frequency equipment control; internal diagnostics; response to remote and local test commands; data from the mobile or portable unit in both directions and on all channels; scan receiver control; transmission of power control commands; rescanning of all timing; and commands and voice channel assignment. Additional information with respect to the Lucent Flexent® Modular Cell 4.0B equipment is contained in Attachment 8.

3. Technological Alternatives

Cellco submits that there are no equally effective technological alternatives to the proposal contained herein. In fact, Cellco's wireless system represents state-of-the-art technology offering

high-quality service. Cellco is aware of no viable and currently available alternatives to its system design for carriers licensed by the FCC.

C. Site Selection and Tower Sharing

1. Cell Site Selection

Cellco's goal in selecting cell sites such as the one described in this Application is to locate its facility in such a manner as to allow it to build and to operate a high-quality wireless system with the least environmental impact. Cellco has determined that the proposed Woodstock NW Facility will satisfy this goal and is necessary to resolve existing significant coverage problems and to provide high-quality reliable service along Routes 198, 197 and 171, as well as local roads in northwest Woodstock.

The methodology of cell site selection for Cellco's wireless system generally limits the search for possible locations to a specific area on the overall grid for the area. A list of existing towers or other non-tower structures considered is included in Attachment 9. Cellco currently shares the existing towers in the immediate area, including those sites identified on the coverage maps as the Woodstock, Woodstock North, Coatney Hill, and Union West cell sites. (See Attachment 7). None of these existing cell sites can resolve the coverage problems in northwest Woodstock. Cellco also regularly investigates the use of existing, non-tower structures in an area as an alternative to building a new tower. No existing non-tower structures of suitable height exist in northwest Woodstock. The site search summary together with the site information contained in Attachment 1 support Cellco's position that the site selected represents the most feasible alternative of the sites investigated.

Cellco originally filed an application with the Council, for a cell site location off Old Turnpike and Route 198 (Council Docket No. 350). During the course of that proceeding, Cellco

was approached by Mr. Hallquest about the potential use of his parcel off Sherman Road as an alternative to the Old Turnpike site. After a careful review of this alternative Cellco determined that the Sherman Road parcel was a better overall alternative and withdrew the Docket No. 350 application.

2. Tower Sharing

Cellco will design the Woodstock NW Facility tower and compound so that it could be shared by a minimum of four carriers. This type of tower sharing arrangement would reduce, if not eliminate, the need for these other carriers to develop a separate tower in this same area in the future.

The Town of Woodstock has asked Cellco to reserve space on the tower for its municipal service and emergency service antennas and Cellco has agreed to do so at no cost to the Town. Cellco has also agreed to make ground space in the facility compound available to the Town.

D. Cell Site Information

1. Site Facilities

At the Woodstock NW Facility, Cellco would construct a new 140-foot tall tower and install twelve (12) panel-type directional antennas with their centerline at 137 feet AGL. The top of Cellco's antennas would not extend above the top of the tower. Cellco would install a 12' x 30' single-story equipment shelter near the base of the tower to house Cellco's receiving, transmitting, switching, processing and performance monitoring equipment and the required heating and cooling equipment. A diesel-fueled back-up generator would be installed within a segregated room in Cellco's equipment shelter for use during power outages and periodically for maintenance purposes. The tower and equipment shelter would be surrounded by an 8-foot high security fence and gate, which would be screened by landscaping. (*See* Attachment 1).

The equipment shelter would be equipped with silent intrusion and systems alarms. Cellco personnel will be available on a 24-hour basis to receive and to respond to incoming alarms. The equipment building will remain unstaffed, except as required for periodic maintenance purposes.

2. Overall Costs and Benefits

Aside from the limited visual impacts discussed further below, Cellco believes that there are no significant costs attendant to the construction, maintenance, and operation of the proposed cell site. In fact, the public will benefit substantially from its increased ability to receive high-quality, reliable wireless service in the northwest Woodstock area.[3] The Woodstock NW Facility would be a part of a communications system that addresses the public need identified by the FCC and the United States Congress for high-quality, competitive mobile and portable wireless service. Moreover, the proposed cell site would be part of a system designed to limit the need for additional cell sites in the future.

The overall costs to Cellco for development of the proposed cell site are set forth in Section III.E. of the Application.

3. Environmental Compatibility

Pursuant to Section 16-50p of the General Statutes, in its review of the Application, the Council is required to find and to determine, among other things, the nature of the probable environmental impact, including a specification of every significant adverse effect of the Woodstock NW Facility, whether alone or cumulatively with other effects, on, and conflicting with the policies of the state concerning the natural environment, ecological balance, public health and

[3] Businesses across the State have become more dependent on wireless telecommunication services. The public safety benefits of wireless telephone service are illustrated by the improved Connecticut State Police 911 emergency calling system. The 911 emergency calling system is available statewide to all wireless telephone users. Numerous other emergency service organizations have turned to wireless telephone service for use during natural disasters and severe storms when wireline service is interrupted or unavailable. As a deterrent to crime, the general public will further benefit from the Cellular Telecommunications Industry Association's donation of cellular phones to "Neighborhood Watch" groups nationwide.

safety, scenic, historic and recreational values, forests and parks, air and water purity and fish and wildlife.

a. Primary Facility Impact is Visual

The wireless system of which the proposed Woodstock NW Facility would be a part has been designed to meet the public need for high-quality, reliable wireless service while minimizing any potential adverse environmental impact. In part because there are few, if any other adverse impacts, the primary impact of facilities such as this is visual. This visual impact will vary from location to location around a tower, depending upon factors such as vegetation, topography, the distance of nearby properties from the tower and the location of buildings and roadways in a "sight line" toward the tower. Similarly, visual impact of a tower facility can be further reduced through the proper use of alternative tower structures; so-called "stealth installations." Where appropriate, telecommunications towers camouflaged as trees, for example, can help to further reduce visual impacts associated with these structures. While not proposed in this Application, the Council may determine that some type of stealth installation may be appropriate at this site. Attachment 10 contains a detailed Visual Resource Evaluation Report, prepared by VHB, Inc. (the "VHB Report") that assesses the visual impact of the proposed tower and includes photosimulations of the tower at this site for the Council's consideration. Overall, VHB concludes that areas where the tower would be visible above the tree canopy are limited to approximately 30 acres, or less than one-half of one percent of the 8,042-acre study area. Much of this visibility occurs along an approximate 0.10-mile portion of Route 197 with select areas of potential year-round visibility extending to portions of Herindeen Landing and at the intersection of Corbin Road and Route 197. VHB estimates that select portions of approximately eight (8) residential properties could have at least partial year-round views of the proposed Woodstock NW Facility. VHB has determined that the proposed

tower would not be visible from Sherman Road, Marcy Road or Camp Road, locally designated scenic roads or from Black Pond. Seasonal views may be available from an additional area of approximately nine (9) acres and from four (4) additional residential properties.

There are no residences within 1,000 feet of the Woodstock NW Facility. The closest residence is located approximately 1,400 feet to the east.

Weather permitting, Cellco will raise a balloon with a diameter of at least three (3) feet at the proposed cell site on the day of the Council's hearing on this Application, or at a time otherwise specified by the Council.

b. Environmental Reviews and Agency Comments

Section 16-50j of the General Statutes requires the Council to consult with and to solicit comments on the Application from the Commissioners of the Departments of Environmental Protection, Public Health, Public Utility Control, Economic Development, and Transportation, the Council on Environmental Quality, and the Office of Policy and Management, Energy Division. In addition to the Council's solicitation of comments, Cellco, as a part of its National Environmental Policy Act ("NEPA") Checklist, solicits comments on the proposed facility from the U.S. Department of the Interior, Fish and Wildlife Service ("USFWS"), Environmental and Geographic Information Center of the Connecticut Department of Environmental Protection ("DEP") and the Connecticut Historical Commission, State Historic Preservation Officer ("SHPO"). USFWS and DEP comments regarding impacts on known populations of Federal or State Endangered, Threatened or Special Concern Species occurring at the proposed site are included in Attachment 11. According to the USFWS letter dated July 7, 2008, and as confirmed by VHB, Inc. there are no Federally-listed endangered or threatened species known to occur at the proposed cell site and in Windham County, Connecticut. Likewise, the DEP has determined that there are no extant

populations of Federal or State Endangered, Threatened or Special Concern Species at the property. The SHPO has reviewed Cellco's request for review of the proposed site and determined that the proposed Woodstock NW Facility will have no effect.

This review by state administrative agencies furnishes ample expert opinion on the potential environmental impacts from the facility proposed in the Application, in the context of the criteria which the Council must consider.

c. Non-Ionizing Radio Frequency Radiation

The FCC has adopted a standard for exposure to Radio Frequency ("RF") emissions from telecommunications facilities like the one proposed in this Application. To ensure compliance with the applicable standards, Cellco has performed maximum power density calculations for the proposed cell site according to the methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) ("OET Bulletin 65"). The calculation is a conservative, worst-case approximation for RF power density levels at the closest accessible point to the antennas, in this case the base of the tower, and with all antennas transmitting simultaneously on all channels at full power. The calculations indicate that the maximum power density level for Cellco antennas would be 15.79% of the Standard at the Woodstock NW Facility.

d. Other Environmental Issues

No sanitary facilities are required for the Woodstock NW Facility. The operations at the proposed site will not cause any significant air, water, noise or other environmental impacts, or hazard to human health.

Based on agency comments received and field investigations by Cellco's project team, Cellco submits that the proposed facility will have no significant adverse effect on scenic, natural,

historic or recreational features, and that none of the potential effects from the facility alone or cumulatively with other effects is sufficient reason to deny this Application.

4. Consistency with Local Land Use Controls

The Connecticut Siting Council Application Guide for Community Antenna Television and Telecommunication Facilities, as amended on February 16, 2007, requires the inclusion of a narrative summary of the project's consistency with the Town's Plan of Development and Zoning Regulations, as well as a description of planned and existing uses of the site location and surrounding properties.

a. Planned and Existing Land Uses

The proposed Woodstock NW Facility would be located on a 38.96-acre parcel owned by Colin Gunnar Hallquest. The Property is in the Town's Community District zone. The 38.96-acre Property is vacant land and heavily-wooded. The property owner plans to construct a single-family home on the parcel in the near future. The Property is surrounded by other vacant wooded parcels, a portion of the Nipmuck State Forest and low-density residential land uses along Sherman Road.

b. Plan of Conservation and Development

The 2002 Town of Woodstock Plan of Conservation and Development (the "Plan"), does not specifically identify telecommunications towers or facilities as a land use consistent or inconsistent with the general planning or conservation policies of the Town of Woodstock.

c. Zoning Regulations

According to Article 1, Section 4 of the Town Zoning Regulations ("Zoning Regulations"), the Woodstock NW Facility is located in an area designated "Community District". Pursuant to Article 1, Section 17 of the Zoning Regulations, wireless communications

facilities are permitted in the Community District zone subject to Special Permit and Site Plan approval. The Woodstock NW Facility will comply with the General Standards set forth in Article 1, Section 17.3 of the Zoning Regulations. For example, the tower is the minimum height required to satisfy Cellco's objectives; the tower's entire fall zone remains within the owners 38.96-acre subject parcel; no lights or signage is proposed; and the tower will be designed to accommodate a minimum of three additional carriers.

d. Inland Wetland and Water Course Regulations

According to site surveys and a wetlands delineation report prepared by Dean Gustafson of VHB, Inc., the proposed cell site compound location does not contain any wetland areas that would be impacted by the proposed development activity. The existing gravel driveway was constructed within approximately 20 feet from an on-site wetland, identified in the Wetlands Inspection Report as Wetland 1 and approximately 50 feet from another on-site wetland, identified in the Wetland Inspection Report as Wetland 2. Use of the existing access driveway by Cellco will require minimal improvements. No direct impact to these existing wetland areas is proposed and no adverse impacts to wetland resources is anticipated. (See Wetlands Inspection Report – Attachment 12).

In accordance with the Connecticut Soil Erosion Control Guidelines, as established by the Council for Soil and Water Conservation, adequate and appropriate soil erosion and sedimentation control measures will be established and maintained throughout the cell site construction period. In addition, Cellco will employ appropriate construction management practices to ensure that no pollutants would be discharged to any nearby watercourse or wetland areas or to area groundwater during the construction process.

According to the Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Number 0901200015B (November 1, 1984), the Woodstock NW Facility is located in Zone C, an area of minimal flooding.

Copies of Cellco's Technical report were also sent to Union First Selectman Thomas L. Fitzgerald.

5. Local Input

Section 16-50*l*(e) of the Connecticut General Statutes, as amended, requires local input on matters before the Council. On June 24, 2008, Cellco submitted its technical report to Town of Woodstock First Selectman Allan D. Walker, Jr. to commence the 60-day local review period. On September 25, 2008, Cellco appeared before the recently formed Woodstock Telecommunications Task Force to discuss the Woodstock NW application and Cellco's future needs in Town.

6. Consultations With State and Federal Officials

Attachment 10 and Section III.D. of the Application describe Cellco's consultations with state and federal officials regarding the proposed Woodstock NW Facility.

a. Federal Communications Commission

The FCC did not review this particular proposal. As discussed above, FCC approval is not required where the authorized service area is not enlarged.

b. Federal Aviation Administration

As with all of its tower applications, Cellco has conducted the appropriate air-space analysis for the Woodstock NW Facility to determine if the proposed tower would constitute an obstruction or hazard to air navigation. This analysis confirms, pursuant to FAA standards and guidelines, that the proposed tower site would not constitute an obstruction or hazard to air navigation and therefore no obstruction marking or lighting would be required. A copy of the Aviation Systems, Inc. FAR Part 77 Airspace Obstruction Report is included in Attachment 13.

c. United States Fish and Wildlife Service

According to the USFWS there are no federally-listed or proposed, threatened or endangered species or critical habitat known to occur at the Property. (See VHB memo dated June 2, 2008 in Attachment 11).

d. Connecticut Department of Environmental Protection Bureau of Air Management

Pursuant to R.C.S.A. § 22a-174-3, the on-site emergency back-up generator proposed as a part of this Application will require the issuance of a permit from the DEP Bureau of Air Management. As proposed, this emergency generator will be run only during the interruption of utility service to the cell site and periodically as required for maintenance purposes. Cellco will obtain the necessary permit prior to installing the generator at the facility.

e. Connecticut State Historic Preservation Officer

As discussed above, Attachment 11 also includes the SHPO's determination that the proposed Woodstock NW Facility will have no effect on historic, architectural or archaeological resources eligible or listed on the National Register of Historic Places.

E. Estimated Cost and Schedule

1. Overall Estimated Costs

The total estimated cost of construction of the proposed Woodstock NW Facility is approximately Nine Hundred Fifty Thousand Dollars $950,000.00.

This estimate includes:

(1)	Cell site radio equipment of approximately	$ 450,000
(2)	Tower, coax and antenna costs of approximately	200,000
(3)	Power systems costs of approximately	20,000
(4)	Equipment building costs of approximately	50,000

(5) Miscellaneous costs (including site preparation and installation) of approximately 230,000

2. Overall Scheduling

Site preparation and engineering would commence following Council approval of Cellco's Development and Maintenance ("D & M") plan and are expected to be completed within two to four weeks. Due to the delivery schedules of the manufacturers, installation of the building and installation of the tower are expected to take an additional two weeks. Equipment installation is expected to take an additional two weeks after installation of the building and installation of the tower. Cell site integration and system testing is expected to require two weeks after equipment installation.

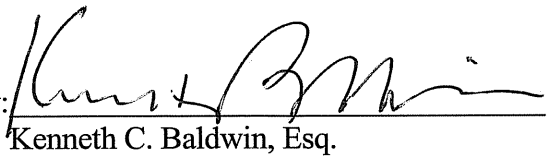
IV. CONCLUSION

Based on the facts contained in this Application, Cellco submits that the establishment of the Woodstock NW Facility will not have any substantial adverse environmental effects. A public need exists for high quality reliable wireless service in Windham County, as determined by the FCC and the United States Congress, and a competitive framework for providing such service has been established by the FCC and the Telecommunications Act of 1996. Cellco submits that the public need far outweighs any possible environmental effects resulting from the construction of the Woodstock NW Facility. Moreover, the Woodstock NW Facility will help to provide a level of service in the area that is commensurate with the public demand currently and in the foreseeable future.

WHEREFORE, Cellco respectfully requests that the Council grant this Application for a Certificate of Environmental Compatibility and Public Need for the Woodstock NW Facility.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

By: 

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
(860) 275-8200
Attorneys for the Applicant

WOODSTOCK NORTHWEST

Sherman Road
Woodstock, Connecticut

Description of Proposed Cell Site

Cellco Partnership d/b/a Verizon Wireless
99 East River Drive
East Hartford, CT 06108

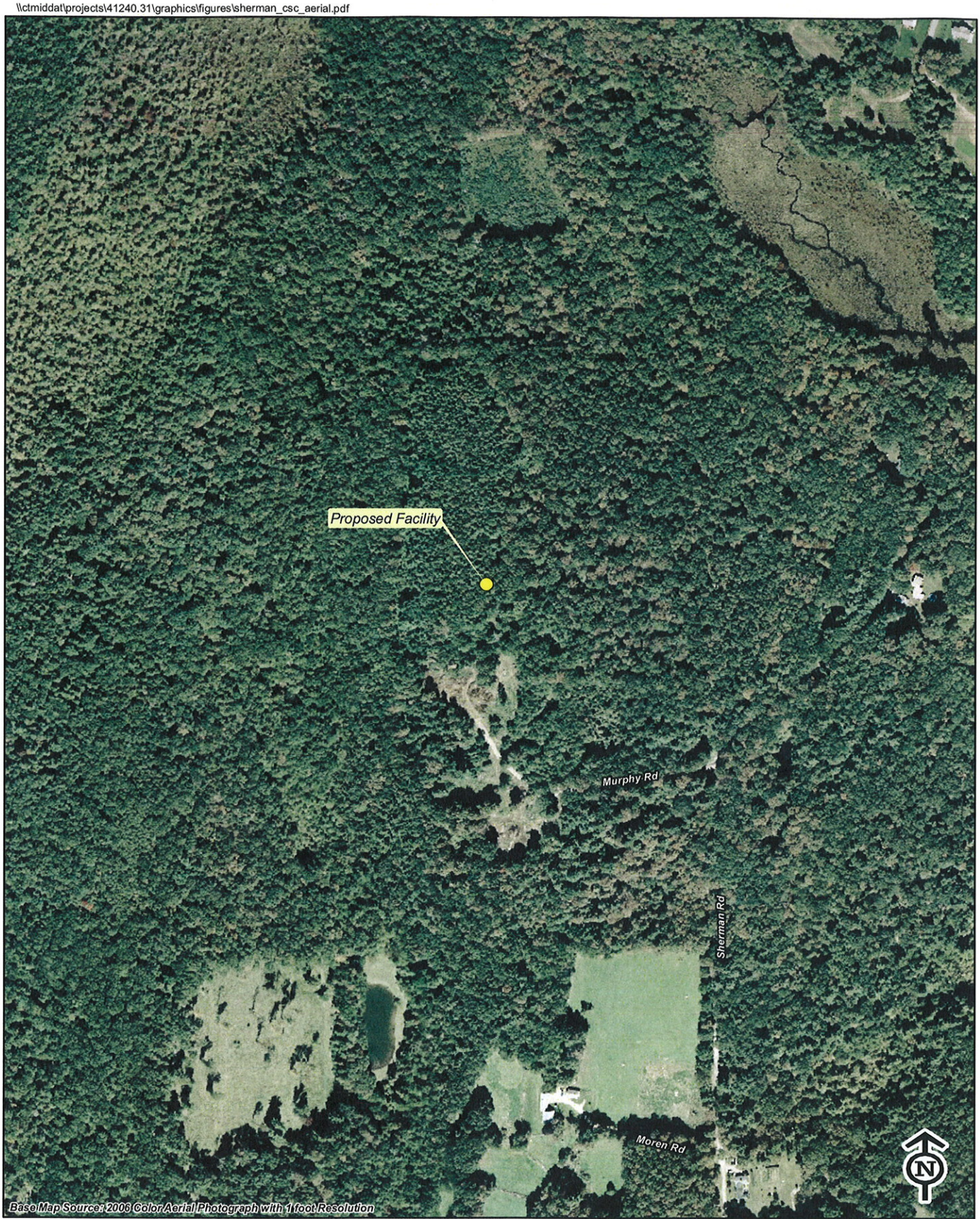
TABLE OF CONTENTS

SITE NAME: WOODSTOCK NORTHWEST – Sherman Road, Woodstock, CT

GENERAL CELL SITE DESCRIPTION

The proposed cell site would be located within a 40' x 75' fenced compound within an 100' x 100' leased area in the central portion of an approximately 38.96-acre parcel ("Property") owned by Colin G. Hallquest. The Property is located off Sherman Road in Woodstock (the "Woodstock NW Facility"). The Woodstock NW Facility would consist of a 140-foot telecommunications tower and a 12' x 30' equipment shelter located near the base of the tower. Cellco antennas would be mounted at the top of the tower with their centerline at the 137-foot level. The top of the Cellco antennas would not extend above the top of the tower. Vehicular access to the site compound would extend from Sherman Road along an existing driveway, a distance of approximately 1,060 feet then along a short gravel driveway extension an additional distance of 220 feet. Utility service would extend underground from existing CL&P service on the Property to the cell site.

\\ctmiddat\projects\41240.31\graphics\figures\sherman_csc_aerial.pdf

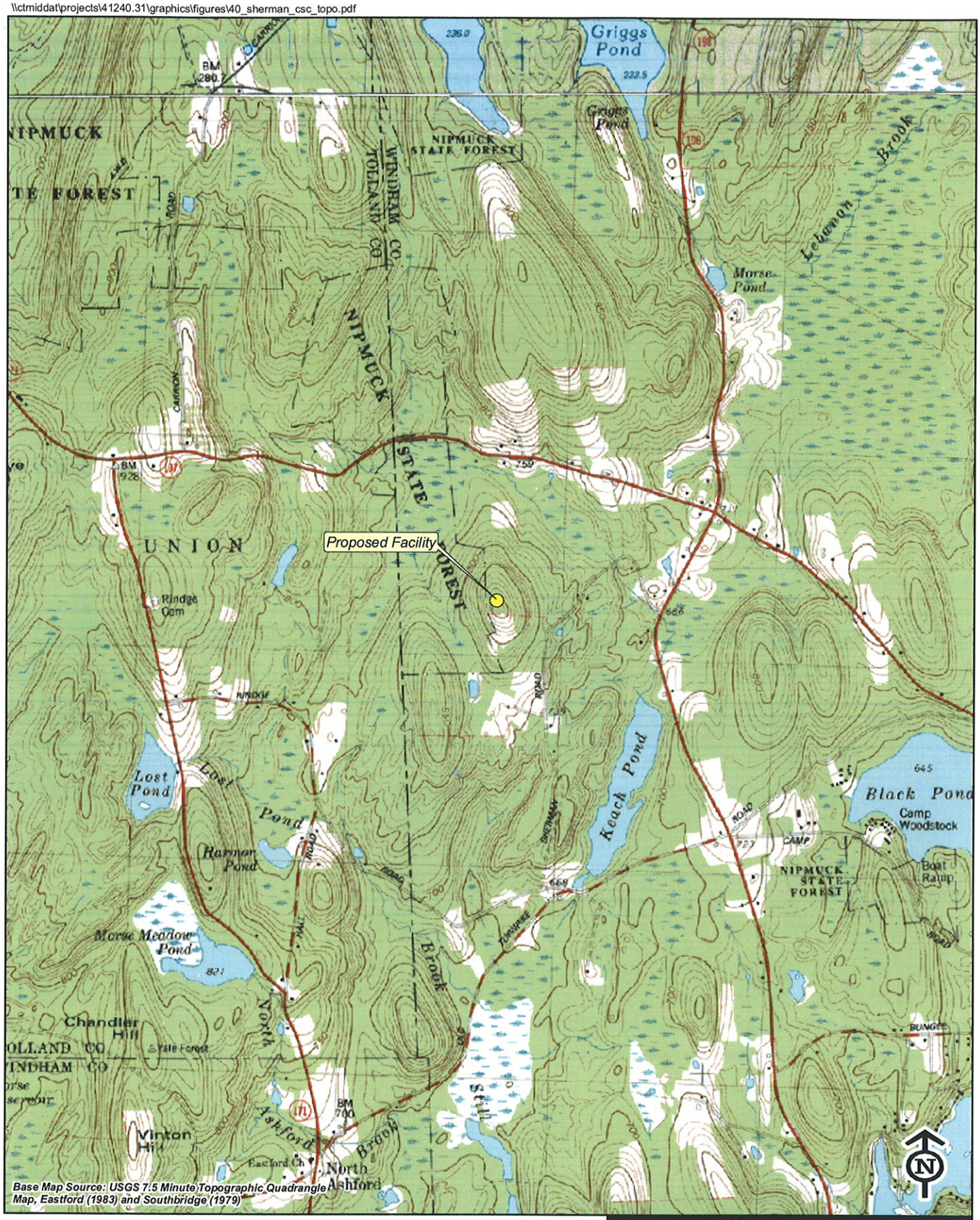


Vanasse Hangen Brustlin, Inc.

Quadrangle Location

2006 Aerial Photograph
Proposed Verizon Wireless
Telecommunications Facility
Woodstock Northwest
40 Sherman Road
Woodstock, Connecticut

\\ctmiddat\projects\41240.31\graphics\figures\40_sherman_csc_topo.pdf



1,000 500 0 1,000 Feet

Vanasse Hangen Brustlin, Inc.

USGS Topographic Map
Proposed Verizon Wireless
Telecommunications Facility
Woodstock Northwest
40 Sherman Road
Woodstock, Connecticut

Quadrangle Location

SITE EVALUATION REPORT

SITE NAME: WOODSTOCK NORTHWEST – Sherman Road, Woodstock, CT

I. LOCATION

A. COORDINATES: 41°-58'-43.147" N 72°-05'-39.934" W

B. GROUND ELEVATION: Approximately 904.5± feet AMSL

C. U.S.G.S. MAP: Eastford, CT/Southbridge, MA

D. SITE ADDRESS: Sherman Road, Woodstock, CT

E. ZONING WITHIN 1/4 MILE OF SITE: Land within 1/4 mile of the cell site is zoned Community District.

II. DESCRIPTION

A. SITE SIZE: 100' x 100' Leased Area
40' x 75' Compound Area

B. LESSOR'S PARCEL: Approximately 38.96-acres

C. TOWER TYPE/HEIGHT: 140' Monopole Tower/Top of antennas

D. SITE TOPOGRAPHY AND SURFACE: The proposed cell site is located near the topographic high point on the Property. Land in the general area slopes down to the north, east and west and slightly up to the south. Clearing and grading of the leased area will be required. The site location selected will allow Cellco to minimize, to the extent possible, the clearing of substantial trees. In fact, only twenty-three (23) trees greater than 6" diameter at breast height will need to be removed to construct the Woodstock NW Facility, including the installation of utilities and the extension of the access driveway to the site.

E. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The tower is located in the central portion of a heavily wooded 38.96-acre parcel. No wetland areas exist within or near the site compound. Cellco's use of the owner's existing driveway will reduce or eliminate any potential for impacts on a small wetland area in the southeast portion of the Property.

F. LAND USE WITHIN 1/4 MILE OF SITE: The Woodstock NW Facility is located on a vacant 38.96-acre wooded property. The property is surrounded by low density residential areas to the south and east and portions of the Nipmuck State Forest to the north and west. (See Aerial Photograph at p. ii).

III. FACILITIES

A. POWER COMPANY: Connecticut Light and Power

B. POWER PROXIMITY TO SITE: Approximately 665 feet to the south of the cell site.

C. TELEPHONE COMPANY: AT&T

D. PHONE SERVICE PROXIMITY: Same as power

E. VEHICLE ACCESS TO SITE: Vehicle access to the site would extend from Sherman Road over an existing gravel driveway a distance of approximately 1,060 feet then over a new gravel driveway extension an additional distance of approximately 220 feet to the site compound.

F. CLEARING AND FILL REQUIRED: Clearing and grading would be required for construction of the tower, site compound and for improving a 220-foot portion of the access drive. Detailed construction plans would be developed after approval by the Siting Council.

IV. LEGAL

A. PURCHASE [ ] LEASE [X]

B. OWNER: Colin G. Hallquest

C. ADDRESS: Sherman Road, Woodstock, CT 06281

D. DEED ON FILE AT: Town of Woodstock, CT Land Records

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FACILITIES AND EQUIPMENT SPECIFICATION
(NEW TOWER & EQUIPMENT BUILDING)

SITE NAME: WOODSTOCK NORTHWEST – Sherman Road, Woodstock, CT

I. TOWER SPECIFICATIONS:

A. MANUFACTURER: To be determined

B. TYPE: Self-supporting monopole

C. TOWER HEIGHT: 140' DIMENSIONS: Approx. 42" base

Approx. 30" top

II. TOWER LOADING:

A. CELLCO EQUIPMENT:

1. Antennas (12)
Six (6) Model LPA-80080/6CF (70.87" x 5.51" x 13.19") Cellular
Six (6) Model LPA-185080/12CF (71.1" x 4.1" x 5.9) PCS
Antenna Centerline 137' AGL

2. GPS Antenna: Mounted on the top of the equipment shelter

3. Transmission Lines:
a. MFG/Model: Andrews LDF5-50A
b. Size: 1 5/8"

III. ENGINEERING ANALYSIS AND CERTIFICATION:

The towers will be designed in accordance with Electronic Industries Association Standard EIA/TIA-222-E "Structural Standards for Steel Antenna Towers and Antenna Support Structures." The foundation designs would be based on soil conditions at the site. Details for the towers and foundation designs will be provided as a part of the final D&M Plan.

ENVIRONMENTAL ASSESSMENT STATEMENT

SITE NAME: WOODSTOCK NORTHWEST – Sherman Road, Woodstock, CT

I. PHYSICAL IMPACT

A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the facility. There are no lakes, ponds, rivers, streams, wetlands or other regulated bodies of water located in the area to be used for the new portion of the facility access drive, tower or equipment shelter. Wetland areas near the existing gravel driveway and Sherman Road will not be affected by site development activities. The equipment used will not discharge any pollutants to area surface or groundwater systems.

B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at the site would emit no air pollutants of any kind. For limited periods during power outages and periodically for maintenance purposes, minor levels of emissions from the on-site generator would result.

Pursuant to R.C.S.A. § 22a-174-3, the on-site emergency back-up generator proposed as a part of this application would require the issuance of a Connecticut Department of Environmental Protection Air Bureau permit for potential emissions. Cellco would obtain this permit prior to installing the generator at the approved cell site.

C. LAND

Clearing and grading of the tower compound and northern-most 220 feet of the access drive will be required. The remaining land of the Lessor would remain unchanged by the construction and operation of the cell site.

D. NOISE

The equipment to be in operation at the site after construction would emit no noise of any kind, except for operation of the installed heating, air conditioning and ventilation systems and occasional operation of a back-up generator which would be run during power failures and periodically for maintenance purposes. Some noise is anticipated during cell site construction, which is expected to take approximately four to six weeks.

E. POWER DENSITY

The worst-case calculation of power density for Cellco's Cellular and PCS antennas at the Alternate Site facility would be 15.79% of the Standard.

F. VISIBILITY

See Visual Resource Evaluation Report included as Attachment 10.

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

WOODSTOCK NW, CT
SHERMAN ROAD
WOODSTOCK, CT

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE, EAST HARTFORD, CONNECTICUT **TO:** SHERMAN ROAD, WOODSTOCK, CONNECTICUT

–START OUT GOING EAST ON EAST RIVER DRIVE;	0.0 MI.
–MERGE ONTO I–84 E VIA THE RAMP ON THE LEFT TOWARD BOSTON;	30.1 MI.
–TAKE THE CT–190 EXIT, EXIT 73, TOWARD UNION;	0.4 MI.
–TURN RIGHT ONTO BUCKLEY HWY/CT–190;	1.9 MI.
–TURN RIGHT ONTO BIGELOW HOLLOW RD/CT–171;	2.3 MI.
–STAY STRAIGHT TO GO ONTO LAWSON RD/CT–197. CONTINUE TO FOLLOW CT–197;	1.8 MI.
–TURN RIGHT ONTO CT–198/BLACK POND ROAD;	0.3 MI.
–TURN RIGHT ONTO SHERMAN ROAD.	0.2 MI.

GENERAL NOTES

1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP.

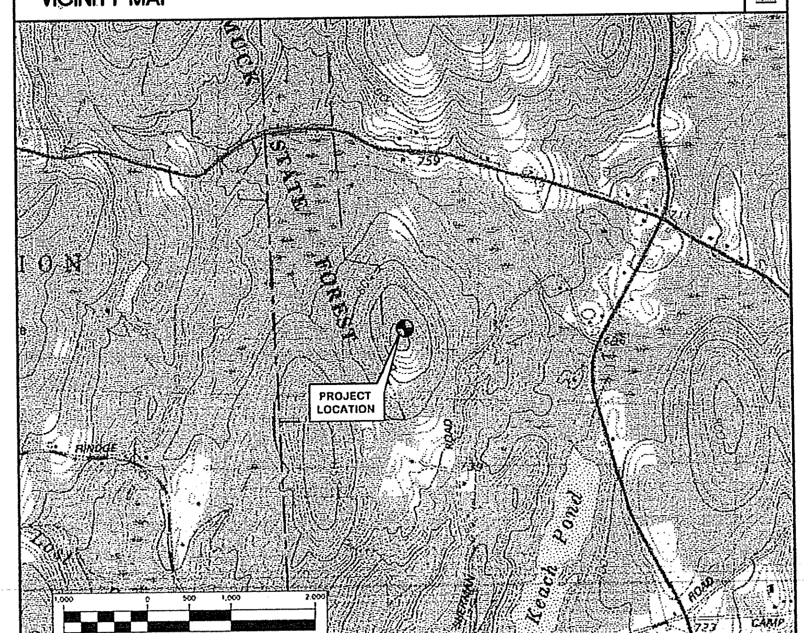
SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE CONSTRUCTION OF A 40'x75' FENCED WIRELESS COMMUNICATIONS COMPOUND WITHIN A 100'x100' LEASE AREA.
2. MINIMAL SITE GRADING WILL BE REQUIRED WITHIN LEASE AREA AND ACCESS DRIVE FOR PROPER DRAINAGE. A TOTAL OF TWENTY–THREE TREES WILL BE REQUIRED TO BE REMOVED TO ACCOMMODATE THE PROPOSED COMPOUND, ACCESS EASEMENT AND PROPOSED CL&P UTILITY EASEMENT.
3. APPROXIMATELY 1,060 OF AN EXISTING STONE/DIRT DRIVEWAY WILL BE UTILIZED WITH AN ADDITIONAL 220' +/– OF PROPOSED GRAVEL ACCESS DRIVE IS PROPOSED FOR SITE ACCESS.
4. A TOTAL OF TWELVE (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A RAD CENTER ELEVATION OF 137'–0"+/– AGL ON A PROPOSED 140' MONOPOLE TOWER LOCATED CENTRALLY WITHIN THE PROPOSED COMPOUND.
5. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM AN EXISTING UTILITY POLE LOCATED ON THE SUBJECT PROPERTY TO THE PROPOSED UTILITY BACKBOARD LOCATED ADJACENT TO THE PROPOSED FENCED COMPOUND. UTILITIES WILL BE ROUTED FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x30' WIRELESS EQUIPMENT SHELTER LOCATED WITHIN THE COMPOUND. FINAL UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES.
6. FINAL DESIGN FOR TOWER AND ANTENNA MOUNTS SHALL BE INCLUDED IN THE FINAL CONSTRUCTION DOCUMENTS.
7. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2005 CONNECTICUT SUPPLEMENT.
8. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA.
9. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.
10. FOR ADDITIONAL NOTES AND DETAILS REFER TO THE ACCOMPANYING DRAWINGS.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	WOODSTOCK NW, CT
SITE ADDRESS:	SHERMAN ROAD WOODSTOCK, CT 06281
PROPERTY OWNER/ LEASOR:	COLIN G. HALLQUEST M.A. 40 SHERMAN ROAD WOODSTOCK, CT 06281
LESSEE / APPLICANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP (860) 803–8219
TOWER COORDINATES:	LATITUDE: 41°58'43.147" LONGITUDE: 72°05'39.934" GND ELEVATION: 904.5'± A.M.S.L. COORDINATES ARE BASED ON FAA 2C CERTIFICATION CONDUCTED BY MARTINEZ COUCH AND ASSOCIATES LLC. DATED APRIL 29, 2008, REVISED AUGUST 27, 2008.

LEGEND

SYMBOL	DESCRIPTION
(section symbol)	SECTION OR DETAIL NUMBER SHEET WHERE DETAIL/SECTION OCCURS
(elevation symbol)	ELEVATION NUMBER SHEET WHERE ELEVATION OCCURS

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T–1	TITLE SHEET	0
C–1	SITE PLAN AND ABUTTERS MAP	0
C–1A	GRADING PLAN	0
C–2	COMPOUND PLAN AND ELEVATION	0
C–3	SITE DETAILS AND EROSION CONTROL NOTES	0
C–4	SITE UTILITY DETAILS AND SHELTER ELEVATIONS	0
C–5	SHELTER FOUNDATION PLAN, DETAILS AND NOTES	0

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
D	09/18/08	DMD	CFC	ISSUED FOR CSC
B	08/15/08	DMD	CFC	REVISED FOR CSC REVIEW
A	05/19/08	CMS	DMD	ISSUED FOR CSC REVIEW

STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER No. 16694

Cellco Partnership d.b.a. verizon wireless

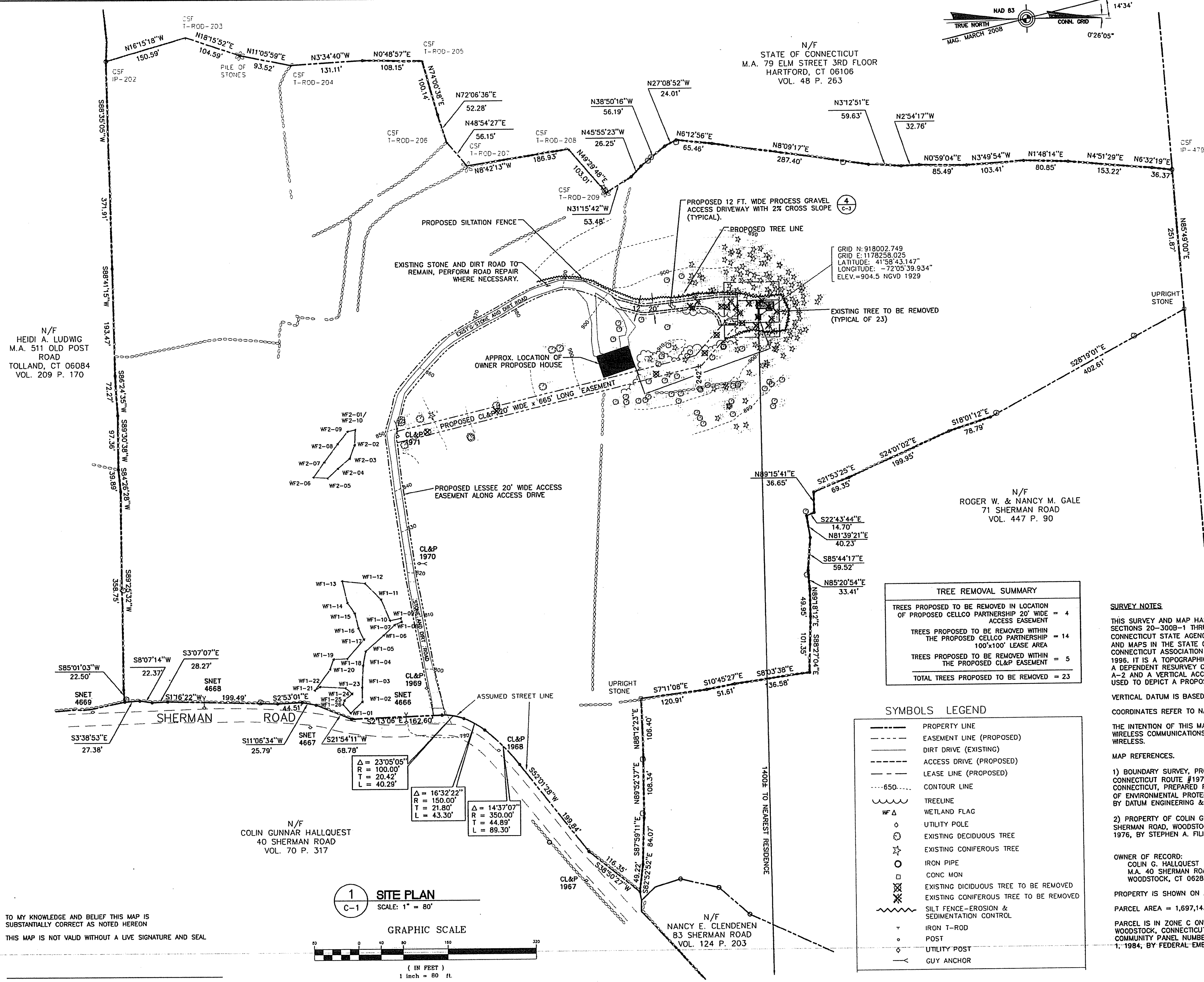
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

TITLE SHEET

T–1

Sheet No. 1 of 7



1 SITE PLAN
C-1 SCALE: 1" = 80'

GRAPHIC SCALE
(IN FEET)
1 inch = 80 ft.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

A. RAFAEL MARTINEZ LLS #18833 DATE

TREE REMOVAL SUMMARY	
TREES PROPOSED TO BE REMOVED IN LOCATION OF PROPOSED CELLCO PARTNERSHIP 20' WIDE ACCESS EASEMENT	= 4
TREES PROPOSED TO BE REMOVED WITHIN THE PROPOSED CELLCO PARTNERSHIP 100'x100' LEASE AREA	= 14
TREES PROPOSED TO BE REMOVED WITHIN THE PROPOSED CL&P EASEMENT	= 5
TOTAL TREES PROPOSED TO BE REMOVED	= 23

SYMBOLS LEGEND

- PROPERTY LINE
- EASEMENT LINE (PROPOSED)
- DIRT DRIVE (EXISTING)
- ACCESS DRIVE (PROPOSED)
- LEASE LINE (PROPOSED)
- ----650---- CONTOUR LINE
- TREELINE
- WF Δ WETLAND FLAG
- UTILITY POLE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- IRON PIPE
- CONC MON
- EXISTING DICIDUOUS TREE TO BE REMOVED
- EXISTING CONIFEROUS TREE TO BE REMOVED
- SILT FENCE-EROSION & SEDIMENTATION CONTROL
- IRON T-ROD
- POST
- UTILITY POST
- GUY ANCHOR

SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. IT IS A TOPOGRAPHIC / BOUNDARY SURVEY AND IS BASED UPON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND A VERTICAL ACCURACY OF CLASS T-2 AND IS INTENDED TO BE USED TO DEPICT A PROPOSED TELECOMMUNICATION SITE.

VERTICAL DATUM IS BASED ON NGVD 29.

COORDINATES REFER TO NAD 83.

THE INTENTION OF THIS MAP IS TO SHOW THE LOCATION OF THE WIRELESS COMMUNICATIONS FACILITY TO BE CONSTRUCTED BY VERIZON WIRELESS.

MAP REFERENCES.

1) BOUNDARY SURVEY, PROPERTY OF JOSEPH F. & NICOLE J. SANSONE, CONNECTICUT ROUTE #197, RED WHITE SCHOOL ROAD, WOODSTOCK, CONNECTICUT, PREPARED FOR THE STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SCALE 1"=100', DATED APRIL 4, 2003, BY DATUM ENGINEERING & SURVEYING.

2) PROPERTY OF COLIN GUNNAR AND NANCY ELIZABETH HALLQUEST, SHERMAN ROAD, WOODSTOCK, CONN., SCALE 1"=40', DATED MAY 12, 1976, BY STEPHEN A. FILIP.

OWNER OF RECORD:
COLIN G. HALLQUEST
M.A. 40 SHERMAN ROAD
WOODSTOCK, CT 06281

PROPERTY IS SHOWN ON ASSESSORS MAP 5122 BLOCK 18 LOT 4.

PARCEL AREA = 1,697,143 SQ. FT., 38.961 ACRES.

PARCEL IS IN ZONE C ON THE FLOOD INSURANCE RATE MAP, TOWN OF WOODSTOCK, CONNECTICUT, WINDHAM COUNTY, PANEL 15 OF 30, COMMUNITY PANEL NUMBER 090120 0015 B, EFFECTIVE DATE NOVEMBER 1, 1984, BY FEDERAL EMERGENCY MANAGEMENT AGENCY.

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

DATE	DRAWN BY	CHK'D BY	DESCRIPTION
05/12/08	DMD	CFC	ISSUED FOR CSC
05/15/08	DMD	CFC	REVISED FOR CSC REVIEW
05/19/08	DMD	CFC	ISSUED FOR CSC REVIEW

Cellco Partnership
d.b.a. verizon wireless

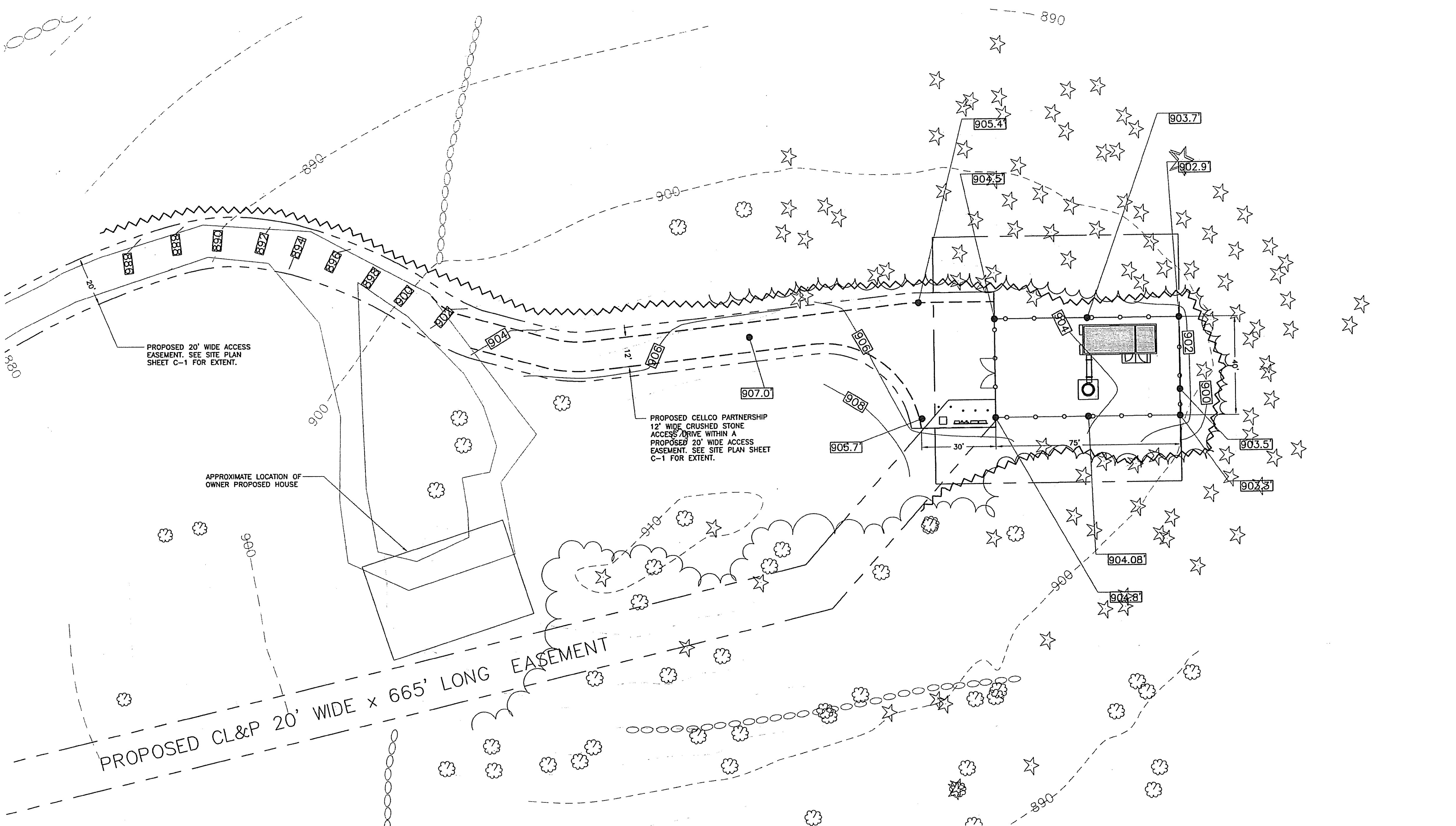
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

SITE PLAN

C-1

Sheet No. 2 of 7



1 C-1A **GRADING PLAN**
SCALE: 1"=20'-0"

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

NOTE:
TREES SCHEDULED FOR REMOVAL ARE NOT SHOWN ON THIS PLAN. SEE SHEET C-1.

SYMBOLS LEGEND

EASEMENT LINE (PROPOSED)
DIRT DRIVE (EXISTING)
ACCESS DRIVE (PROPOSED)
LEASE LINE (PROPOSED)
CONTOUR LINE
GRADING LINE
TREELINE
EXISTING DECIDUOUS TREE TO REMAIN
SILT FENCE-EROSION & SEDIMENTATION CONTROL

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	09/18/08	DMD	CFC	ISSUED FOR CSC
B	09/15/08	DMD	CFC	REVISED FOR CSC REVIEW
A	05/19/08	CMS	DMD	ISSUED FOR CSC REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. verizon wireless

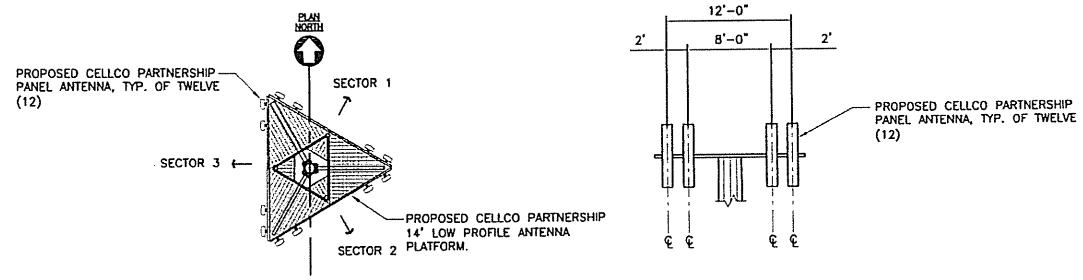
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

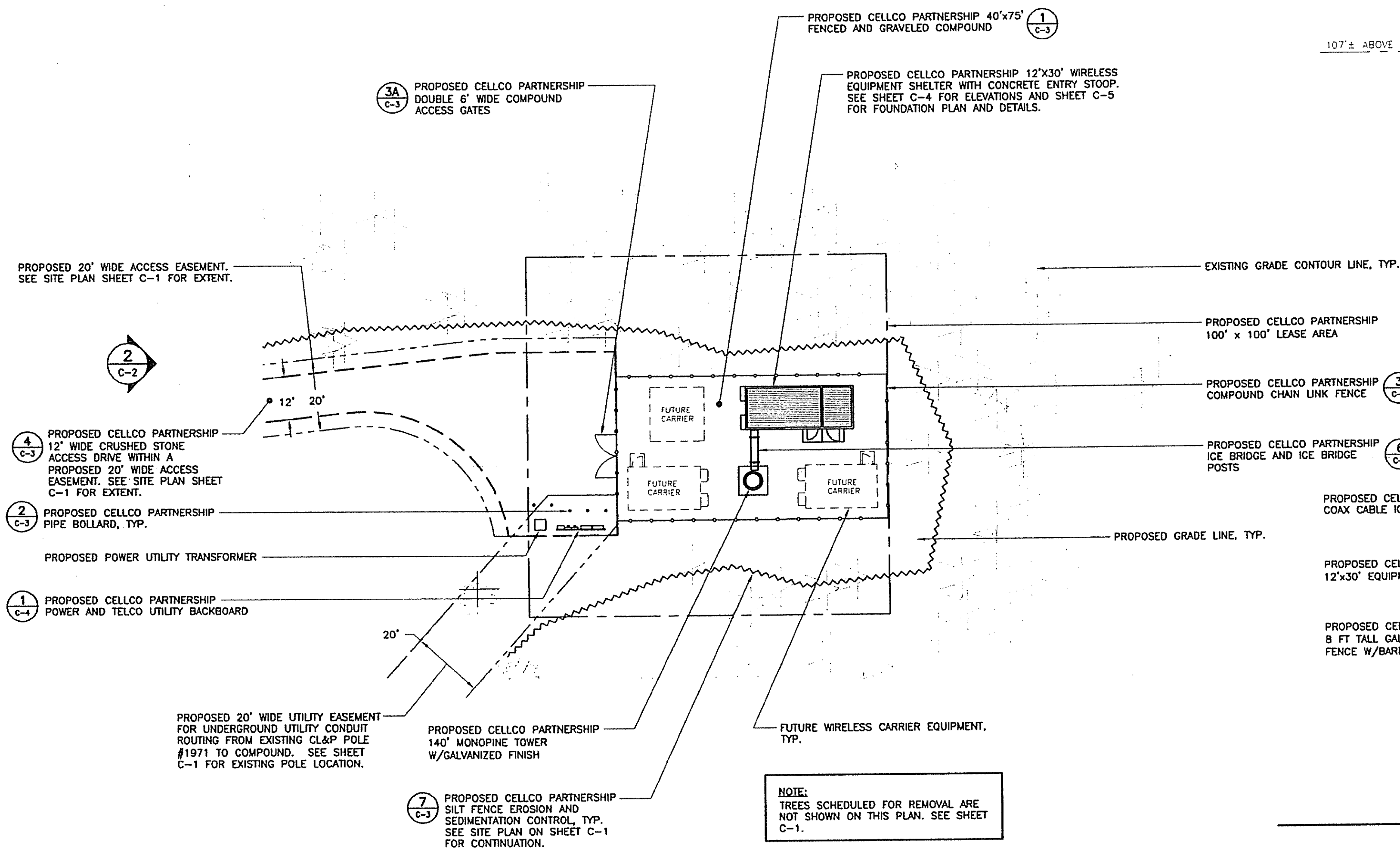
GRADING PLAN

C-1A

Sheet No. 3 of 7

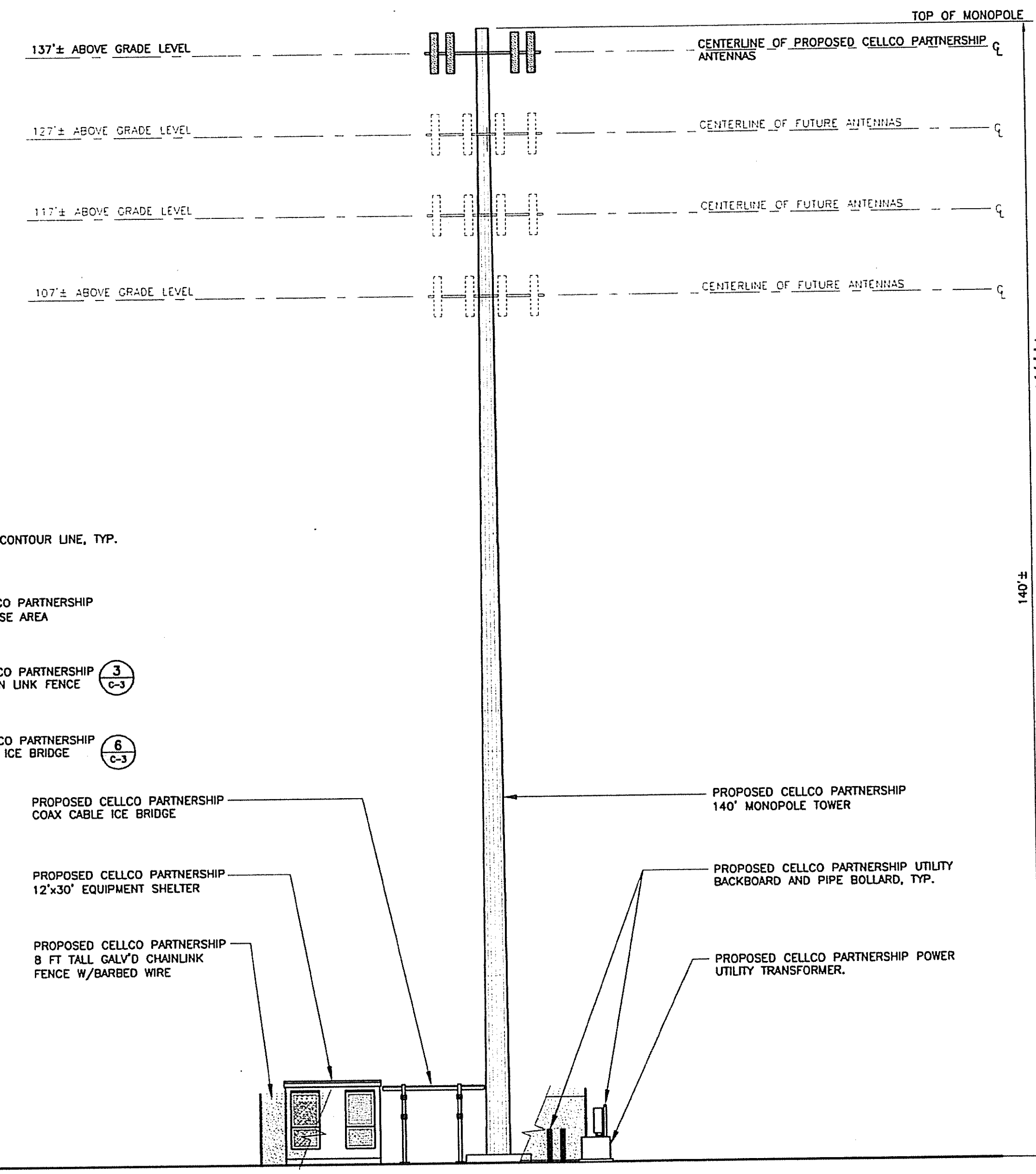


3 C-2 **PROPOSED ANTENNA MOUNTING CONFIGURATION**
NOT TO SCALE



1 C-2 **COMPOUND PLAN**
SCALE: 1"=20'-0"

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.



2 C-2 **ELEVATION**
SCALE: 1"=10'-0"

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	05/19/08	DMD	CFC	ISSUED FOR CSC REVIEW
B	09/15/08	DMD	CFC	ISSUED FOR CSC REVIEW
C	09/18/08	DMD	CFC	ISSUED FOR CSC

STATE OF CONNECTICUT PROFESSIONAL ENGINEER NO. 16694 LICENSED

Cellco Partnership d.b.a. verizon wireless

NATCOMM CONSULTING ENGINEERS

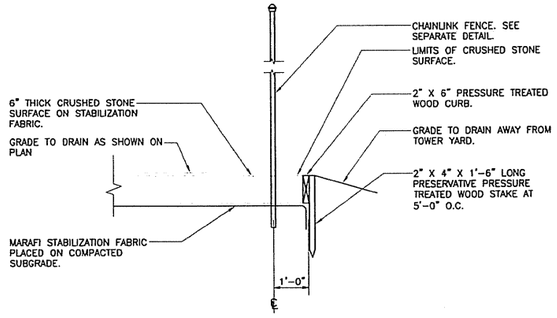
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

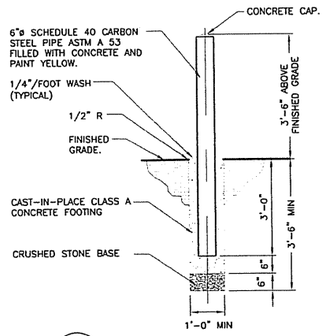
COMPOUND PLAN AND ELEVATION

C-2

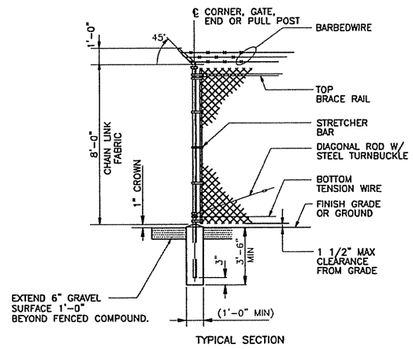
Sheet No. 4 of 7



1 C-3 **COMPOUND SURFACING DETAIL**
NOT TO SCALE



2 C-3 **BOLLARD DETAIL**
NOT TO SCALE

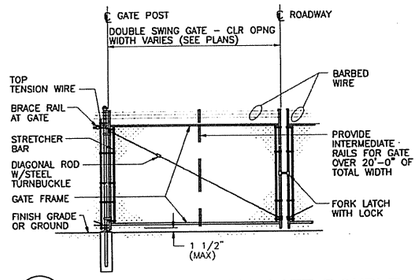


TYPICAL SECTION

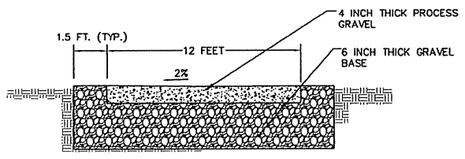
3 C-3 **WOVEN WIRE FENCE DETAIL**
NOT TO SCALE

WOVEN WIRE FENCE NOTES

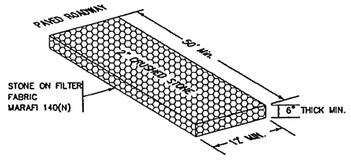
1. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 12 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH W/FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
9. GATE LATCH: DROP DOWN LOCKABLE FORK LATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
10. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH IF REQUIRED.
11. HEIGHT = 8' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.



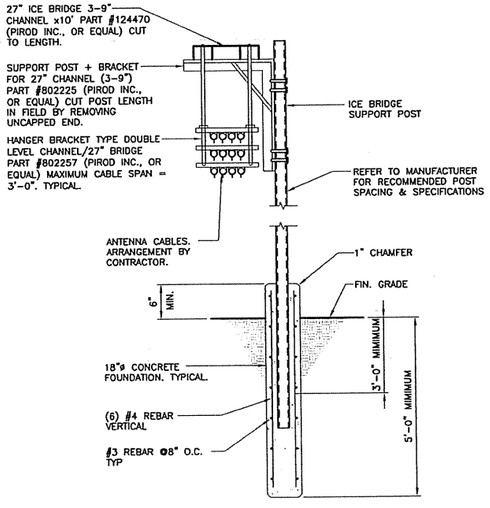
3A C-3 **WOVEN WIRE SWING GATE-DOUBLE**
NOT TO SCALE



4 C-3 **GRAVEL DRIVEWAY SECTION**
NOT TO SCALE



5 C-3 **ANTI-TRACKING APRON**
NOT TO SCALE



6 C-3 **ICE BRIDGE DETAIL**
NOT TO SCALE

EROSION CONTROL

GENERAL CONSTRUCTION SEQUENCE

THIS IS A GENERAL CONSTRUCTION SEQUENCE OUTLINE SOME ITEMS OF WHICH MAY NOT APPLY TO PARTICULAR SITES.

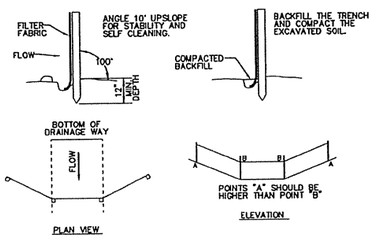
1) CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
2) INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
3) REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
4) CONSTRUCT CLOSED DRAINAGE SYSTEM. PRECEPT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
5) CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILTATION FENCES AS REQUIRED TO CONTROL SOIL EROSION.
6) INSTALL UNDERGROUND UTILITIES.
7) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION. NO AREA SHALL BE LEFT UNSTABILIZED FOR A TIME PERIOD OF MORE THAN 30 DAYS.
8) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING.
9) BEGIN EXCAVATION FOR AND CONSTRUCTION OF TOWERS AND PLATFORMS.
10) FINISH PAVING ALL ROADWAYS, DRIVES, AND PARKING AREAS.
11) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12) NO FLOW SHALL BE DIVERTED TO ANY WETLANDS UNTIL A HEALTHY STAND OF GRASS HAS BEEN ESTABLISHED IN REGARDED AREAS.
13) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

CONSTRUCTION SPECIFICATIONS - SILT FENCE

1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3) WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.
5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
6) FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7) MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BUILD UP IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

MAINTENANCE - SILT FENCE

1) SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3) SEDIMENT SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

7 C-3 **SILTATION FENCE DETAIL**
NOT TO SCALE

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	05/12/08	DMD	CFC	ISSUED FOR CSC
2	06/19/08	DMD	CFC	ISSUED FOR CSC REVIEW
3	09/15/08	DMD	CFC	ISSUED FOR CSC REVIEW

STATE OF CONNECTICUT — 16694 — LICENSED PROFESSIONAL ENGINEER

Celtco Partnership d.b.a. Verizon wireless

NATCOMM

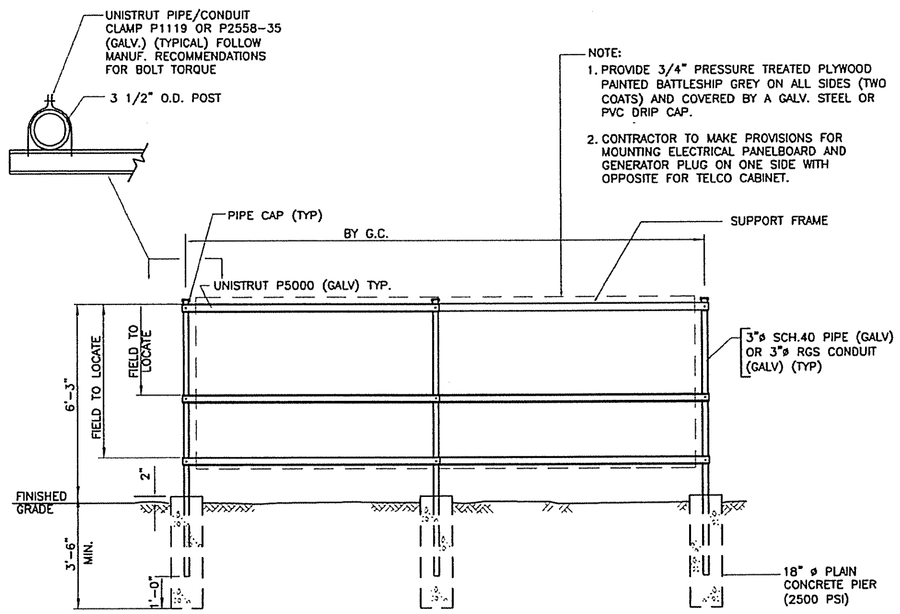
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

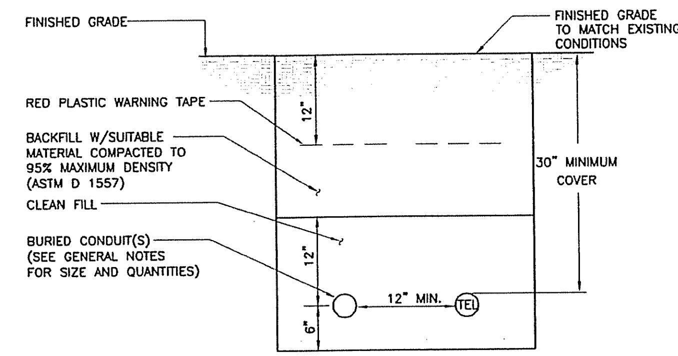
SITE DETAILS AND EROSION CONTROL NOTES

C-3

Sheet No. 5 of 7



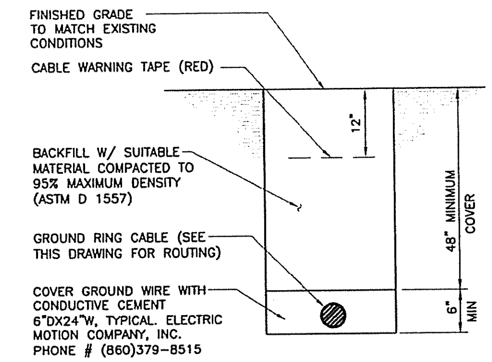
1 C-4 **UTILITY SUPPORT FRAME (TYP)**
NOT TO SCALE



NOTES:

1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

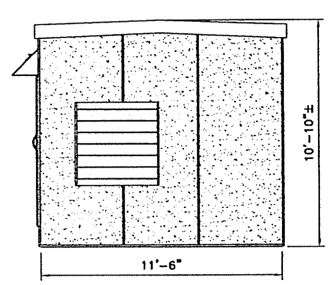
2 C-4 **TYPICAL ELECTRICAL/TEL TRENCH DETAIL**
NOT TO SCALE



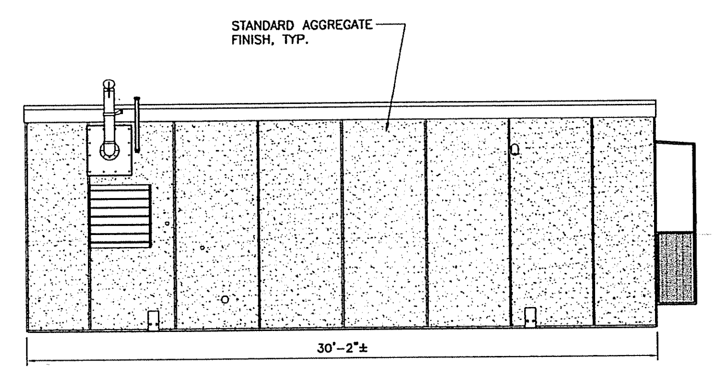
NOTES:

1. BACK FILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

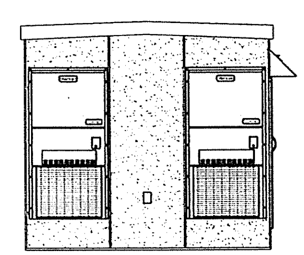
3 C-4 **TYPICAL BURIAL GROUND CABLE DETAIL**
NOT TO SCALE



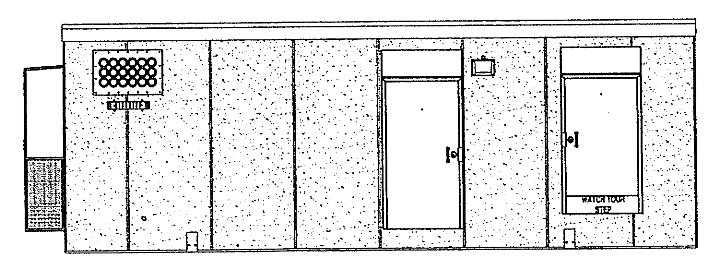
4 C-4 **NORTH SHELTER ELEVATION**
SCALE: 1/4" = 1'-0"



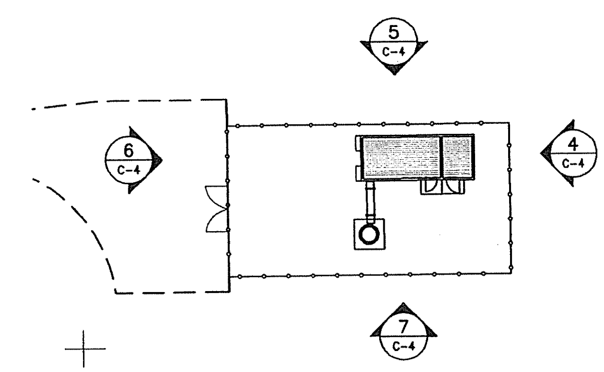
5 C-4 **WEST SHELTER ELEVATION**
SCALE: 1/4" = 1'-0"



6 C-4 **SOUTH SHELTER ELEVATION**
SCALE: 1/4" = 1'-0"



7 C-4 **EAST SHELTER ELEVATION**
SCALE: 1/4" = 1'-0"



SHELTER ELEVATION KEY PLAN
NOT TO SCALE

TRUE NORTH

PROPOSED CELLCO PARTNERSHIP EQUIPMENT SHELTER

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
	05/12/08	DMD	CFC	ISSUED FOR CSC
	09/16/08	DMD	CFC	ISSUED FOR CSC REVIEW
	09/18/08	DMD	CFC	ISSUED FOR CSC REVIEW

STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER

Cellco Partnership d.b.a. verizon wireless

NATCOMM

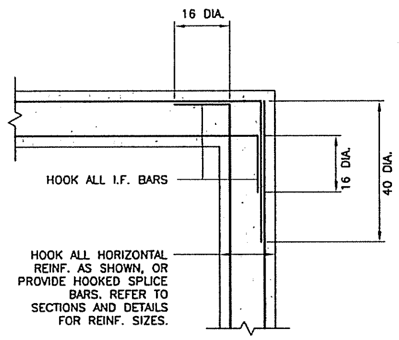
VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

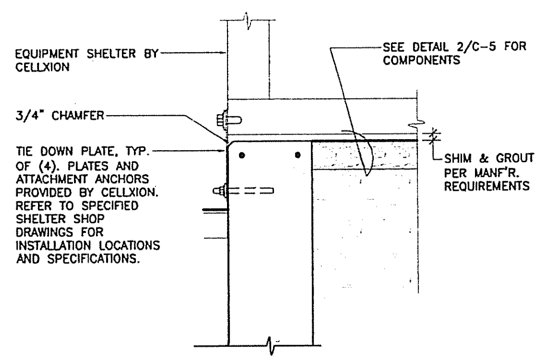
SITE UTILITY DETAILS AND SHELTER ELEVATIONS

C-4

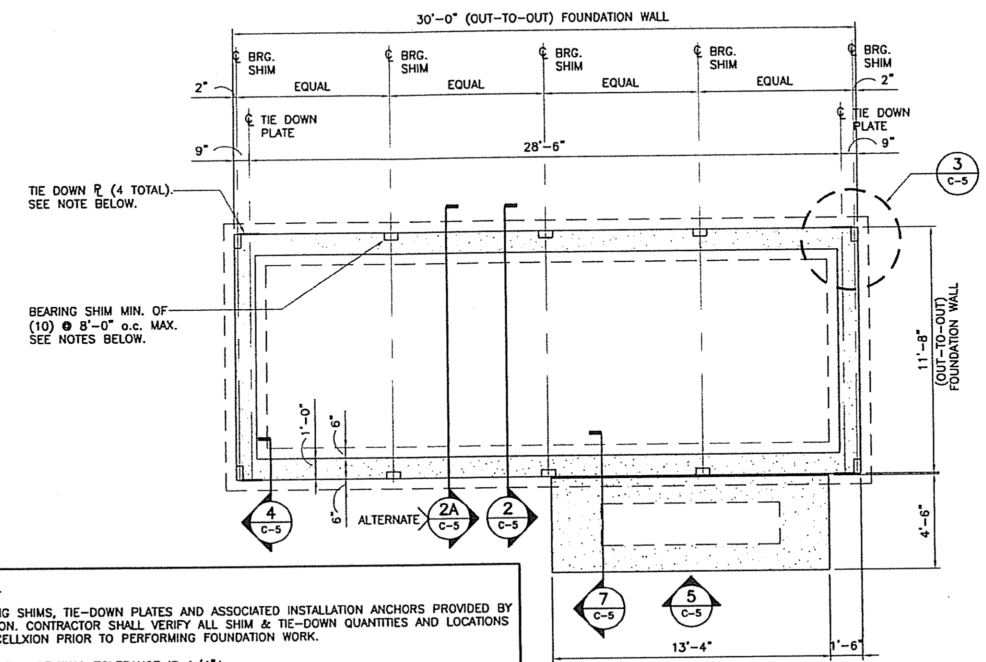
Sheet No. 6 of 7



3 C-5 PLAN DETAIL
NOT TO SCALE



4 C-5 BUILDING TIE DOWN
SCALE: 1"=1'-0"



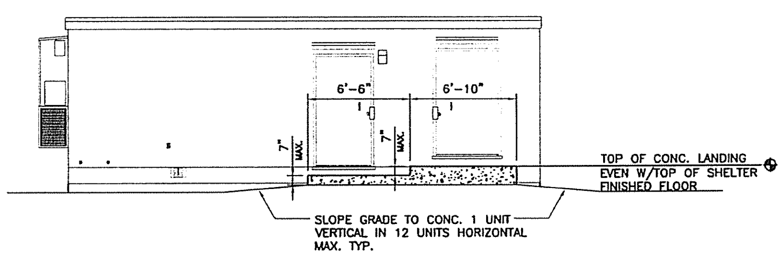
NOTES:

1. BEARING SHIMS, TIE-DOWN PLATES AND ASSOCIATED INSTALLATION ANCHORS PROVIDED BY CELLXION. CONTRACTOR SHALL VERIFY ALL SHIM & TIE-DOWN QUANTITIES AND LOCATIONS WITH CELLXION PRIOR TO PERFORMING FOUNDATION WORK.
2. SLAB/ TOP OF WALL TOLERANCE IS 1/4"±
3. TOP 8" OF FOUNDATION SIDES MUST BE FORMED FLAT TO ACCEPT TIE-DOWN PLATES.

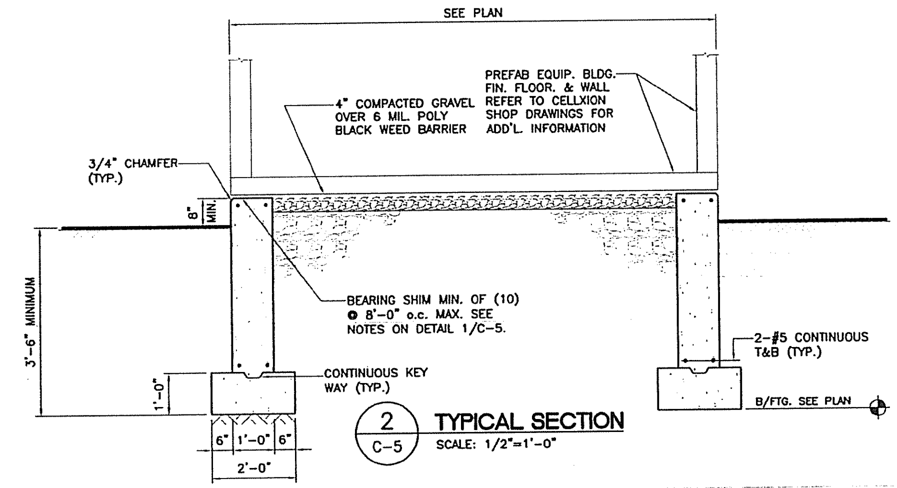
NOTE:
1. B/FTG. ELEVATION AT 3'-6" MINIMUM BELOW FINISHED GRADE. (TYP)

1 C-5 FOUNDATION PLAN
SCALE: 1/4"=1'-0"

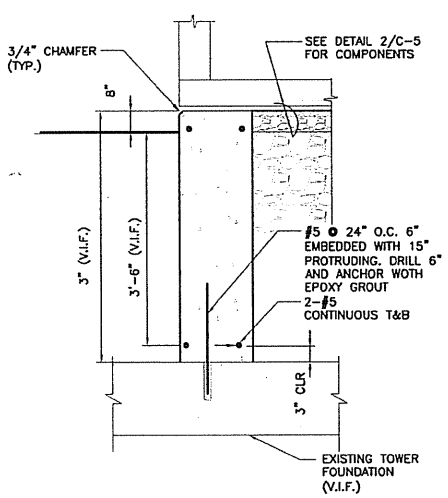
APPROX. GRID NORTH



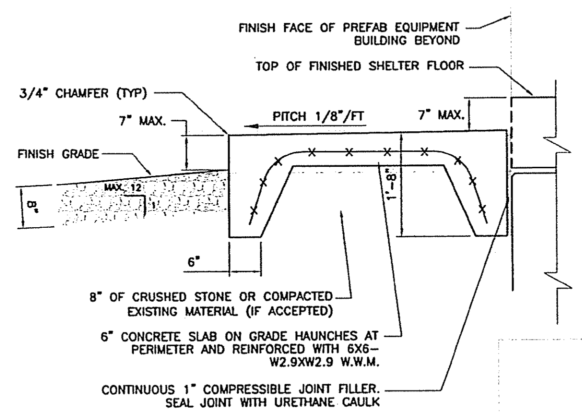
5 C-5 ENTRY STOOP DETAIL - ELEVATION
SCALE: 3/16"=1'-0"



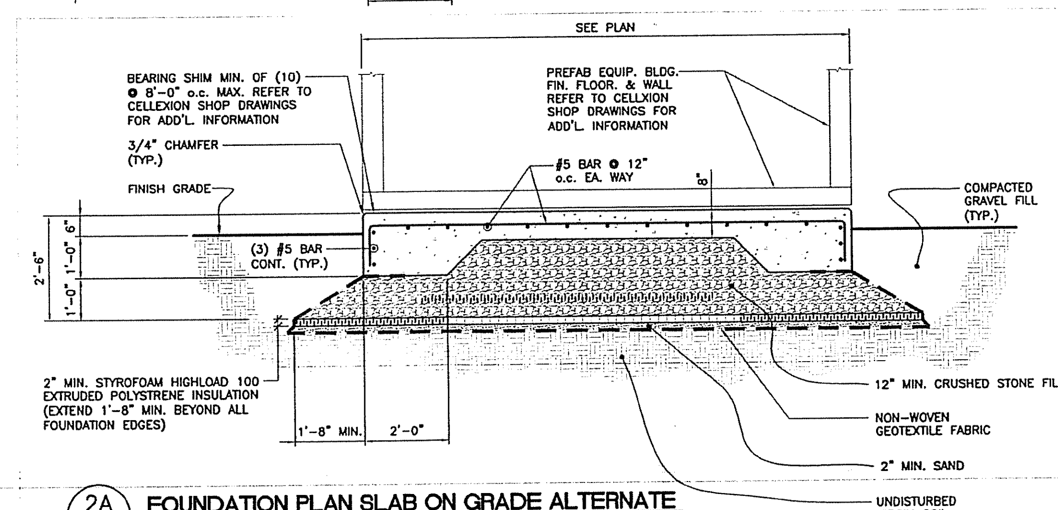
2 C-5 TYPICAL SECTION
SCALE: 1/2"=1'-0"



6 C-5 FOUNDATION OVER TOWER FOUNDATION
SCALE: 3/4"=1'-0"



7 C-5 ENTRY STOOP DETAIL - SECTION
SCALE: 3/16"=1'-0"



2A C-5 FOUNDATION PLAN SLAB ON GRADE ALTERNATE
SCALE: 1/2"=1'-0"

EQUIPMENT SHELTER BY CELLXION. VERIFY ALL SHELTER DIMENSIONS, EQUIPMENT DIMENSIONS, EQUIPMENT LOCATIONS AND UTILITY OPENINGS WITH BUILDING SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

FOUNDATION NOTES:

1. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
4. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

SITE NOTES:

1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. ALL RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED OFF SITE AND BE LEGALLY DISPOSED, AT NO ADDITIONAL COST.
4. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
5. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
6. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
7. THE AREAS OF THE COMPOUND DISTURBED BY THE WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
8. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
9. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.
10. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
11. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.

COMPACTED GRAVEL FILL:

1. COMPACTED GRAVEL FILL SHALL BE FURNISHED AND PLACED AS A FOUNDATION FOR STRUCTURES, WHERE SHOWN ON THE CONTRACT DRAWINGS OR DIRECTED BY THE ENGINEER.
2. GRAVEL SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE M.02.02 OF THE CONNECTICUT D.O.T. STANDARD SPECIFICATIONS. ADMIXTURES AND SURFACE PROTECTIVE MATERIALS USED TO PREVENT THE GRAVEL FROM FREEZING MUST MEET THE APPROVAL OF THE ENGINEER. THE LARGEST STONE SIZE SHALL BE 3-1/2 INCHES.
3. SAMPLES OF THE MATERIAL TO BE USED SHALL BE DELIVERED TO THE JOB SITE 5 DAYS PRIOR TO ITS INTENDED USE SO IT MAY BE TESTED FOR APPROVAL.
4. AFTER ALL EXCAVATION HAS BEEN COMPLETED, GRAVEL SHALL BE DEPOSITED IN LAYERS NOT EXCEEDING EIGHT (8) INCHES IN DEPTH OVER THE AREAS. IN EXCEPTIONAL CASES, THE ENGINEER MAY PERMIT THE FIRST LAYER TO BE THICKER THAN EIGHT (8) INCHES. EACH LAYER SHALL BE LEVELED OFF BY SUITABLE EQUIPMENT. THE ENTIRE AREA OF EACH LAYER SHALL BE COMPACTED BY USE OF APPROVED VIBRATORY, PNEUMATIC-TIRED OR TREAD-TYPE COMPACTION EQUIPMENT. COMPACTION SHALL BE CONTINUED UNTIL THE DRY DENSITY OVER THE ENTIRE AREA OF EACH LAYER IS NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY ACHIEVED BY AASHTO T-99 METHOD C. THE MOISTURE CONTENT OF THE GRAVEL SHALL NOT VARY BY MORE THAN 3 %+ FROM ITS OPTIMUM MOISTURE CONTENT. NO SUBSEQUENT LAYER SHALL BE DEPOSITED UNTIL THE SPECIFIED COMPACTION IS ACHIEVED FOR THE PREVIOUS LAYER. IF NECESSARY TO OBTAIN THE REQUIRED COMPACTION, WATER SHALL BE ADDED AND GENTLE PUDDLING PERFORMED IF AUTHORIZED. COMPACTED GRAVEL FILL SHALL BE PREVENTED FROM FREEZING BY USE OF APPROVED ADMIXTURES OR BY USE OF APPROVED PROTECTIVE MATERIALS ON THE SURFACE, OR BOTH.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED WITH A MAXIMUM SLUMP OF 4", AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS OTHERWISE INDICATED.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE NOTED ON THE DRAWINGS:

   CONCRETE CAST AGAINST EARTH....................3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER..2 IN.
   #5 AND SMALLER & WWF..............................1 1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL...3/4 IN.
   BEAMS AND COLUMNS....................................1 1/2 IN.
5. ALL EXPOSED EDGES OF CONCRETE TO RECEIVE A 3/4" CHAMFER IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. CONCRETE EQUIPMENT PAD TO RECEIVE A BRUSHED FINISH.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT DURING DRILLING WITHOUT PRIOR REVIEW BY THE ENGINEER.

DESIGNED BY:	CFC
DRAWN BY:	DMD
CHK'D BY:	CFC

0	05/12/08	DMD	CFC	ISSUED FOR CSC
A	05/15/08	DMD	CFC	ISSUED FOR CSC REVIEW
B	06/19/08	DMD	CFC	ISSUED FOR CSC REVIEW
NO.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION

Cellco Partnership d.b.a. Verizon wireless

VERIZON WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODSTOCK NW, CT
40 SHERMAN ROAD
WOODSTOCK, CT 06281

DATE:	05/12/08
SCALE:	AS NOTED
JOB NO.	08046

SHELTER FOUNDATION PLAN, DETAILS AND NOTES

C-5

Sheet No. 7 of 7

APPLICATION GUIDE[1]

App. p. i	(A)	An Executive Summary on the first page of the application with the address, proposed height, and type of tower being proposed. A map showing the location of the proposed site should accompany the description;
App. pp. 1-4	(B)	A brief description of the proposed facility, including the proposed locations and heights of each of the various proposed sites of the facility, including all candidates referred to in the application;
App. pp. 1-3	(C)	A statement of the purpose for which the application is made;
App. p. 1	(D)	A statement describing the statutory authority for such application;
App. pp. 4-5	(E)	The exact legal name of each person seeking the authorization or relief and the address or principal place of business of each such person. If any applicant is a corporation, trust association, or other organized group, it shall also give the state under the laws of which it was created or organized;
App. pp. 4-5	(F)	The name, title, address and telephone number of the attorney or other person to whom correspondence or communications in regard to the application are to be addressed. Notice, orders, and other papers may be served upon the person so named, and such service shall be deemed to be service upon the applicant;
App. pp. 7-8 Attachments 1 and 7	(G)	A statement of the need for the proposed facility with as much specific information as is practicable to demonstrate the need, including a description of the proposed system and how the proposed facility would eliminate or alleviate any existing deficiency or limitation;
App. pp. 11-12	(H)	A statement of the benefits expected from the proposed facility with as much specific information as is practicable;

[1] This Application Guide is copied directly from the "Connecticut Siting Council Application Guide," Section VI, as amended February 16, 2007. References to the Regulations of Connecticut State Agencies ("RCSA") contained in the Guide have been omitted.

App. pp. 1-4, 9-11
Attachments 1 and 7

(I) A description of the proposed facility at the named sites including:

(1) Height of the tower and its associated antennas including a maximum "not to exceed height" for the facility, which may be higher than the height proposed by the Applicant;
(2) Access roads and utility services;
(3) Special design features;
(4) Type, size, and number of transmitters and receivers, as well as the signal frequency and conservative worst-case and estimated operational level approximation of electro magnetic radio frequency power density levels (facility using FCC Office of Engineering and Technology Bulletin 65, August 1997) at the base of the tower base, site compound boundary where persons are likely to be exposed to maximum power densities from the facility;
(5) A map showing any fixed facilities with which the proposed facility would interact;
(6) The coverage signal strength, and integration of the proposed facility with any adjacent fixed facility, to be accompanied by multi-colored propagation maps of red, green and yellow (exact colors may differ depending on computer modeling used, but a legend is required to explain each color used) showing interfaces with any adjacent service areas, including a map scale and north arrows; and
(7) For cellular systems, a forecast of when maximum capacity would be reached for the proposed facility and for facilities that would be integrated with the proposed facility.

Attachment 1

(J) A description of the named sites, including:

(1) The most recent U.S.G.S. topographic quadrangle map (scale 1 inch = 2,000 feet) marked to show the site of the facility and any significant changes within a one-mile radius of the site;

(2) A map (scale not less than 1 inch = 200 feet) of the lot or tract on which the facility is proposed to be located showing the acreage and dimensions of such site, the name and location of adjoining public roads or the nearest public road, and the names of abutting owners and the portions of their lands abutting the site;

(3) A site plan (scale not less than 1 inch = 40 feet) showing the proposed facility, set back radius, existing and proposed contour elevations, 100-year flood zones, waterways, wetlands, and all associated equipment and structures on the site;

(4) Where relevant, a terrain profile showing the proposed facility and access road with existing and proposed grades; and

(5) The most recent aerial photograph (scale not less than 1 inch = 1,000 feet) showing the proposed site, access roads, and all abutting properties.

Attachment 1

(K) A statement explaining mitigation measures for the proposed facility including:

(1) Construction techniques designed specifically to minimize adverse effects on natural areas and sensitive areas;

(2) Special design features made specifically to avoid or minimize adverse effects on natural areas and sensitive areas;

(3) Establishment of vegetation proposed near residential, recreation, and scenic areas; and

(4) Methods for preservation of vegetation for wildlife habitat and screening.

App. pp. 1-4 and 16
Attachment 10

(L) A description of the existing and planned land uses of the named sites and surrounding areas;

App. pp. 12-15 Attachments 10 and 11	(M)	A description of the scenic, natural, historic, and recreational characteristics of the names sites and surrounding areas including officially designated nearby hiking trails and scenic roads;
Attachment 10	(N)	Sight line graphs to the named sites from visually impacted areas such as residential developments, recreational areas and historic sites;
Attachment 9	(O)	A list describing the type and height of all existing and proposed towers and facilities within a four mile radius within the site search area, or within any other area from which use of the proposed towers might be feasible from a location standpoint for purposes of the application;
App. p. 10 Attachment 9	(P)	A description of efforts to share existing towers, or consolidate telecommunications antennas of public and private services onto the proposed facility including efforts to offer tower space, where feasible, at no charge for space for municipal antennas;
App. pp. 9-10 Attachment 1	(Q)	A description of technological alternatives and a statement containing justification for the proposed facility;
Attachment 9	(R)	A description of rejected sites with a U.S.G.S. topographic quadrangle map (scale 1 inch = 2,000 feet) marked to show the location of rejected sites;
App. pp. 10-11 Attachments 1 and 9	(S)	A detailed description and justification for the site(s) selected, including a description of siting criteria and the narrowing process by which other possible sites were considered and eliminated including, but not limited to, environmental effects, cost differential, coverage lost or gained, potential interference with other facilities, and signal loss due to geographic features compared to the proposed site(s);
App. p. 15	(T)	A statement describing hazards to human health, if any, with such supporting data and references to regulatory standards;
App. pp. 19-20	(U)	A statement of estimated costs for site acquisition, construction, and equipment for a facility at the various proposed sites of the facility, including all candidates referred to in the application;

App. p. 20	(V)	A schedule showing the proposed program of site acquisition, construction, completion, operation and relocation or removal of existing facilities for the named sites;
App. p. 14	(W)	A statement indicating that, weather permitting, the applicant will raise a balloon with a diameter of at least three feet, at the sites of the various proposed sites of the facility, including all candidates referred to in the application, on the day of the Council's first hearing session on the application or at a time otherwise specified by the Council. For the convenience of the public, this event shall be publicly noticed at least 30 days prior to the hearing on the application as scheduled by the Council;
App. pp. 14-19 Attachments 1, 11 and 12 Bulk File Exhibits	(X)	Such information as any department or agency of the State exercising environmental controls may, by regulation, require including: (1) A listing of any federal, state, regional, district, and municipal agencies, including but not limited to the Federal Aviation Administration; Federal Communications Commission; State Historic Preservation Officer; State Department of Environmental Protection; and local conservation, inland wetland, and planning and zoning commissions with which reviews were conducted concerning the facility, including a copy of any agency position or decision with respect to the facility; and (2) The most recent conservation, inland wetland, zoning, and plan of development documents of the municipality, including a description of the zoning classification of the site and surrounding areas, and a narrative summary of the consistency of the project with the Town's regulations and plans.
Attachment 1 (Project Plans)	(Y)	Description of proposed site clearing for access road and compound including type of vegetation scheduled for removal and quantity of trees greater than six inches diameter at breast height and involvement with wetlands;
N/A	(Z)	Such information as the applicant may consider relevant.

CERTIFICATION OF SERVICE

I hereby certify that on this 30th day of September, 2008, copies of the Supplemental Application Materials and Attachments were sent by certified mail, return receipt requested, to the following:

STATE OFFICIALS:

The Honorable Richard Blumenthal
Attorney General
Office of the Attorney General
55 Elm Street
Hartford, CT 06106

Gina McCarthy, Commissioner
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

J. Robert Galvin, M.D., M.P.H., Commissioner
Department of Public Health and Addiction Services
410 Capitol Avenue
P. O. Box 340308, MS 13COM
Hartford, CT 06134-0308

Karl J. Wagener, Executive Director
Council on Environmental Quality
79 Elm Street
P.O. Box 5066
Hartford, CT 06106

Donald W. Downes, Chairman
Department of Public Utility Control
Ten Franklin Square
New Britain, CT 06051

Robert L. Genuario, Secretary
Office of Policy and Management
450 Capitol Avenue
Hartford, CT 06134-1441

Joan MacDonald, Commissioner
Department of Economic and Community Development
505 Hudson Street
Hartford, CT 06106

Joseph F. Marie, Commissioner
Department of Transportation
P.O. Box 317546
Newington, CT 06131-7546

Karen Senich
Deputy State Historic Preservation Officer
Connecticut Commission on Culture and Tourism
One Constitution Plaza, 2nd Floor
Hartford, CT 06103

WOODSTOCK TOWN OFFICIALS:

Allan D. Walker, Jr.
First Selectman
Town of Woodstock
415 Route 169
Woodstock, CT 06281

The Honorable Anthony Guglielmo
Senator
100 Stafford Street
Stafford Springs, CT 06076

The Honorable Michael Alberts
Representative – 50th District
P.O. Box 206
East Woodstock, CT 06244

Judy Walberg
Town Clerk
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Gail L. Dickinson, Chairman
Town Planning & Zoning Commission
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Martin Nieski, Chairman
Zoning Board of Appeals
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Telecommunications Task Force
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Delia Fey, AICP
Town Planner/Zoning Enforcement Officer
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Jean Pillo, Interim Chairman
Conservation Commission
Town of Woodstock
415 Route 169
Woodstock, CT 06281

Mark A. Parker, Chairman
Inland Wetlands and Watercourses Agency
Town of Woodstock
415 Route 169
Woodstock, CT 06281

UNION TOWN OFFICIALS:

Thomas L. Fitzgerald
First Selectman
Town of Union
1043 Buckley Highway
Union, CT 06076

The Honorable Anthony Guglielmo
Senator
100 Stafford Street
Stafford Springs, CT 06076

The Honorable Penny Bacchiochi
Representative – 52nd District
37 Beverly Drive
Somers, CT 06072

Heidi Bradrick
Town Clerk
Town of Union
1043 Buckley Highway
Union, CT 06076

James George, Chairman
Planning & Zoning Commission
Town of Union
1043 Buckley Highway
Union, CT 06076

James Smith, Chairman
Zoning Board of Appeals
Town of Union
1043 Buckley Highway
Union, CT 06076

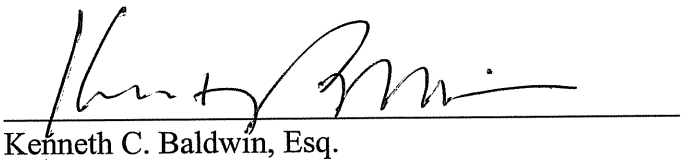
David D. Eaton
Zoning Enforcement Officer
Town of Union
1043 Buckley Highway
Union, CT 06076

Barry Kaplan, Chairman
Conservation Commission
Town of Union
1043 Buckley Highway
Union, CT 06076

James George, Chairman
Inland Wetlands and Watercourses Agency
Town of Union
1043 Buckley Highway
Union, CT 06076

Northeastern Connecticut Council of Governments
125 Putnam Pike (Route 12)
P.O. Box 759
Dayville, CT 06241

Federal Communications Commission
445 12th Street SW
Washington, DC 20554



Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103
Telephone: (860) 275-8200
Attorneys for Cellco Partnership d/b/a Verizon Wireless

LEGAL NOTICE

Notice is hereby given, pursuant to Section 16-50*l*(b) of the Connecticut General Statutes and Regulations pertaining thereto, of an Application to be submitted to the Connecticut Siting Council ("Council") on or about September 30, 2008, by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"). The Application proposes the installation of a wireless telecommunications facility in the Town of Woodstock, Connecticut. The installation would consist of a 100' x 100' leased area within a 38.96-acre parcel off Sherman Road. At this site, Cellco proposes to construct a 140-foot monopole tower. Access to the site will extend from Sherman Road to the cell site. Cellco will also install a new 12' x 30' shelter located near the base of the tower to house its radio equipment and an emergency back-up generator. The location and other features of the proposed facility are subject to change under provisions of Connecticut General Statutes § 16-50g et. seq.

On the day selected for the Siting Council public hearing on this proposal, Cellco will fly a balloon at the height of the proposed tower described above, between the hours of 8:00 a.m. and 5:00 p.m. Interested parties and residents of the Town of Woodstock are invited to review the Application during normal business hours at any of the following offices:

Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Cellco Partnership d/b/a Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Town Clerk
Town of Woodstock
Town Hall
415 Route 169
Woodstock, CT 06281

First Selectman
Town of Woodstock
Town Hall
415 Route 169
Woodstock, CT 06281

or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
(860) 275-8200
Its Attorneys

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

September 26, 2008

Via Certified Mail Return Receipt Requested

«Name_and_Address»

Re: **Cellco Partnership d/b/a Verizon Wireless**
Proposed Telecommunications Facility
Woodstock, Connecticut

Dear «Salutation»:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") will be submitting an application to the Connecticut Siting Council ("Council") on or about September 30, 2008, for approval of the construction of a telecommunications facility off Sherman Road in the Town of Woodstock, Connecticut.

The proposed facility would consist of a new 140-foot, self-supporting monopole telecommunications tower and a 12' x 30' equipment shelter located on a 38.96-acre parcel. The parcel is owned by Colin G. Hallquest. An on-site backup generator would also be installed inside Cellco's shelter. The tower would be designed to accommodate multiple carriers.

The location and other features of the proposed facility are subject to change under the provisions of Connecticut General Statutes § 16-50g et seq.

State law provides that owners of record of property which abuts a parcel on which the proposed facility may be located must receive notice of the submission of this application. This notice is directed to you either because you may be an abutting land owner or as a courtesy notice.

If you have any questions concerning the application, please direct them to either the Connecticut Siting Council or me. My address and telephone number are listed above. The Siting Council may be reached at its New Britain, Connecticut office at (860) 827-2935.

Very truly yours,

Kenneth C. Baldwin

ADJACENT PROPERTY OWNERS

SITE NAME: WOODSTOCK NW

OWNER NAME: COLIN G. HALLQUEST

OWNER ADDRESS: SHERMAN ROAD, WOODSTOCK, CT 06281

ASSESSOR'S REFERENCE: PARCEL MAP 5122, BLOCK 18, LOT 4

THE FOLLOWING INFORMATION WAS COLLECTED FROM THE TAX ASSESSOR'S RECORDS AND LAND RECORDS OF THE TOWN OF WOODSTOCK. THE INFORMATION IS CURRENT AS OF SEPTEMBER 22, 2008.

THE PARCEL IS ZONED COMMUNITY DISTRICT.

	Map/Block/Lot	Property Owner and Mailing Address	Property Address
1.	5122/18/2A	State of Connecticut Department of Environmental Protection 79 Elm Street Hartford, CT 06106	1860 Route 197
2.	5122/18/1	State of Connecticut Department of Environmental Protection 79 Elm Street Hartford, CT 06106	Route 197
3.	5122/18/3	Roger W. and Nancy M. Gale 71 Sherman Road Woodstock, CT 06281	71 Sherman Road
4.	5122/18/3A	Nancy E. Clendenen 83 Sherman Road Woodstock, CT 06281	83 Sherman Road
5.	5124/19/3	Colin Gunnar Hallquest 40 Sherman Road Woodstock, CT 06281	40 Sherman Road
6.	5122/18/5	Heidi A. Ludwig 511 Old Post Road Tolland, CT 06084	17 Noren Road

CERTIFICATION OF SERVICE

I hereby certify that a copy of the foregoing letter was sent by certified mail, return receipt requested, to each of the parties on the attached list of abutting landowners.

Sept. 26, 2008
Date

/Kenneth C. Baldwin/
Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103
Attorneys for CELLCO PARTNERSHIP
d/b/a VERIZON WIRELESS

ULS License

Cellular License - KNKN862 - Cellco Partnership

Call Sign	KNKN862	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA358 - Connecticut 2 - Windham	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	10/10/2001	Expiration	10/01/2011
Effective	03/21/2007	Cancellation	

Five Year Buildout Date

01/08/1997

Control Points

1	180 WASHINGTON VALLEY ROAD, BEDMINSTER, NJ P: (800)852-2671
2	482 PIDGEON HILL RD., WINDSOR, CT P: (860)688-5901

Licensee

FRN	0003290673	Type	Partnership

Licensee

Cellco Partnership
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Contact

Verizon Wireless
Sonya R Dutton
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity Gender

ULS License

Cellular License - KNKN862 - Cellco Partnership - Frequencies

Call Sign KNKN862 Radio Service CL - Cellular

Return to Main

A Block

824.04 - 834.99 paired with 869.04 - 879.99

845.01 - 846.48 paired with 890.01 - 891.48

ULS License

PCS Broadband License - KNLH263 - Cellco Partnership

Call Sign	KNLH263	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA319 - New London-Norwich, CT	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000 001970.00000000-001975.00000000

Dates

Grant	07/23/2007	Expiration	06/27/2017
Effective	07/23/2007	Cancellation	

Buildout Deadlines

1st	06/27/2002	2nd	

Notification Dates

1st	05/29/2002	2nd	

Licensee

FRN	0003290673	Type	Joint Venture

Licensee

Cellco Partnership
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Contact

Verizon Wireless
Sonya R Dutton
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	

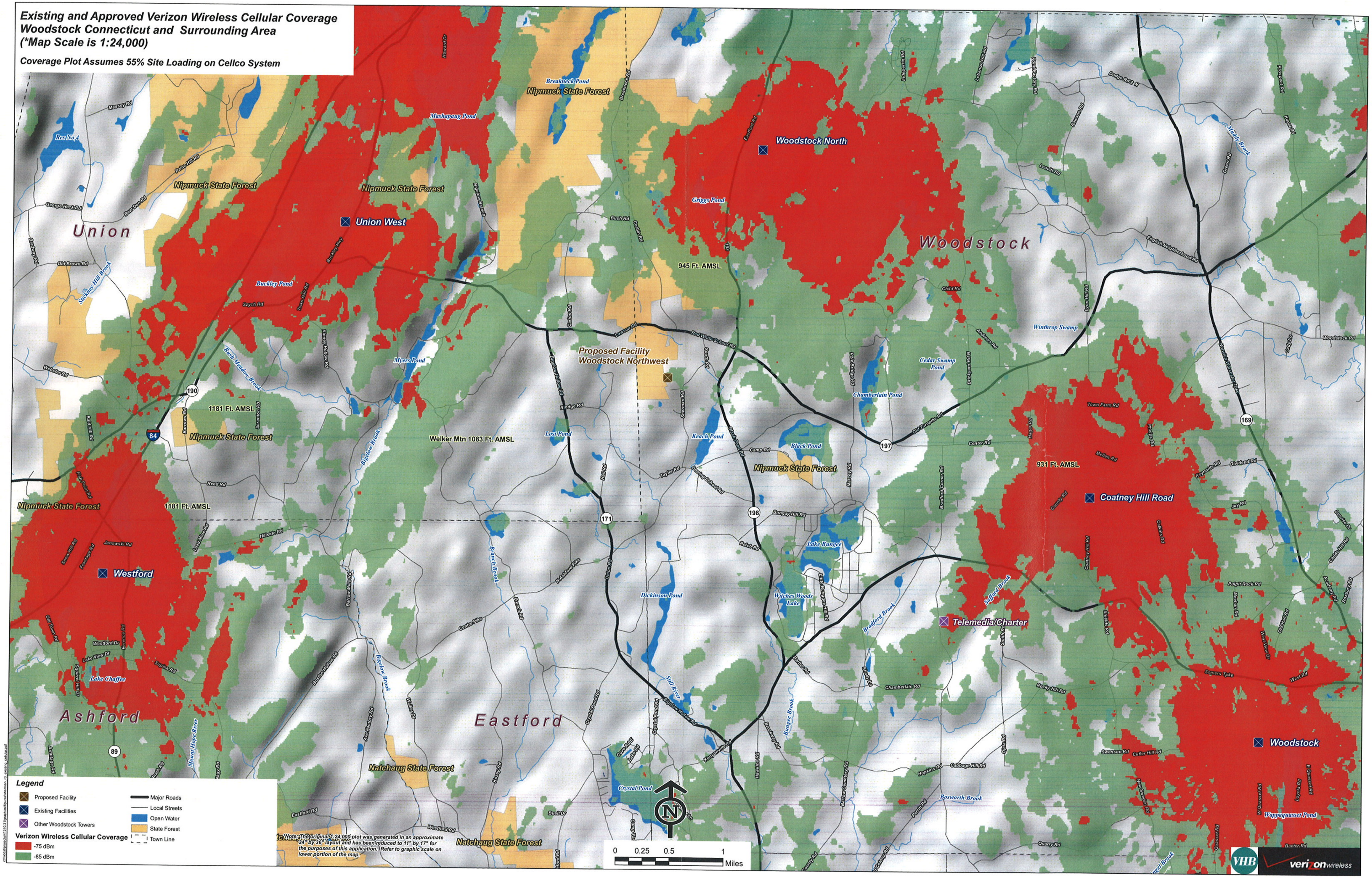
Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

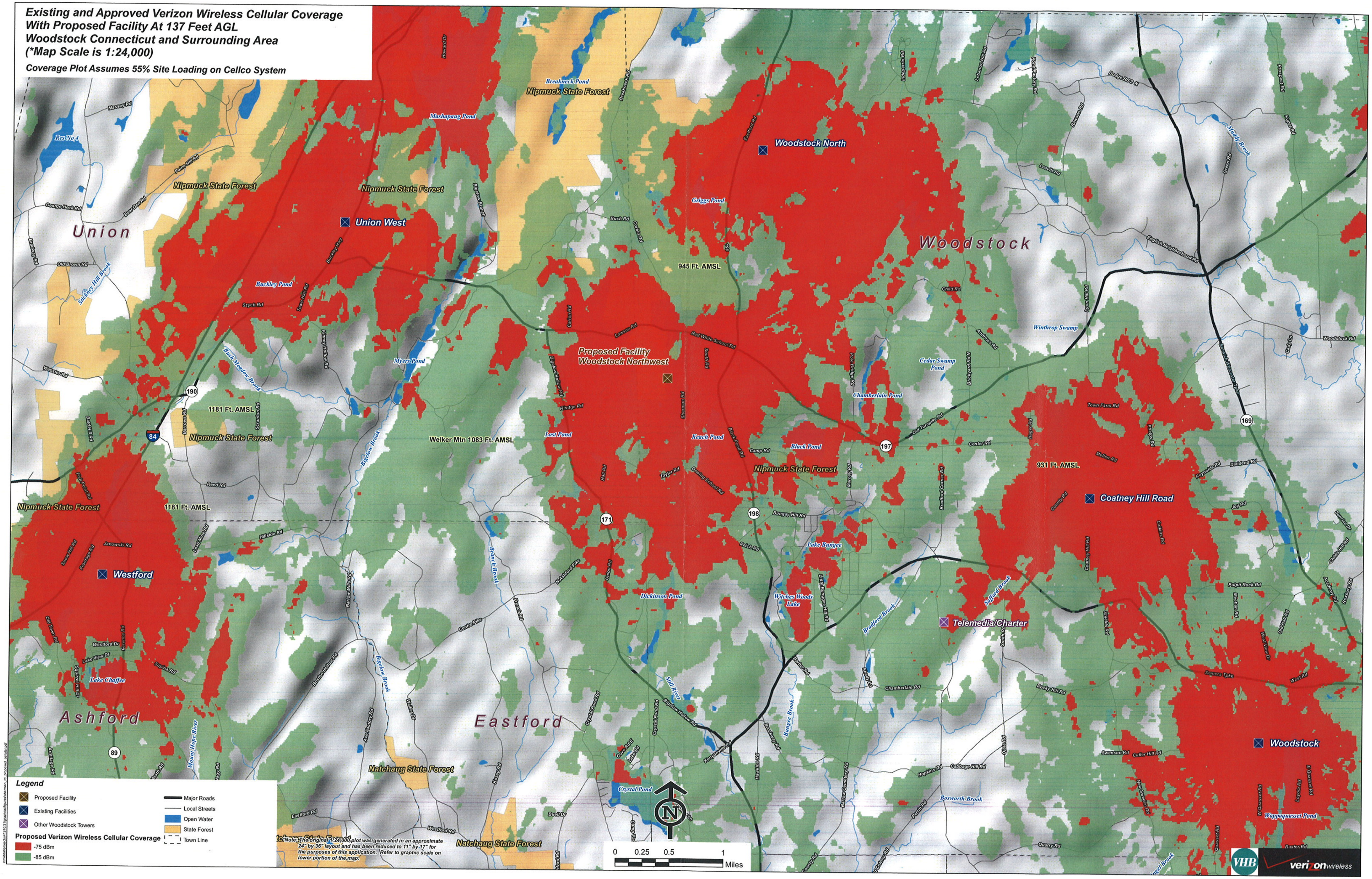
Demographics

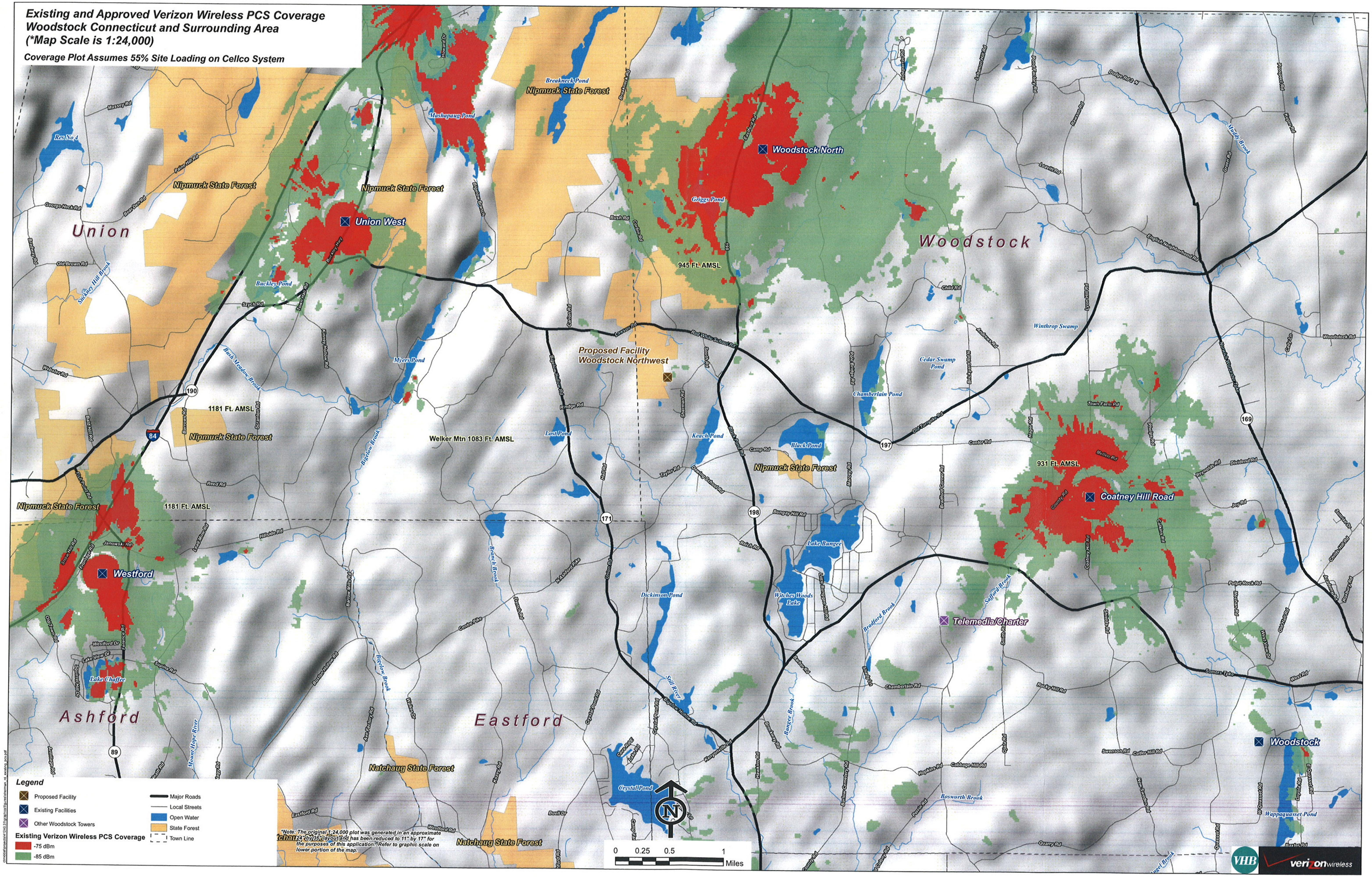
Race

Ethnicity Gender

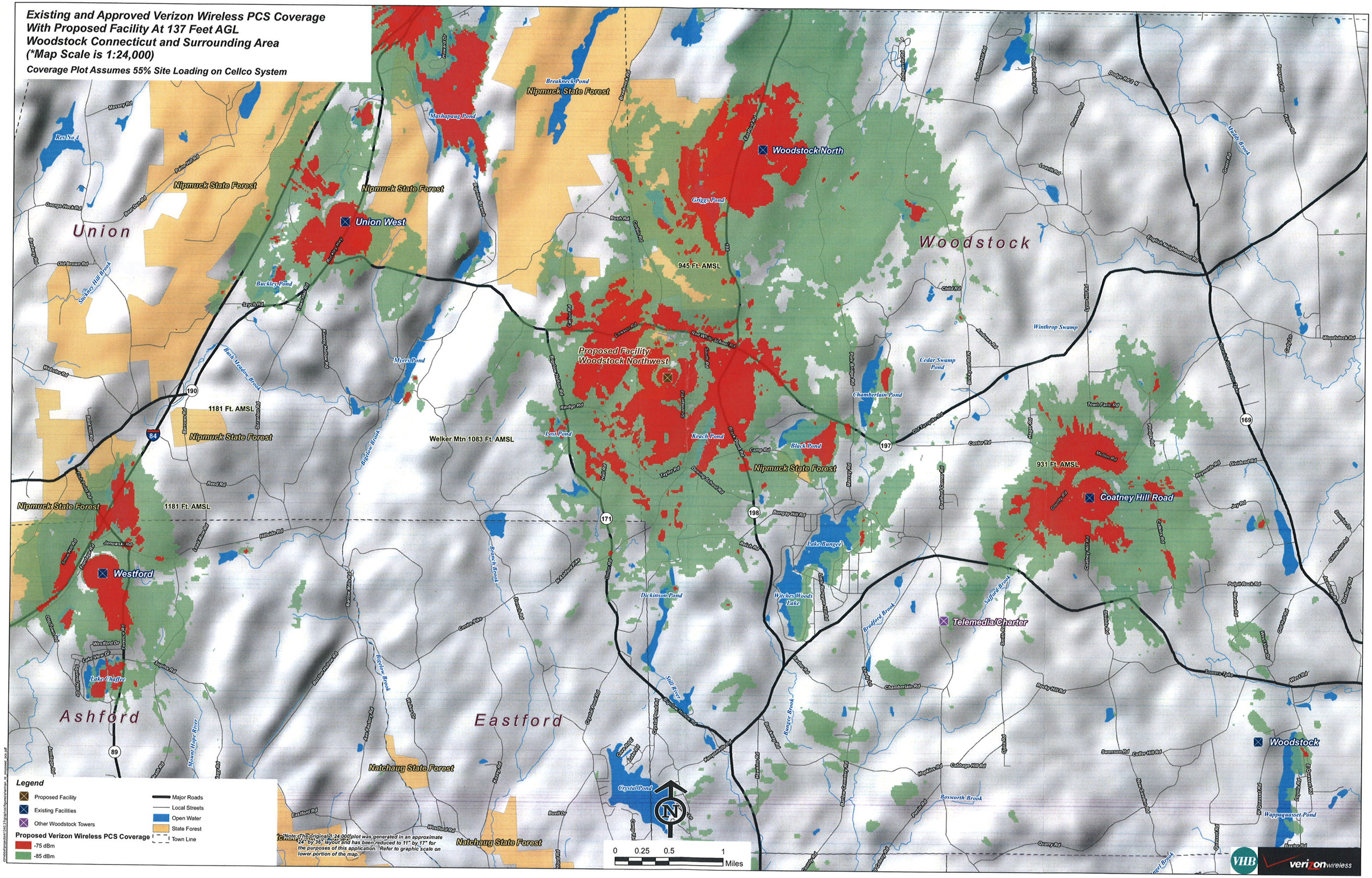


Existing and Approved Verizon Wireless Cellular Coverage
Woodstock Connecticut and Surrounding Area
(*Map Scale is 1:24,000)
Coverage Plot Assumes 55% Site Loading on Cellco System
Union
Woodstock
Eastford
Ashford
Union West
Woodstock North
Proposed Facility
Woodstock Northwest
Coatney Hill Road
Telemedia/Charter
Westford
Woodstock
945 Ft. AMSL
1181 Ft. AMSL
1181 Ft. AMSL
Welker Mtn 1083 Ft. AMSL
931 Ft. AMSL
Nipmuck State Forest
Natchaug State Forest
Legend
Proposed Facility
Existing Facilities
Other Woodstock Towers
Major Roads
Local Streets
Open Water
State Forest
Town Line
Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
*Note: The original 1:24,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0 0.25 0.5 1 Miles
VHB
verizonwireless


Existing and Approved Verizon Wireless Cellular Coverage
With Proposed Facility At 137 Feet AGL
Woodstock Connecticut and Surrounding Area
(*Map Scale is 1:24,000)
Coverage Plot Assumes 55% Site Loading on Cellco System
Nipmuck State Forest
Breakneck Pond
Mashapaug Pond
Woodstock North
Union West
Union
Woodstock
Griggs Pond
945 Ft. AMSL
Buckley Pond
Proposed Facility
Woodstock Northwest
Myers Pond
Winthrop Swamp
Cedar Swamp Pond
Chamberlain Pond
1181 Ft. AMSL
Welker Mtn 1083 Ft. AMSL
Lost Pond
Keach Pond
Black Pond
931 Ft. AMSL
Coatney Hill Road
Westford
Lake Bungee
Witches Woods Lake
Dickinson Pond
Telemedia/Charter
Lake Chaffee
Ashford
Eastford
Woodstock
Crystal Pond
Natchaug State Forest
Wappaquasset Pond
190
84
197
169
171
198
89
Legend
Proposed Facility
Existing Facilities
Other Woodstock Towers
Proposed Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Major Roads
Local Streets
Open Water
State Forest
Town Line
*Note: The original 1:24,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0 0.25 0.5 1
Miles
N
VHB
verizonwireless



Existing and Approved Verizon Wireless PCS Coverage
Woodstock Connecticut and Surrounding Area
(*Map Scale is 1:24,000)
Coverage Plot Assumes 55% Site Loading on Cellco System
Union
Woodstock
Ashford
Eastford
Union West
Woodstock North
Westford
Coatney Hill Road
Woodstock
Telemedia/Charter
Proposed Facility
Woodstock Northwest
Nipmuck State Forest
Natchaug State Forest
945 Ft. AMSL
1181 Ft. AMSL
Welker Mtn 1083 Ft. AMSL
931 Ft. AMSL
Breakneck Pond
Mashapaug Pond
Griggs Pond
Buckley Pond
Myers Pond
Lost Pond
Keach Pond
Black Pond
Lake Bungee
Witches Woods Lake
Chamberlain Pond
Cedar Swamp Pond
Winthrop Swamp
Dickinson Pond
Crystal Pond
Lake Chaffee
Wappaquasset Pond
Still River
Bigelow Brook
Mount Hope River
Legend
Proposed Facility
Existing Facilities
Other Woodstock Towers
Existing Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Major Roads
Local Streets
Open Water
State Forest
Town Line
*Note: The original 1:24,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0 0.25 0.5 1 Miles
VHB
verizonwireless


Existing and Approved Verizon Wireless PCS Coverage
With Proposed Facility At 137 Feet AGL
Woodstock Connecticut and Surrounding Area
(*Map Scale is 1:24,000)
Coverage Plot Assumes 55% Site Loading on Cellco System
Union
Woodstock
Ashford
Eastford
Union West
Woodstock North
Proposed Facility
Woodstock Northwest
Coatney Hill Road
Westford
Woodstock
Telemedia/Charter
Nipmuck State Forest
Natchaug State Forest
945 Ft. AMSL
1181 Ft. AMSL
Welker Mtn 1083 Ft. AMSL
931 Ft. AMSL
Breakneck Pond
Mashapaug Pond
Griggs Pond
Buckley Pond
Myers Pond
Lost Pond
Keach Pond
Black Pond
Chamberlain Pond
Cedar Swamp Pond
Winthrop Swamp
Lake Bungee
Witches Woods Lake
Dickinson Pond
Crystal Pond
Lake Chaffee
Wappaquasset Pond
190
84
171
198
197
169
89
Legend
Proposed Facility
Existing Facilities
Other Woodstock Towers
Proposed Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Major Roads
Local Streets
Open Water
State Forest
Town Line
Note: The original 1:24,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0 0.25 0.5 1
Miles
VHB
verizonwireless

Vertically Polarized, Log Periodic 80° / 14 dBd

LPA-80080/6CF ___

When ordering replace "___" with connector type.

Mechanical specifications

Length	1800 mm	70.9 in
Width	140 mm	5.5 in
Depth	335 mm	13.2 in
Depth with z-bracket	375 mm	14.8 in
[4] Weight	9.5 kg	21.0 lbs
Wind Area		
Fore/Aft	0.25 m^2	2.7 ft^2
Side	0.60 m^2	6.5 ft^2
Rated Wind Velocity (Safety factor 2.0)	>295 km/hr	>183 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	415 N	93.3 lbs
Side	870 N	195.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

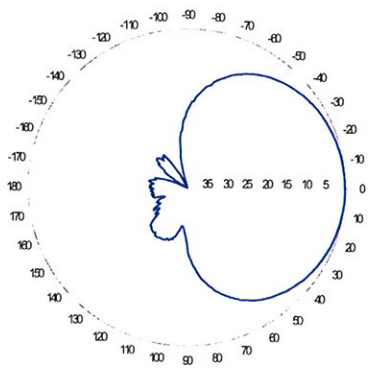
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

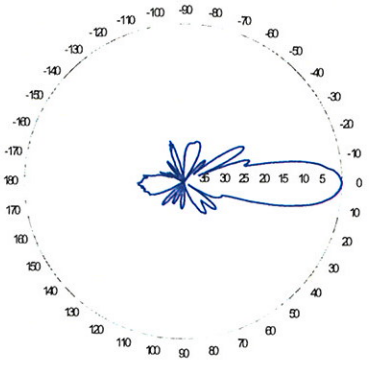
Electrical specifications

Frequency Range	806-960 MHz
Impedance	50Ω
[3] Connector(s)	NE or E-DIN 1 port / center
[1] VSWR	≤ 1.4:1
Polarization	Vertical
[1] Gain	14 dBd
[2] Power Rating	500 W
[1] Half Power Angle	
H-Plane	80°
E-Plane	10°
[1] Electrical Downtilt	0°
[1] Null Fill	10%
Lightning Protection	Direct Ground

Radiation pattern[1]



Horizontal

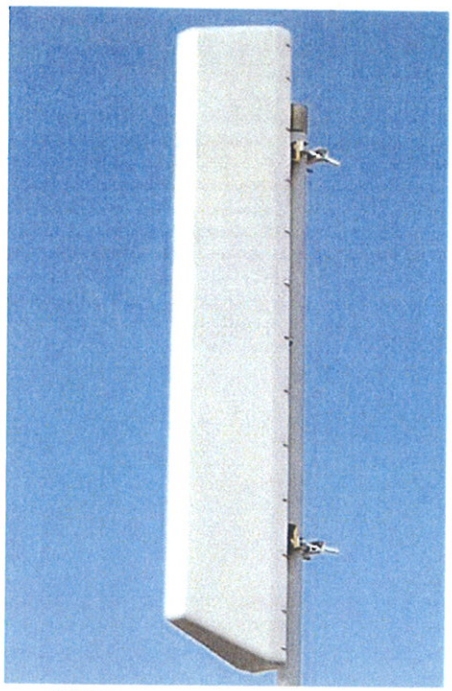


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

806-960 MHz

Amphenol Antel, Inc. The Antenna Technology Company

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Revision Date: 7/5/07

Vertically Polarized, Log Periodic 80° / 17.5 dBi

LPA-185080/12CF __ 2°

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1806 mm	71.1 in
	Width	104 mm	4.1 in
	Depth	150 mm	5.9 in
	Depth with t-bracket	178 mm	7.0 in
4)	Weight	4.8 kg	10.5 lbs
	Wind Area		
	Fore/Aft	0.19 m^2	2.0 ft^2
	Side	0.27 m^2	2.9 ft^2
	Rated Wind Velocity (Safety factor 2.0)	>270 km/hr	>168 mph
	Wind Load @ 100 mph (161 km/hr)		
	Fore/Aft	325 N	73.1 lbs
	Side	440 N	98.9 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in).

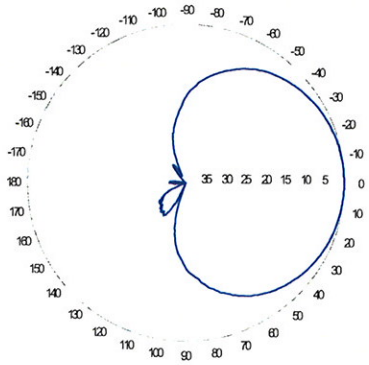
Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtil bracket kit includes the mounting bracket kit.

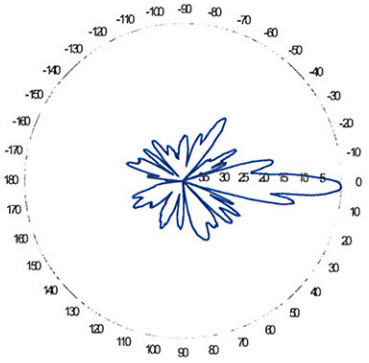
Electrical specifications

	Frequency Range	1850-1990 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.4:1
	Polarization	Vertical
1)	Gain	17.5 dBi
2)	Power Rating	250 W
1)	Half Power Angle	
	H-Plane	80°
	E-Plane	5°
1)	Electrical Downtilt	2°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



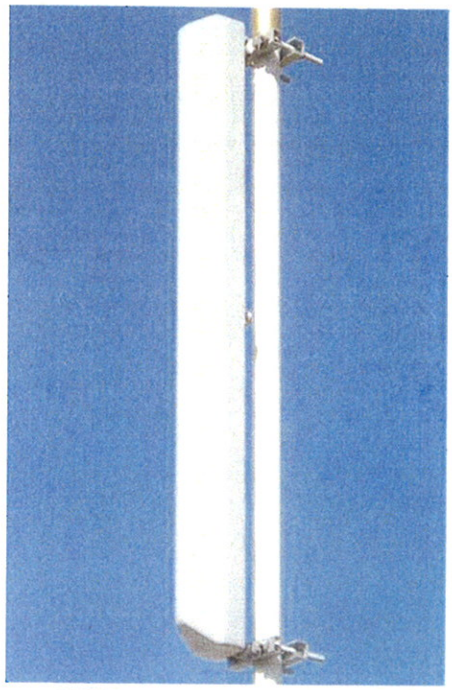
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



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1850-1990 MHz

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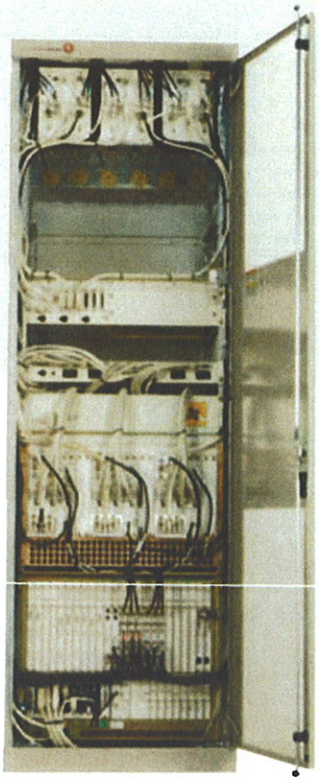
Revision Date: 7/12/07

Lucent CDMA Modular Cell 4.0B Indoor

For CDMA Networks



Lucent CDMA Modular Cell 4.0B is a high capacity base station equipped with the state-of-the-art technologies developed by Bell Labs. The product brings you outstanding carrier density and immediate OPEX savings. This indoor product can support up to 8 carriers/3 sectors per frame. It is twice the density of Modular Cell 4.0 (indoor). Modular Cell 4.0B offers full spectrum coverage in a single frame, dramatically simplifying growth patterns. As the leader in spread spectrum technology, Lucent Technologies continues to introduce innovations to the market: Multi-Carrier Radio (15MHz), Block Filters/Wideband Filters, and 40W Power Amplifier Modules are the latest assets integrated in the base station.

Features

The Modcell 4.0B indoor version offers a small footprint with exceptional carrier density in a standard ETSI cabinet.

- Indoor Single Frame Configuration
- 1-8 carriers per frame at 3 sectors (will support up to 11 carriers with Auxiliary Amplifier Frame)
- Dual Band: one cell to the ECP & mobile
- Close Loop Gain Control
- Timing and Controller Redundancy
- Integrated Power option
- Support CDMA2000™1X, and EV-DO Rev.0, with future support to EV-DO Rev. A
- IP Backhaul and Ethernet Backhaul capable
- 6-Sector option ready
- Intelligent Antenna option ready

Benefits

- Optimized for highest carrier density, smooth growth in one frame
- Conserves indoor footprint, reducing hardware and floor space requirements
- Minimizes configuration complexity
- Software-Only Carrier Add at certain carrier counts
- Flexible channel growth planning
- Designed to use existing power supply
- Grow CDMA carriers on only 2 antennas/sector
- Multi-Carrier Radio (15MHz), Block Filters/ Wideband Filters, and 40W Power Amplifier Modules

Lucent Technologies
Bell Labs Innovations

Technical Specifications

Description	Specification
1. **Configurations**	
a. Sectors	3, 4 and 6
b. Carriers	1–8 per frame at 3 sectors (up to 11 with Auxiliary Amplifier Frame)
2. **CDMA Channel Card Capacity**	12 slots; CMU IVB capable
3. **T1, E1 Facilities**	Maximum of 20 per cabinet when equipped with URC-II's
4. **User Alarms**	7 Power Alarms, 25 User Alarms
5. **GPS Antenna**	Yes
6. **Air Interface Standards**	T1A/E1A 95-A plus TSB-74; T1A/E1A 95-B for 850 MHz; CDMA 2000
7. **Frequency Bands**	850MHz/1900 MHz; 300 to 2100 MHz capable
8. **Vocoder**	8 Kbps; 8 Kbps EVRC; 13 Kbps; SMV-ready
9. **Environmental Cabinet Housing**	Standard ETSI cabinet; UL50 compliant; zero rear clearance
10. **Cabinet Access**	Front Access
11. **Operating Temperature Range**	Range: -5 to +40°C (continuous)
12. **Dimensions**	600 mm W x 600 mm D x 1880 mm H (23.6 x 23.6 x 74) inches
13. **Estimated Installed Weight**	365 kg (785 lbs.) DC [8 carriers in one cabinet]
14. **Power Options**	Integrated Power, AC 120/240 Volt Input, -48V or +24 V DC Conversion Non-integrated Power requires either + 24 VDC Input or - 48 VDC Input
15. **Power Consumption**	
a. 3 Carrier/3 Sectors	2167 W
b. 6 Carrier/3 Sectors	5449 W
c. 11 Carrier/3 Sectors	10026 W
16. **RF Power (at J4)**	25 W per carrier (850) FCC Rated short-term average 20 W per carrier (850) FCC Rated long-term average 20 W per carrier (1900) FCC Rated short-term average 16 W per carrier (1900) FCC Rated long-term average
17. **Minimal Antenna Configuration**	2 antennas/sector
18. **Filter**	Block and Wide Band Dual Duplex
19. **Growth Frame**	PCS AUX Frame, Dual Band Growth Frame
20. **Operational Accessories**	Integrated Power
21. **Channel Elements**	Channel pooling across sectors or carriers

To learn more about our comprehensive portfolio, please contact your Lucent Technologies Sales Representative or visit our web site at http://www.lucent.com.

MOB-Mod4B-i 0106

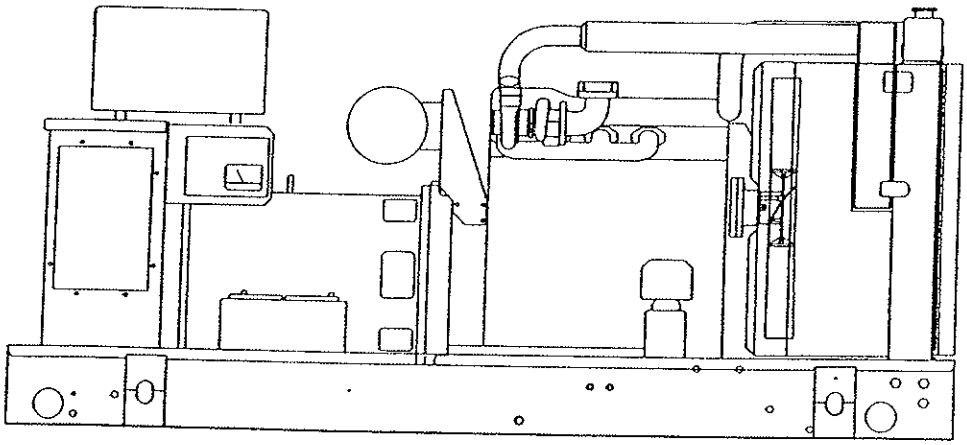
Lucent Technologies
Bell Labs Innovations

SD060

Liquid Cooled Diesel Engine Generator Sets

Continuous Standby Power Rating
60KW 60 Hz / 60KVA 50 Hz

Prime Power Rating
48KW 60 Hz /48KVA 50 Hz



Power Matched
GENERAC 3.9DTA ENGINE
Turbocharged

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.

- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ ELECTRO-MAGNETIC INTERFERENCE
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
  - ✓ SHORT CIRCUIT TESTING
  - ✓ UL 2200 COMPLIANCE AVAILABLE

- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own an GENERAC POWER SYSTEM.

- **ECONOMICAL DIESEL POWER.** Low cost operation due to modern diesel engine technology. Better fuel utilization plus lower cost per gallon provide real savings.

- **LONGER ENGINE LIFE.** Generac heavy-duty diesels provide long and reliable operating life.

- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

SD060

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%
LOAD CAPACITY (PRIME)	110%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

☐ BRUSHLESS	Magnetically coupled DC current ✓
	Eight-pole exciter w/ battery-driven field boost ✓
	Mounted outboard of main bearing ✓
☐ PERMANENT MAGNET EXCITER	Eighteen pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION	Solid-state ✓
	±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator is directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as define by NEMA MG1-32.6 and NEMA1-1.65, while the insulation system meets the requirements for the higher class "H" rating.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit is tested with an oscillograph for motor-starting ability by measuring instantaneous voltage dip.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, T.I.F. (Telephone Influence Factor) and non-linear loading have been evaluated to acceptable standards in accordance with NEMA MG1.
- Alternator is self-ventilated and drip-proof constructed.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers are capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	3.9DTA
CYLINDERS	4 in-line
DISPLACEMENT	3.9 Liter (238 cu.in.)
BORE	104 mm (4.09 in.)
STROKE	115 mm (4.52 in.)
COMPRESSION RATIO	16.5:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	4-Drop Forged Steel
CYLINDER HEAD	Cast Iron Overhead Valve
PISTONS	4- Aluminum Alloy
CRANKSHAFT	Hardened, Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Special Heat Resistant Steel
EXHAUST VALVE MATERIAL	Special Heat Resistant Steel
HARDENED VALVE SEATS	Replaceable

ENGINE GOVERNOR

☐ MECHANICAL (Gear Driven)	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	5.0%
STEADY STATE REGULATION	±0.33%
☐ ELECTRONIC	Optional
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	0.5%
STEADY STATE REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER	Full flow, Cartridge
CRANKCASE CAPACITY	18 Litres (19 qts.)
OIL COOLER	Oil to water

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP	Pre-Lubed, Self-Sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	457 mm (18 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40) (Fuel should conform to ASTM Spec.)
FUEL FILTER	Single Cartridge
FUEL INJECTION PUMP	Stanadyne
FUEL PUMP	Mechanical
INJECTORS	Multi-Hole, Nozzle Type
ENGINE TYPE	Direct Injection
FUEL LINE (Supply)	7.94 mm (0.31 in.)
FUEL RETURN LINE	6.35 mm (0.25 in.)
STARTING AID	Glow Plugs

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	30 Amps at 24 V
STARTER MOTOR	24 V
RECOMMENDED BATTERY	(2)—12 Volt, 90 A.H., 4DLT
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

GENERAC®
POWER SYSTEMS, INC.

SD060

OPERATING DATA

		STANDBY		PRIME	
		SD060		SD060	
GENERATOR OUTPUT VOLTAGE/KW-60Hz			Rated AMP		Rated AMP
120/240V, 1-phase, 1.0 pf	NOTE: Consult your Generac dealer for additional voltages.	60	250	48	200
120/208V, 3-phase, 0.8 pf		60	208	48	166
120/240V, 3-phase, 0.8 pf		60	180	48	144
277/480V, 3-phase, 0.8 pf		60	90	48	72
600V, 3-phase, 0.8 pf		60	72	48	58
GENERATOR OUTPUT VOLTAGE/KVA-50Hz			Rated AMP		Rated AMP
110/220V, 1-phase, 1.0 pf	NOTE: Consult your Generac dealer for additional voltage	48	218	38	172
115/200V, 3-phase, 0.8 pf		60	173	48	138
100/200V, 3-phase, 0.8 pf		60	173	48	138
231/400V, 3-phase, 0.8 pf		60	87	48	69
480V, 3-phase, 0.8 pf		60	72	48	58
MOTOR STARTING KVA					
Maximum at 35% instantaneous voltage dip		120/208/240V	277/480V	120/208/240V	277/480V
with standard alternator; 50/60 Hz		100/120	117/141	100/120	117/141
with optional alternator; 50/60 Hz		234/281	276/331	234/281	276/331
FUEL					
Fuel consumption—60 Hz	Load	100%	80%	100%	80%
	gal./hr.	4.3	3.6	3.6	3.0
	liters/hr.	16.3	13.5	13.6	11.3
Fuel consumption—50 Hz	gal./hr.	3.6	3.0	3.0	2.5
	liters/hr.	13.5	11.2	11.3	9.3
Fuel pump lift					
COOLING					
Coolant capacity	System - lit. (US gal.)	15.9 (4.2)		15.9 (4.2)	
	Engine - lit. (US gal.)	6.4 (1.7)		6.4 (1.7)	
	Radiator - lit. (US gal.)	9.5 (2.5)		9.5 (2.5)	
Coolant flow/min.	60 Hz - lit. (US gal.)	128 (34)		128 (34)	
	50 Hz - lit. (US gal.)	107 (28)		107 (28)	
Heat rejection to coolant 60 Hz full load	BTU/hr.	170,900		136,700	
Heat rejection to coolant 50 Hz full load	BTU/hr.	142,400		113,900	
Inlet air to radiator	60 Hz - m³/min. (cfm)	204 (7,200)		204 (7,200)	
	50 Hz - m³/min. (cfm)	170 (6004)		170 (6004)	
Max. air temperature to radiator	°C (°F)	54.4 (130)		54.4 (130)	
Max. ambient temperature	°C (°F)	48.9 (120)		48.9 (120)	
COMBUSTION AIR REQUIREMENTS					
Flow at rated power	60 Hz - cfm	209		168	
	50 Hz - m³/min.	4.7		3.8	
EXHAUST					
Exhaust flow at rated output	60 Hz - m³/min. (cfm)	15.5 (549)		12.4 (439)	
	50 Hz - m³/min. (cfm)	12.3 (434)		10 (353)	
Max recommended back pressure	"Hg	1.5		1.5	
Exhaust temperature 60 Hz (full load)	°C (°F)	524 (975)		459 (858)	
Exhaust outlet size		3"		3"	
ENGINE					
Rated RPM	60 Hz	1800		1800	
	50 Hz	1500		1500	
HP at rated KW	60 Hz	92		74	
	50 Hz	73		59	
Piston speed	60 Hz - m/min. (ft./min.)	414 (1358)		414 (1358)	
	50 Hz - m/min. (ft./min.)	345 (1132)		345 (1132)	
BMEP	60 Hz - psi	170		138	
	50 Hz - psi	161		130	
DERATION FACTORS					
Temperature					
5% for every 10°C above - °C		25		25	
2.77% for every 10°F above - °F		77		77	
Altitude					
1.1% for every 100 m above - m		1829		1829	
3.5% for every 1000 ft. above - ft.		6000		6000	

STANDARD ENGINE & SAFETY FEATURES

SD060

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Secondary Fuel Filter
- Fuel Lockoff Solenoid
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Radiator Duct Adapter

OPTIONS

OPTIONAL COOLING SYSTEM ACCESSORIES
- O Coolant Heater 120V

OPTIONAL FUEL ACCESSORIES
- O Flexible Fuel Lines
- O UL Listed Fuel Tanks
- O Base Tank Low Fuel Alarm
- O Primary Fuel Filter
- O Primary Fuel Filter with Heater

OPTIONAL EXHAUST ACCESSORIES
- O Critical Exhaust Silencer

OPTIONAL ELECTRICAL ACCESSORIES
- O Battery, 12 Volt, 135 A.H., 4DLT
- O 2A Battery Charger
- O 10A Dual Rate Battery Charger
- O Battery Heater

OPTIONAL ALTERNATOR ACCESSORIES
- O Alternator Upsizing
- O Alternator Strip Heater
- O Alternator Tropicalization
- O Voltage Changeover Switch
- O Main Line Circuit Breaker

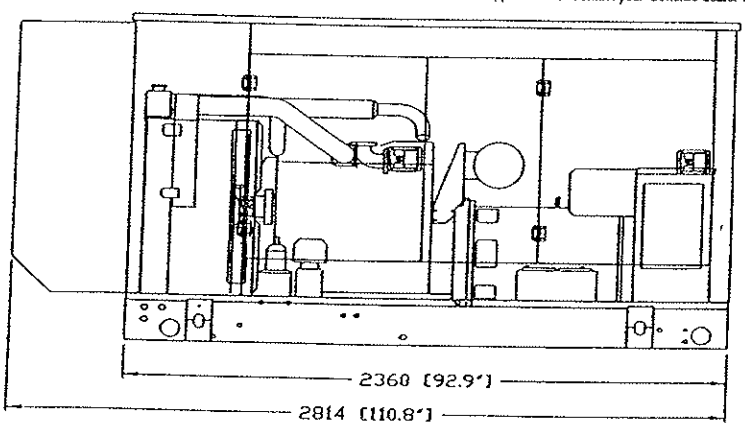
CONTROL CONSOLE OPTIONS
- O Analog Control "C" Panel (Bulletin 0151160SBY)
- O Analog/Digital Control "E" Panel (Bulletin 0161310SBY)

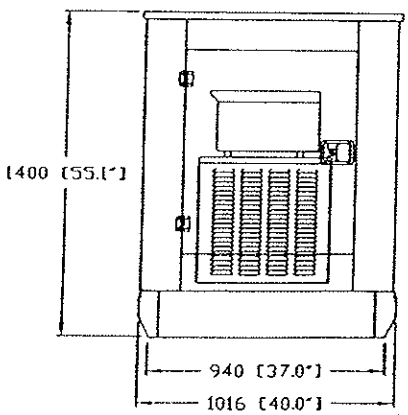
ADDITIONAL OPTIONAL EQUIPMENT
- O Automatic Transfer Switch
- O Isochronous Governor
- O 3 Light Remote Annunciator
- O 5 Light Remote Annunciator
- O 20 Light Remote Annunciator
- O Remote Relay Panels
- O Unit Vibration Isolators (Pad/Spring)
- O Oil Make-Up System
- O Oil Heater
- O 5 Year Warranties
- O Export Boxing
- O GenLink® Communications Software

OPTIONAL ENCLOSURE
- O Weather Protective
- O Sound Attenuated
- O Aluminum and Stainless Steel
- O Enclosed Muffler

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.





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262/544-4811 • FAX 262/544-4851

Bulletin 0166800SBY/Printed in USA 10.02

Site Search Summary
(Woodstock NW – Sherman Road)

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes "the narrowing process by which other possible sites were considered and eliminated." In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in the northwest portion of Woodstock ("Woodstock NW Facility") are provided below.

Site Search Process

To initiate its site selection process in an area where a coverage or capacity problem has been identified, Cellco first establishes a "site search ring" or "site search area." In any search ring or area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a particular facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they are capable of supporting Cellco's telecommunications equipment at a location and elevation that satisfies its technical requirements.

There are five (5) existing telecommunications towers within approximately six (6) miles of the Woodstock NW search area. None of these existing facilities, listed below and identified on the coverage plots included in Attachment 7 of this Application, can provide the coverage and/or capacity relief needed in the problem areas identified along Routes 197, 198 and 171 as well as local roads in the northwest portion of Woodstock.

OWNER	TYPE	LOCATION	CELLCO ANTENNA HEIGHT
George Davis (Woodstock North)	180' Lattice	1825 Route 198 Woodstock, CT	177'
TeleMedia Charter Communications	80' Guyed-Lattice	Perrin Road Woodstock, CT	N/A
Harold Bishop (Woodstock)	150' Lattice	87 West Quasset Road Woodstock, CT	134'
MCF Communications (Coatney Hill)	190' Monopole	215 Coatney Hill Road Woodstock, CT	167'
Wayne Kemp (Union West)	168' Lattice	1050 Buckley Highway Union, CT	150'

If existing towers or structures are not available or technically feasible, other locations are investigated where the construction of a new tower is required to provide adequate elevation to

satisfy Cellco's requirements. The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers, possibly with lights; those with substantial adverse impacts on densely populated residential areas; and those with limited ability to share space with other public or private telecommunications entities). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

Identification of the Woodstock NW Search Area

The purpose of the proposed Woodstock NW Facility is to provide reliable cellular and PCS coverage to significant existing coverage gaps that have been identified along Routes 198, 197 and 171, as well as local roads in the northwest portion of Woodstock. The proposed Woodstock NW Facility will also provide some limited capacity relief in Woodstock by off-loading calls from Cellco's existing and proposed adjacent cell sites, Union West, Coatney Hill and Woodstock North. The coverage gaps referenced above were identified using best server propagation modeling tools. The Woodstock NW search area was issued in September, 2006. A copy of the search area map is attached to this site search summary.

The descriptions of the individual sites investigated, which are set forth below, include sites both inside and outside the Woodstock NW search area that were analyzed and found to be technically unworkable or otherwise unavailable. This is due either to the topography in the area or the overall distance from the investigated site to the search area.

Sites Investigated in the Woodstock NW Area

In addition to the existing communications facilities listed above, Cellco identified and investigated several sites and an existing structure in Woodstock. These sites are described below.

Sites Investigated

1. Hallquest – Sherman Road – Cellco was approached by the owner of a 38.96-acre parcel off Sherman Road regarding a possible cell site location. Cellco successfully negotiated a lease with the owner and now presents this site for consideration by the Council.

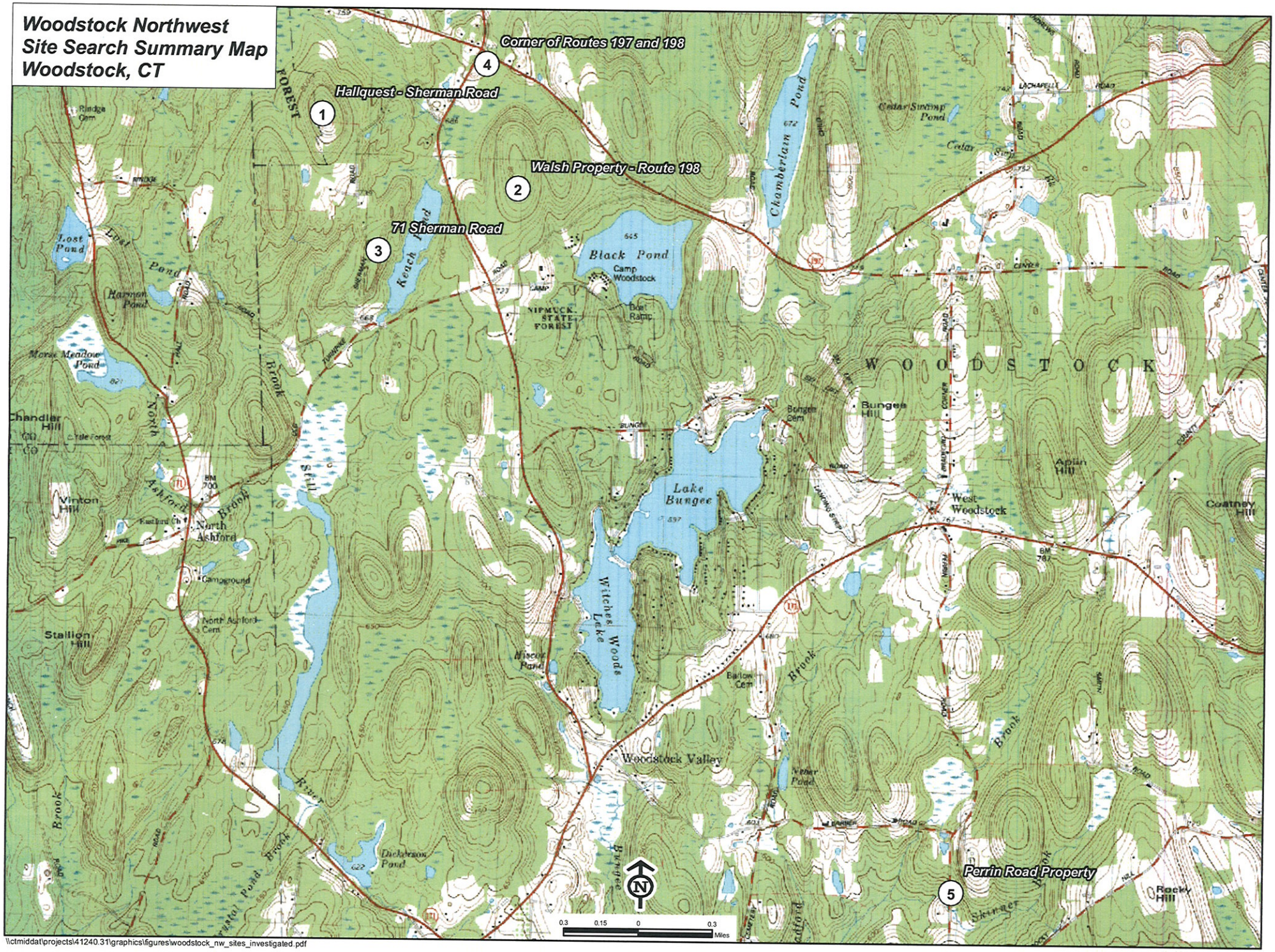
2. Walsh Property-Route 198 – Cellco investigated and ultimately signed a lease for the use of a portion of this 53.6-acre parcel. This location satisfies Cellco's primary coverage objective for its Woodstock NW search area and was presented to the Council in Docket No. 350. Following the Council's initial hearing on the Docket No. 350 application and an investigation of an alternative cell site location presented to the applicant at that time, Cellco chose to withdraw the Docket No. 350 application and pursue the Hallquest property off Sherman Road.

3. 71 Sherman Road – Cellco investigated a site located north and west of the proposed site, off Sherman Road. A site at this location could not satisfy Cellco's coverage objectives along Route 197, one of the three primary target areas of the Woodstock NW cell site.

4. Corner of Routes 197 and 198 – This is an approximately 1.2-acre parcel located at the southeasterly corner of the intersection of Routes 197 and 198. Topography in the area, particularly the hilltop on which the proposed Docket No. 350 tower was to be located prohibits Cellco from satisfying its coverage objectives along Routes 197 and 198 from this location.

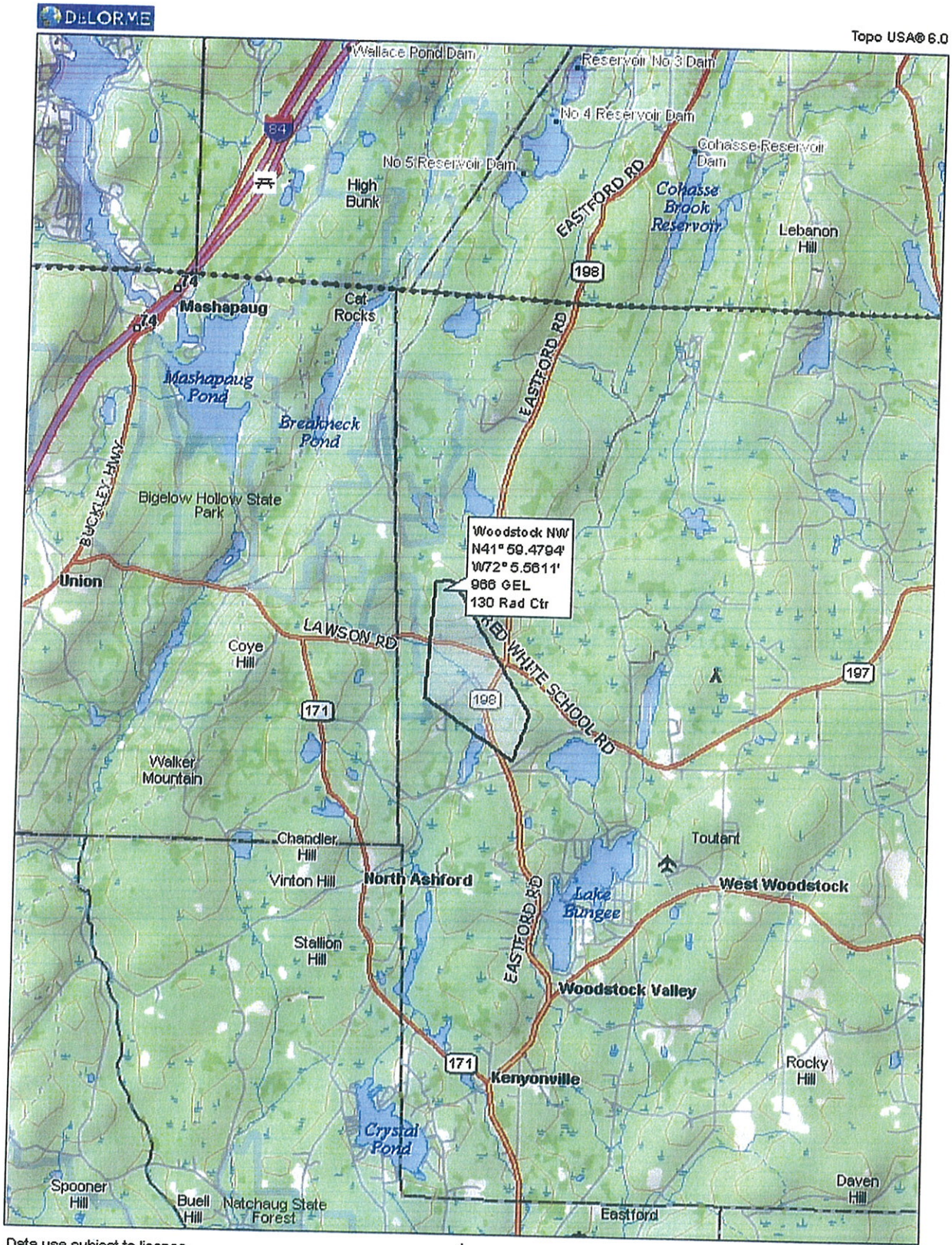
5. Perrin Road Property – This site is located off Perrin Road more than 2½ miles southeast of the proposed tower location. This site is located too far south and cannot satisfy Cellco's objectives in northwest Woodstock.

Woodstock Northwest Site Search Summary Map Woodstock, CT



\\ctmiddat\projects\41240.31\graphics\figures\woodstock_nw_sites_investigated.pdf

Woodstock NW
Search Area Map



Visual Resource Evaluation Report

Proposed Wireless Telecommunications Facility

Woodstock Northwest
Sherman Road
Woodstock, Connecticut

Prepared for 

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

September 2008

Visual Resource Evaluation

Cellco Partnership (dba Verizon Wireless) seeks approval from the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need for the construction of a wireless telecommunications facility ("Facility") to be located on property off Sherman Road in the Town of Woodstock, 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"). Portions of the Towns of Union and Eastford are contained within the Study Area.

Project Introduction

The proposed Facility includes a 140-foot tall monopole with associated ground equipment located at its base, all to be confined within a fence-enclosed, gravel-covered compound area. The proposed project area is located at approximately 905 feet Above Mean Sea Level (AMSL). Access to the Facility would follow an existing woods road located on the host property that extends to the site area in a northeasterly direction from Sherman Road. The existing woods road requires improvements to accommodate service vehicles.

Site Description and Setting

Identified in the Town of Woodstock Tax Assessors records as Map 5122/ Block 18/ Lot 4, the host property consists of 38.96 acres of mostly wooded, undeveloped land. A photograph of the proposed project area is included in Attachment A. Attachment A also contains a map that depicts the location of the proposed Facility and the limits of the Study Area. Land use within the general vicinity of the proposed Facility and host property is comprised of large tracts of undeveloped woodlands and low-density residential parcels. Segments of Route 171, Route 197 and Route 198, important regional state numbered routes, traverse the Study Area. In total, the Study Area features approximately 50 linear miles of roadways.

The topography within the Study Area is characterized by rolling hills. Ground elevations within the Study Area range from approximately 600 feet AMSL to approximately 1,110 feet AMSL. The Study Area contains approximately 272 acres of surface water, dominated in large measure by Black Pond, Keach Pond and Chamberlain Pond. The tree cover within the Study Area consists mainly of mixed deciduous hardwood species interspersed with stands of mature evergreens. The tree canopy occupies approximately 7,051 acres of the 8,042-acre study area (88%). 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 was determined to be 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 into the predictive model includes a digital elevation model (DEM) and a digital forest layer for the Study Area. The DEM was derived from the United States Geological Survey (USGS) National Elevation Dataset (NED), a seamless, publicly available elevation dataset with an approximate 30-meter resolution. The forest layer was derived through on-screen digitizing in ArcView® GIS from 2001, 2005 and 2006 digital orthophotos with 1-meter, 2-meter and 1-foot pixel resolutions, respectively.

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 infrared 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 parks and forests, recreational facilities, dedicated open space, CTDEP boat launches and other categories. This layer is useful in identifying potential visibility from any sensitive receptors that may be located within the Study Area. Lastly, based on both a review of published information and discussions with municipal officials in Woodstock, Union and Eastford, it was determined that there are several locally designated scenic roads contained within the Study Area. These include Sherman Road, Camp Road, Marcy Road and Corbin 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 September 11, 2008 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 140 feet. Once the balloon was secured at a height of 140 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. VHB staff also conducted reconnaissance from Black Pond located to the southeast of the proposed Facility. During the balloon float, the temperature was approximately 75 degrees Fahrenheit with calm wind conditions and sunny skies.

Photographic Documentation

During the balloon floats, VHB personnel drove the public road system in the Study Area to inventory those areas where the balloon was visible (and paddled Black Pond). The balloon was photographed from a number of different vantage points to document the actual view towards the proposed Facility. Several photographs where the balloon was not visible are also included. The locations of the photos are described below:

1. View from Herindeen Landing.
2. View from Route 197 at Corbin Road.
3. View from Route 197 at Herindeen Landing.

4. View from Old Turnpike Road.
5. View from Black Pond near eastern shore.
6. View from Camp Road at Route 198.
7. View from Route 198 south of Route 197.
8. View from Sherman Road west of Route 198.
9. View from Sherman Road at Moren Road.

Photographs of the balloon from the view points listed above were taken with a Nikon D-80 digital camera body and Nikon 18 to 135 mm zoom lens. For the purposes of this report, the lens was set to 50mm. "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 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

Photographic simulations were generated for the three representative locations where the balloon was visible during the in-field activities. 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 140-foot tall Facility would be visible above the tree canopy comprise approximately 30 acres, or less than one half of one percent of the 8,042-acre Study Area. As depicted on the viewshed map (provided in attachment B), much of the visibility associated with the proposed Facility occurs along an approximate 0.10-mile segment Route 197 with select areas of potential year-round visibility extending to portions of Herindeen Landing (a small residential subdivision currently under construction), and at the intersection of Route 197 and Corbin Road. Other areas of visibility indicated on the viewshed map are located on private and/or otherwise inaccessible properties within the Study Area. Overall, the rolling topography and extensive vegetative cover contained within the Study Area would serve to minimize the extent of year-round visibility associated with the proposed Facility. VHB estimates that select portions of approximately eight residential properties could have at least partial year-round views of the proposed Facility. This includes three residences located along Route 197 north of the proposed Facility; one residence located on Corbin Road just north of Route 197 (see

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

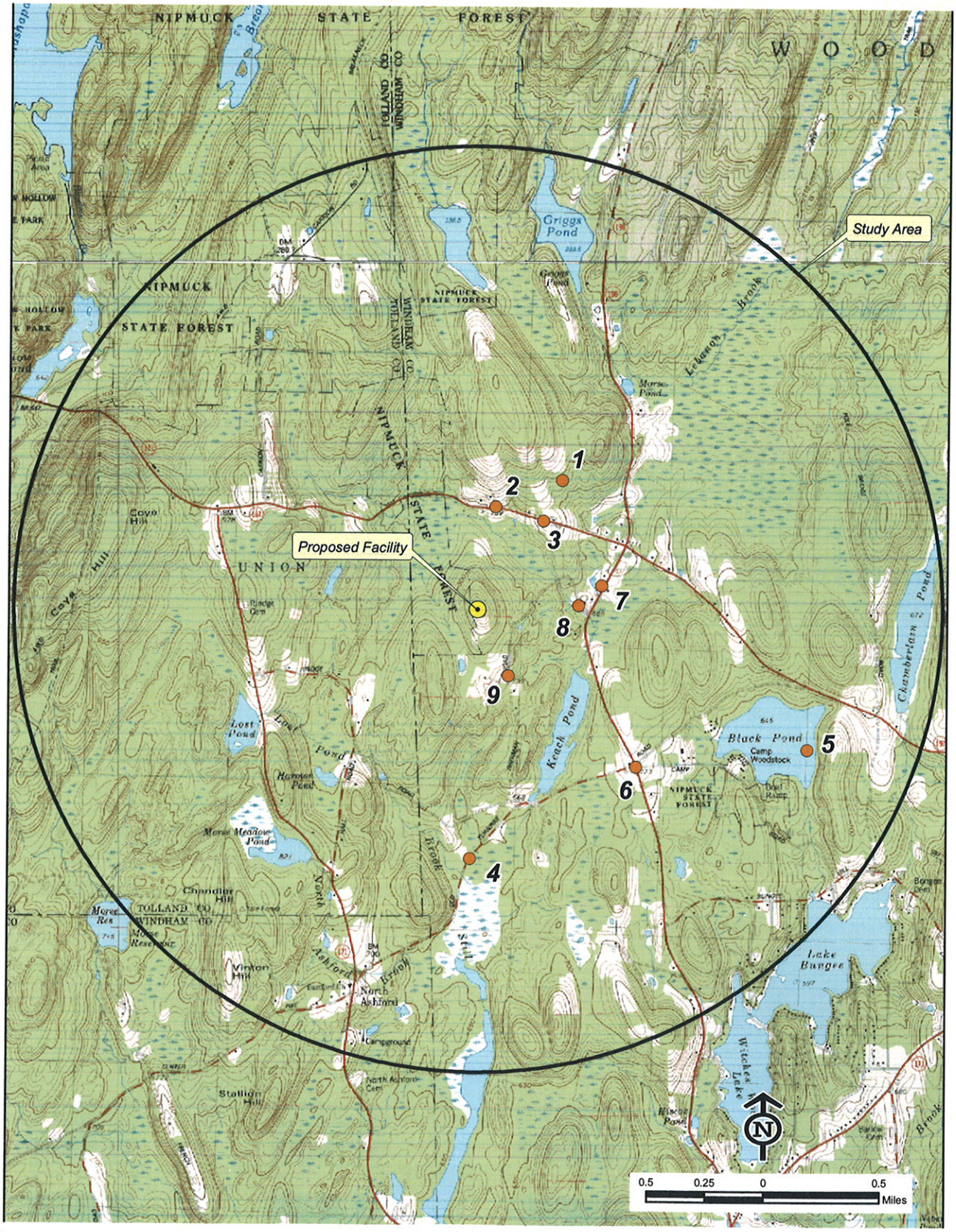
photograph #2); three residences located along Herindeen Landing; and one residence located on Moren Road directly south of the proposed Facility. No views are anticipated from Sherman Road, Marcy Road or Camp Road which are locally designated scenic roadways. Moreover, no views of the proposed Facility are anticipated from Black Pond. The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 9 acres and include the wooded areas located immediately adjacent to the proposed Facility as well as select portions of Route 197. VHB estimates that seasonal views of the proposed Facility could be achieved from portions of approximately 4 additional properties within the Study Area. Three of these residences are located along Route 197 with the remaining property located off Corbin Road.

Attachment A

Site Area Photograph, Photolog Documentation Map, Balloon Float Photographs and Photographic Simulations

Photolog Documentation

Town of
Woodstock
Connecticut



Vanasse Hangen Brustlin, Inc.

verizon wireless

Photographic Documentation

Town of
Woodstock
Connecticut

Sherman Road
Woodstock, CT

Proposed Monopole

PROPOSED PROJECT AREA

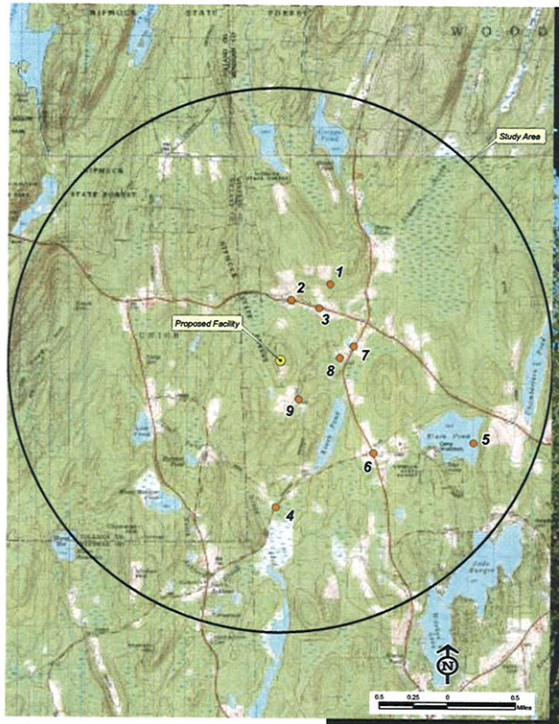
verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation

View 1

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM HERINDEEN LANDING, LOOKING SOUTHWEST

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

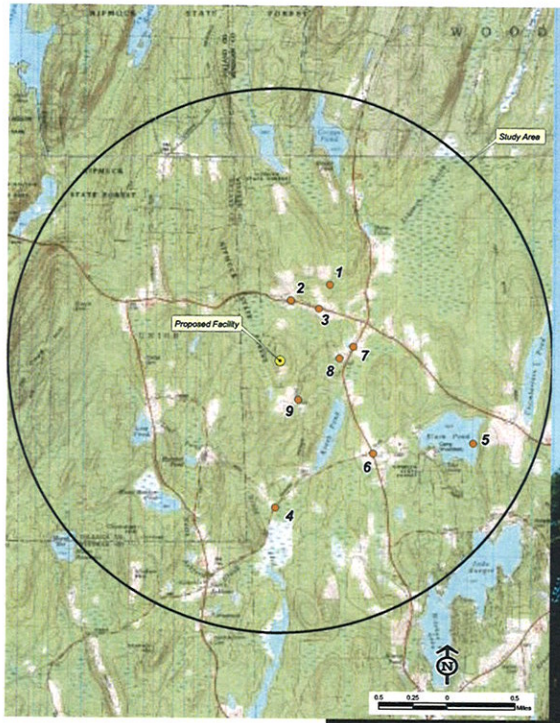
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation

View 2

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

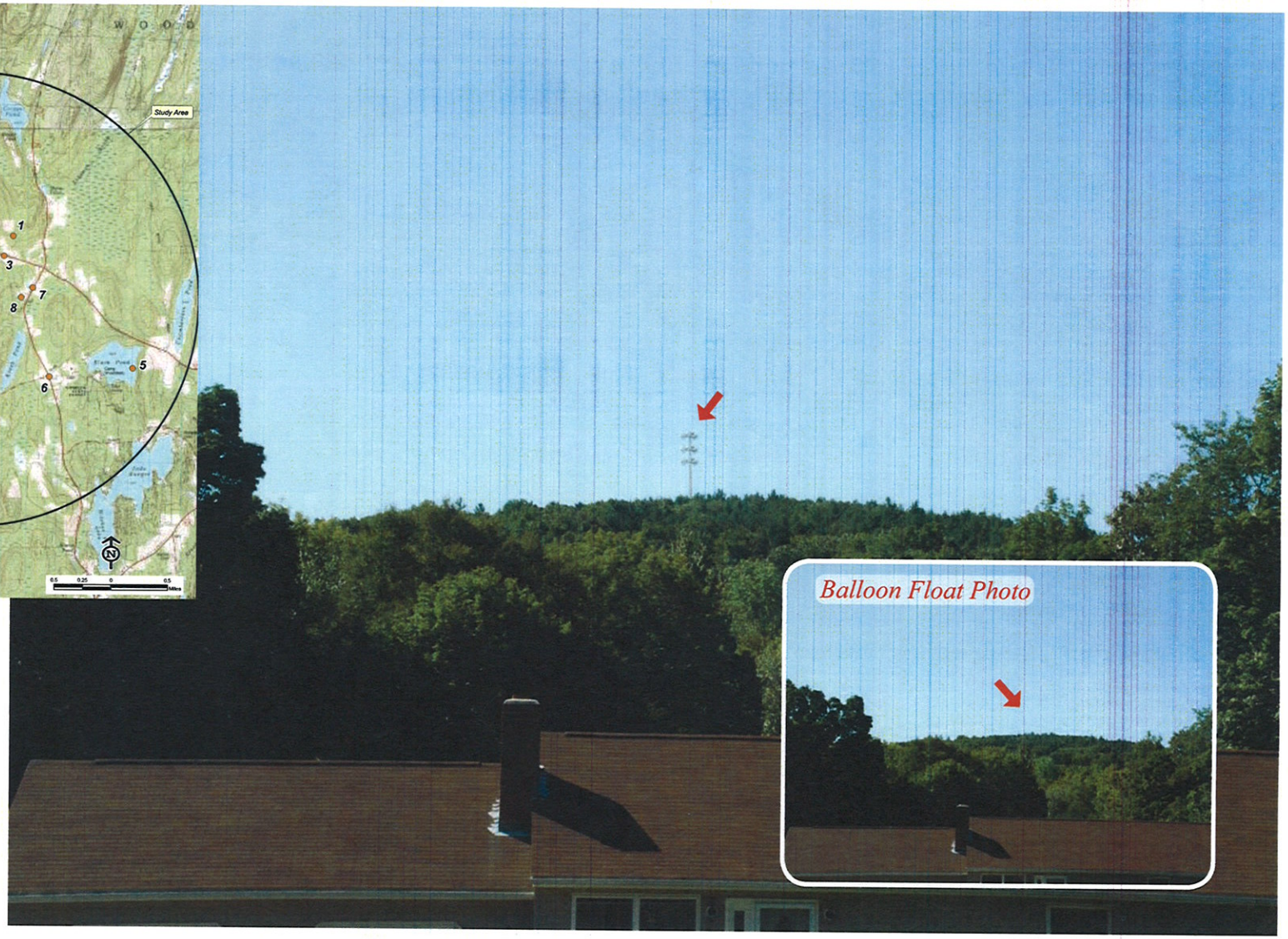


PHOTO TAKEN FROM ROUTE 197 AT CORBIN ROAD, LOOKING SOUTH

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.46 MILE +/-

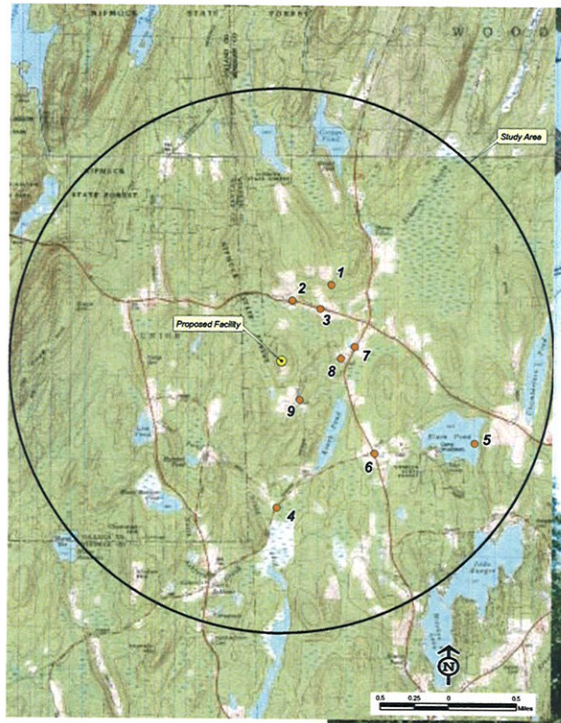
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation

View 3

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM ROUTE 197 AT HERINDEEN LANDING, LOOKING SOUTHWEST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.47 MILE +/-

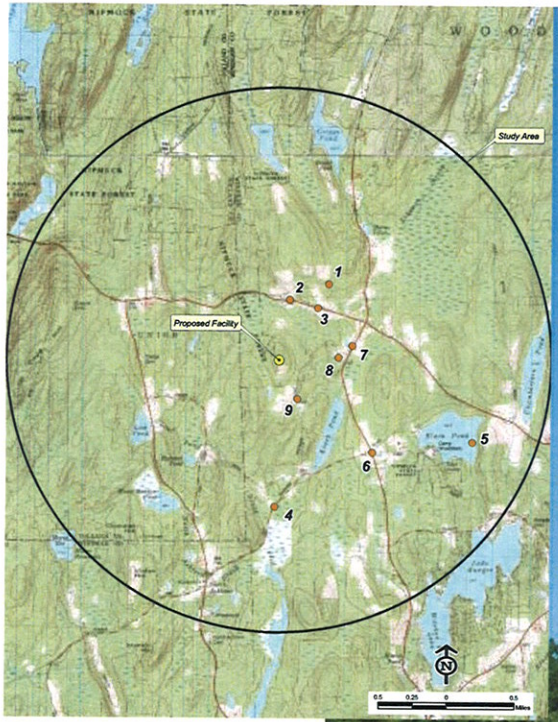
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation

View 4

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM OLD TURNPIKE ROAD, LOOKING NORTH - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.07 MILES +/-

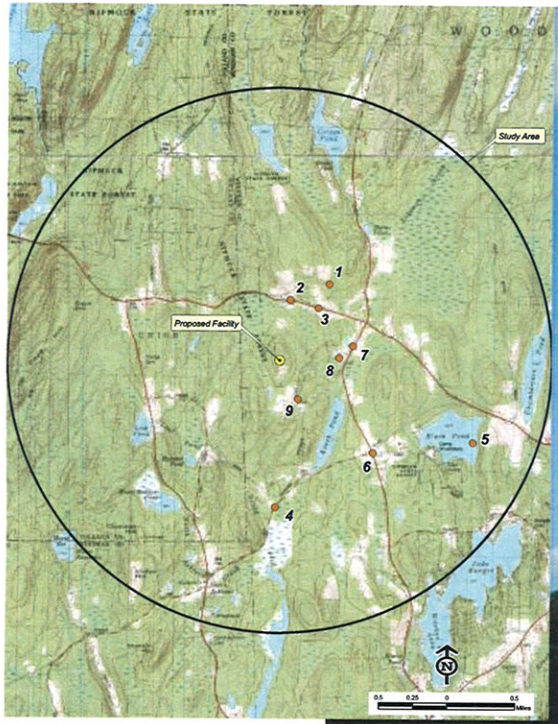
verizonwireless

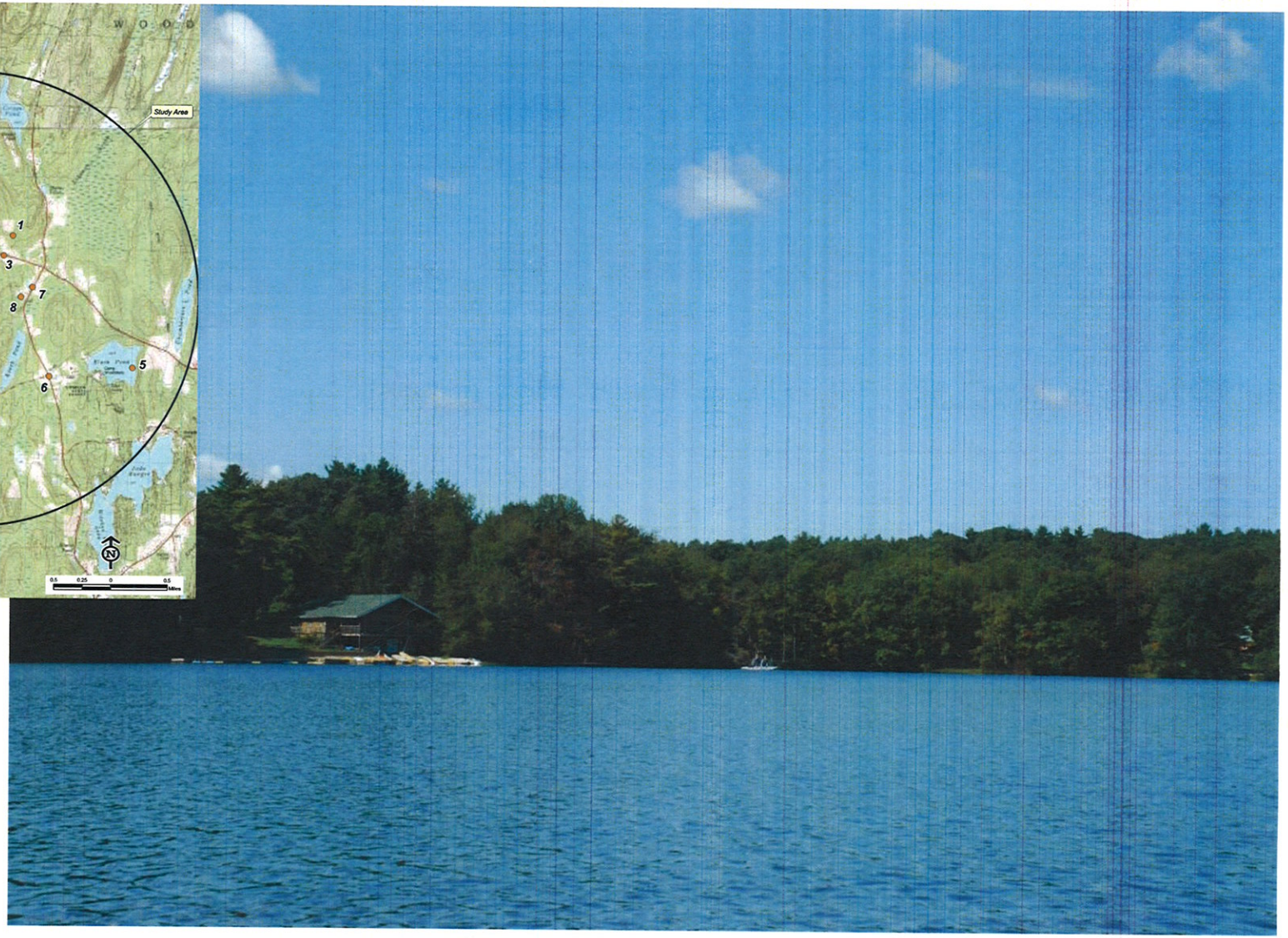
VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation

View 5

Town of
Woodstock
Connecticut





Sherman Road
Woodstock, CT

Proposed Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

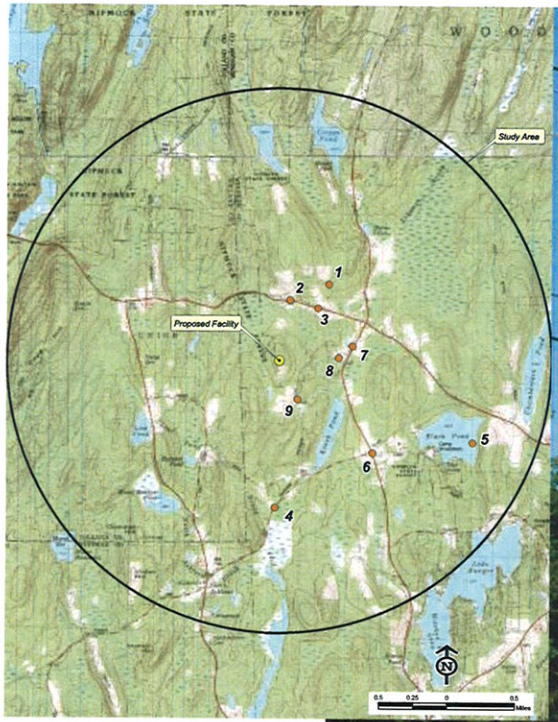
PHOTO TAKEN FROM BLACK POND NEAR EASTERN SHORE, LOOKING NORTHWEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.55 MILE +/-

Photographic Documentation

View 6

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

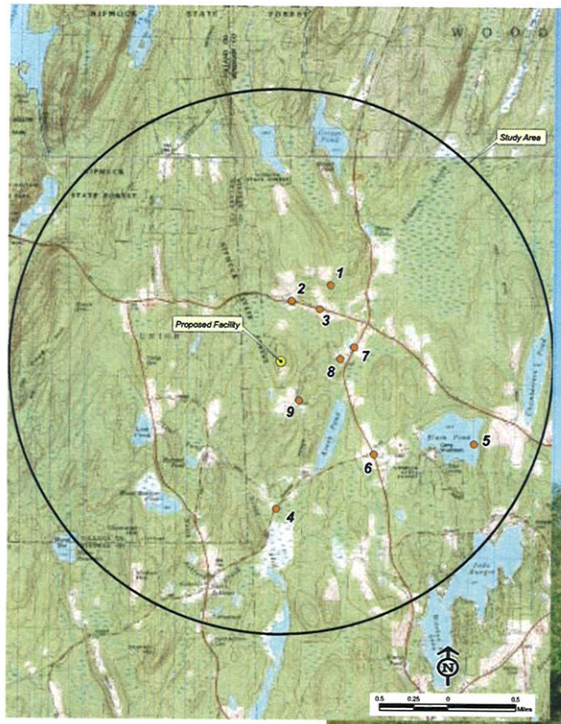
PHOTO TAKEN FROM CAMP ROAD AT ROUTE 198, LOOKING NORTHWEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.95 MILE +/-

Photographic Documentation

View 7

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM ROUTE 198 SOUTH OF ROUTE 197, LOOKING SOUTHWEST - BALLOON IS NOT VISIBLE

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

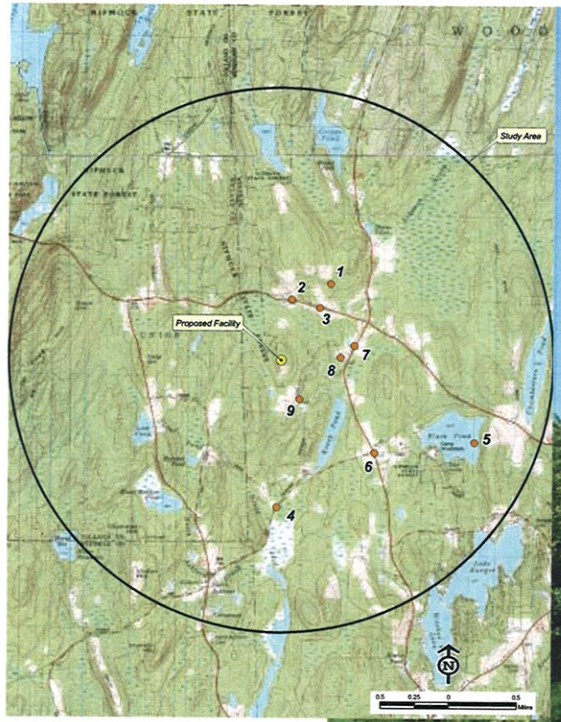
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation

View 8

Town of
Woodstock
Connecticut



Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM SHERMAN ROAD WEST OF ROUTE 198, LOOKING WEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.44 MILE +/-

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation

View 9

Town of
Woodstock
Connecticut

Sherman Road
Woodstock, CT

Proposed Monopole

PHOTO TAKEN FROM SHERMAN ROAD AT MOREN ROAD, LOOKING NORTHWEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.31 MILE +/-

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

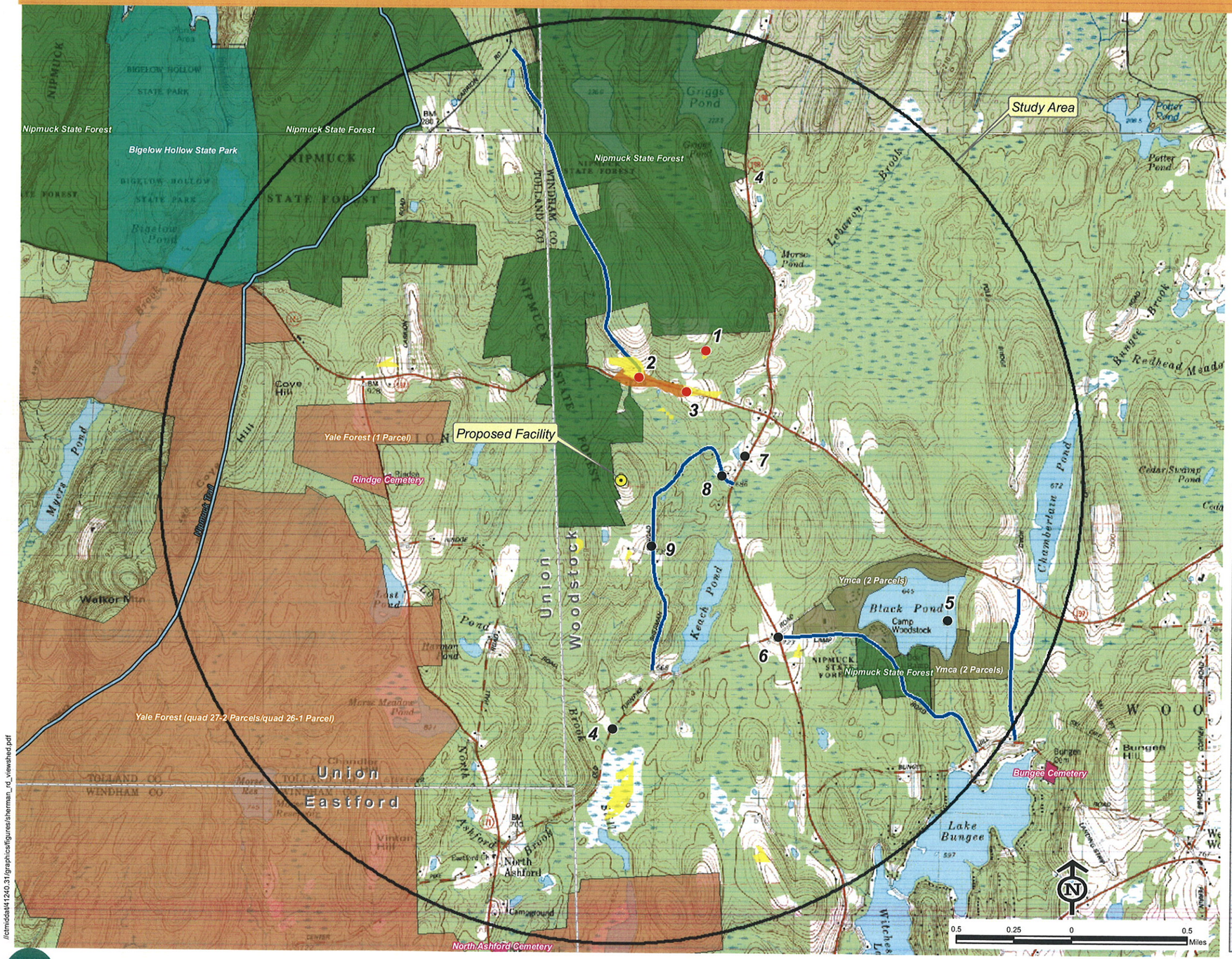
Attachment B

Viewshed Map

Viewshed Map

Topography and Forest Cover as Constraints

Town of Woodstock Connecticut



Proposed Verizon Wireless Telecommunications Facility Woodstock Northwest Sherman Road Woodstock, Connecticut

NOTE:
- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 140 feet.
- 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:
- National Elevation Dataset (NED) with a resolution of one arc-second (approximately 30 meters) produced by the USGS, 1925 - 1999
- Forest areas derived from 2001, 2005, 2006 digital orthophotos with 1-meter, 2-meter and 1-foot pixel resolutions, respectively; digitized by VHB, 2007 and 2008
- Base map comprised of Eastford, Southbridge and Westford USGS Quadrangle Map
- Protected properties data layer provided CTDEP; May, 2007
- Scenic Roads layer derived from available State and Local listings.

Map Compiled September 2008

Legend

- Proposed Monopole Location (Includes select areas of visibility approximately 500 feet around facility)

Photographs - September 11, 2008
- Balloon Not Visible
- Balloon Visible Above Trees

- Anticipated Seasonal Visibility (Approximately 9 Acres)
- Year Round Visibility (Approximately 30 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
- Nipmuck Trail (CT Blue Blaze)

//ctmiddal/41240.31/graphics/figures/sherman_rd_viewshed.pdf

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

verizon wireless

USF&W

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Date: June 2, 2008

Project No.: 41240.31

From: Matthew Davison
Registered Soil Scientist
CT Certified Forester 193

Re: Woodstock NW
Sherman Road
Woodstock, Connecticut

Policies regarding potential conflicts between proposed telecommunications facilities and federally-listed endangered and threatened species are detailed in a January 7, 2008 policy statement of the United States Department of the Interior Fish and Wildlife Service (USFWS) New England Field Office. The following Site occurs in Windham County, Connecticut. No federally-listed endangered or threatened species are known to occur in Windham County, Connecticut (refer to the enclosed listing) and as such the proposed development will not result in an adverse affect to any federally-listed endangered or threatened species. A copy of the January 2008 USFWS policy statement as well as a January 1, 2008 USFWS letter regarding federally-listed endangered and threatened species in Windham County Connecticut are enclosed for reference.

Project Site:

State: Connecticut
County: Windham
Address: Sherman Road, Woodstock, Connecticut
Latitude/Longitude Coordinates: N41°58'42.3" W72°05'39.8"
Watershed: Still River (basin # 3202)

USFWS January 7, 2008 Telecommunications Policy Statement and Federally-Listed Endangered and Threatened Species in Connecticut
USFWS January 1, 2008 No Known Federally-Listed or Endangered Species Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

January 7, 2008

To Whom It May Concern:

The U.S. Fish and Wildlife Service's (Service) New England Field Office has determined that individual project review for certain types of activities associated with communication towers **is not required.** These comments are submitted in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Due to the rapid expansion of the telecommunication industry, we are receiving a growing number of requests for review of **existing** and **new** telecommunication facilities in relation to the presence of federally-listed or proposed, threatened or endangered species, critical habitat, wilderness areas and/or wildlife preserves. We have evaluated our review process for proposed communications towers and believe that individual correspondence with this office is not required for the following types of actions relative to **existing** facilities:

1. the re-licensing of existing telecommunication facilities;
2. audits of existing facilities associated with acquisition;
3. routine maintenance of existing tower sites, such as painting, antenna or panel replacement, upgrading of existing equipment, etc.;
4. co-location of new antenna facilities on/in existing structures;
5. repair or replacement of existing towers and/or equipment, provided such activities do not significantly increase the existing tower mass and height, or require the addition of guy wires.

In order to curtail the need to contact this office in the future for individual environmental review for **existing** communication towers or antenna facilities, please note that we are not aware of any federally-listed, threatened or endangered species that are being adversely affected by any existing communication tower or antenna facility in the following states: Vermont, New Hampshire, Rhode Island, Connecticut and Massachusetts. Furthermore, we are not aware of any **existing** telecommunication towers in federally-designated critical habitats, wilderness areas or wildlife preserves. Therefore, no further consultation with this office relative to the impact of the above referenced activities on federally-listed species is required.

Future Coordination with this Office Relative to **New** Telecommunication Facilities

We have determined that proposed projects are not likely to adversely affect any federally-listed or proposed species when the following steps are taken to evaluate new telecommunication facilities:

1. If the facility will be installed within or on an existing structure, such as in a church steeple or on the roof of an existing building, no further coordination with this office is necessary. Similarly, new antennas or towers in urban and other developed areas, in which no natural vegetation will be affected, do not require further review.

2. If the above criteria cannot be met, your review of the attached lists of threatened and endangered species locations within Vermont, New Hampshire, Rhode Island, Connecticut and Massachusetts may confirm that no federally-listed endangered or threatened species are known to occur in the town or county where the project is proposed.

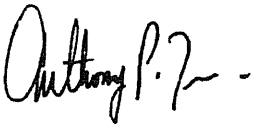
3. If a listed species is present in the town or county where the project is proposed, further review of our enclosed lists of threatened and endangered species may allow you to conclude that suitable habitat for the species will not be affected. Based on past experiences, we anticipate that there will be few, if any, projects that are likely to impact piping plovers, roseate terns, bog turtles, Jesup's milk-vetch or other such species that are found on coastal beaches, riverine habitats or in wetlands because communication towers typically are not located in these habitats.

For projects that meet the above criteria, there is no need to contact this office for further project review. A copy of this letter should be retained in your file as the Service's determination that no listed species are present, or that listed species in the general area will not be affected. Due to the high workload associated with responding to many individual requests for threatened and endangered species information, we will no longer be providing response letters for activities that meet the above criteria. This correspondence and the enclosed species lists remain valid until January 1, 2009. Updated consultation letters and species list are available on our website:

(http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm)

Thank you for your cooperation, and please contact me at 603-223-2541 for further assistance.

Sincerely yours,



Anthony P. Tur
Endangered Species Specialist
New England Field Office

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN CONNECTICUT

There is no federally-designated Critical Habitat in Connecticut. The following are federally-listed species by county:

Common Name	Species	Status	County/General Distribution
Shortnose sturgeon[1]	*Acipenser brevirostrum*	E	Atlantic coastal waters and Connecticut River
Indiana bat	*Myotis sodalis*	E	New Haven/hibernaculum
Bald eagle	*Haliaeetus leucocephalus*	D[2]	**Nesting**: Hartford, Litchfield, Middlesex, New Haven, New London, Tolland **Wintering**: entire state, major rivers
Piping plover	*Charadrius melodus*	T	**Nesting**: Fairfield, Middlesex, New Haven, New London (coastal beaches only) **Migratory:** Atlantic Coast
Roseate tern	*Sterna dougallii dougallii*	E	**Nesting**: New Haven (Faulkner Island) **Migratory:** Atlantic Coast
Bog turtle	*Clemmys muhlenbergii*	T	Fairfield, Litchfield
Dwarf wedgemussel	*Alasmidonta heterodon*	E	Hartford (Connecticut River watershed)
Puritan tiger beetle	*Cicindela puritana*	T	Hartford, Middlesex (Connecticut River floodplain)
Northeastern beach tiger beetle	*Cicindela dorsalis dorsalis*	T	Coastal beaches/extirpated
Small whorled pogonia	*Isotria medeoloides*	T	Litchfield, New Haven
Sandplain gerardia	*Agalinus acuta*	E	Hartford
Chaffseed	*Scwalbea americana*	E	New London/historic

[1] Principal responsibility for this species is vested with the National Marine Fisheries Service.
[2] Delisted. Protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

9/27/2007

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

January 1, 2008

To Whom It May Concern:

This project was reviewed for federally-listed or proposed threatened or endangered species presence per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website (http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm). Based on information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with the Service under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this review, unless additional information on listed or proposed species becomes available.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Anthony P. Tur
Endangered Species Specialist
New England Field Office

DEP

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Natural Resources
Wildlife Division
79 Elm Street, Sixth Floor
Hartford, CT 06106
Natural Diversity Data Base

June 3, 2008

Ms. Coreen Kelsey
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457-1847

re: Proposed Verizon Wireless Facility – "Woodstock NW" in Woodstock, Connecticut

Dear Ms. Kelsey:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed Verizon Wireless Facility "Woodstock NW" in Woodstock Connecticut. According to our information there are no extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur on this property.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Environmental Protection's Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592. Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Dawn M. McKay
Biologist/Environmental Analyst 3

DMM/ss

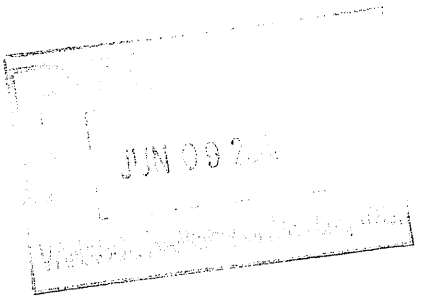
SHPO

Connecticut Commission on Culture & Tourism

Historic Preservation and Museum Division

One Constitution Plaza
Second Floor
Hartford, Connecticut
06103

860.256.2800
860.256.2763 (f)



June 3, 2008

Ms. Nicole Dentamaro
Vanasse Hangen Brustlin Inc.
54 Tuttle Place
Middletown, CT 06457-1847

Subject: Verizon Wireless Telecommunications Facilities
Sherman Road
Woodstock, CT

Dear Ms. Dentamaro:

The State Historic Preservation Office has reviewed supplemental information provided by Vanasse Hangen Brustlin Inc. regarding the above-named project. This office expects that the proposed undertaking will have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places.

This office appreciates the opportunity to have reviewed and commented upon the proposed undertaking.

This comment is provided in accordance with the National Historic Preservation Act and the Connecticut Environmental Policy Act. This comment updates and supersedes all previous correspondence regarding the proposed telecommunications facilities.

For further information, please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Karen Senich
State Historic Preservation Officer

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Date: June 9, 2008

Project No.: 41240.31

From: Dean Gustafson
Professional Soil Scientist

Re: Woodstock NW
Sherman Road
Woodstock, CT

Vanasse Hangen Brustlin, Inc. (VHB) previously completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site.

The Site was inspected on April 17, 2008. The property consists of approximately 38.961 acres of mostly wooded, undeveloped land. Based on a review of Site Plans Sheet No. C-1 prepared by Natcomm Inc. (latest revised date 05-20-08) VHB understands that Verizon Wireless proposes to construct a wireless communications facility in an existing, cleared, upland area near a future residence on Sherman Road in Woodstock, CT. This tower will be accessed through an existing gravel road that would serve the residence. The access road, which will require limited improvements for the proposed Verizon Wireless facility, is 20 feet from Wetland 1 and 50 feet from Wetland 2. Although work is proposed in proximity to nearby wetland resource areas, no direct impact to wetlands is proposed for the Verizon Wireless development and no adverse impacts to wetland resources is anticipated.

In addition, as no direct impact to federal wetlands is associated with Verizon Wireless' construction activities, **NO significant change in surface features** (e.g., wetland fill, deforestation or water diversion) will result in accordance with the National Environmental Policy Act Categorical Exclusion checklist.

Vanasse Hangen Brustlin, Inc.

WETLANDS DELINEATION REPORT

Date: May 14, 2008

Project No.: 41240.31

Prepared For: Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Site Location: Sherman Road, Woodstock, Connecticut

Site Map: Wetlands Flagging Survey Map, Dated April 17, 2008

Inspection Date: April 17, 2008

Field Conditions: Weather: sunny, 60's
Snow Depth: 0 inches
General Soil Moisture: moist
Frost Depth: 0 inches

Type of Wetlands Identified and Delineated:

Connecticut Inland Wetlands and Watercourses	☒
Tidal Wetlands	☐
U.S. Army Corps of Engineers	☐

Local Regulated Upland Review Areas: Wetlands: 100 feet Watercourses (perennial): 125 feet

Field Numbering Sequence of Wetlands Boundary: Connecticut - WF 1-01 to 1-26, WF 2-01 to 2-10 (closed loop)

[as depicted on attached wetland sketch map]

The classification systems of the National Cooperative Soil Survey, the U.S. Department of Agriculture, Natural Resources Conservation Service, County Soil Survey Identification Legend, Connecticut Department of Environmental Protection and United States Army Corps of Engineers New England District were used in this investigation.

All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

The wetlands delineation was conducted and reviewed by:

Matthew Davison
Registered Soil Scientist

Enclosures

54 Tuttle Place
Middletown, Connecticut 06457-1847
860.632.1500 ▪ FAX 860.632.7879
email: info@vhb.com
www.vhb.com

Attachments

- Wetland Delineation Field Form
- Soil Map
- Soil Report
- Wetland Delineation Sketch Map

Wetland Delineation Field Form

Project Address:	Sherman Road, Woodstock, Connecticut	Project Number:	41240.31
Inspection Date:	April 17, 2008	Inspector:	Matthew Davison
Wetland I.D.:	Wetland 1		

Field Conditions:	Weather: sunny, 60's	Snow Depth: 0 inches
	General Soil Moisture: moist	Frost Depth: 0 inches
Type of Wetland Delineation:	Connecticut ☒	
	ACOE ☐	
	Tidal ☐	
Field Numbering Sequence: WF 1-01 to 1-26		

WETLAND HYDROLOGY:

NONTIDAL

Regularly Flooded ☐	Irregularly Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Hillside seep wetland.		

TIDAL

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Seasonally Flooded ☐	Temporarily Flooded ☐	
Comments: N/A		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments:		

CLASS:

Emergent ☒	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: Forested hillside seep wetland. Logging activity has resulted in some minor disturbance (rutting and logging debris within wetland). Vigorous carex and juncus populations are present.		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Comments: N/A		

SPECIAL AQUATIC HABITAT:

Vernal Pool ☐	Other ☐	
Comments: N/A		

Wetland Delineation Field Form (Cont.)

MAPPED SOILS:

SOIL SERIES	WET	UP	NRCS MAPPED	FIELD IDD/ CONFIRMED
Canton	☐	☒	☒	☒
Charlton	☐	☒	☒	☒
Sutton	☐	☒	☐	☒
Ridgebury	☒	☐	☐	☒
Leicester	☒	☐	☐	☒

DOMINANT PLANTS:

white ash	
black birch	
sugar maple	
carex	
juncus	

WETLAND NARRATIVE:

Forested hillside seep wetland. This wetland area exhibits evidence of seasonal surface water flow as scouring, exposed rocks and tree roots. Recent logging activity has resulted in a relatively open tree canopy. Abundant sunlight has encouraged the development of vigorous carex and juncus populations. This wetland ends at Sherman Road where flows appear to infiltrate (no culvert is present beneath Sherman Road).

Wetland Delineation Field Form

Project Address:	Sherman Road, Woodstock, Connecticut	Project Number:	41240.31
Inspection Date:	April 17, 2008	Inspector:	Matthew Davison
Wetland I.D.:	Wetland 2		

Field Conditions:	Weather: sunny, 60's	Snow Depth: 0 inches
	General Soil Moisture: moist	Frost Depth: 0 inches
Type of Wetland Delineation:	Connecticut ☒	
	ACOE ☐	
Field Numbering Sequence: WF 2-01 to 2-10 (closed loop)		

WETLAND HYDROLOGY:

NONTIDAL

Regularly Flooded ☐	Irregularly Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Hillside seep wetland.		

TIDAL

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Seasonally Flooded ☐	Temporarily Flooded ☐	
Comments: N/A		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments:		

CLASS:

Emergent ☒	Scrub-shrub ☐	Forested ☐
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: Emergent hillside seep wetland. Logging activity has resulted in abundant tree canopy openings. Vigorous carex and juncus populations are present.		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Comments: Intermittent flow and channelization are present where seep originates. Flow dissipates and becomes diffuse immediately down slope.		

SPECIAL AQUATIC HABITAT:

Vernal Pool ☐	Other ☐	
Comments: N/A		

Wetland Delineation Field Form (Cont.)

MAPPED SOILS:

SOIL SERIES	WET	UP	NRCS MAPPED	FIELD IDD/ CONFIRMED
Canton	☐	☒	☒	☒
Charlton	☐	☒	☒	☒
Sutton	☐	☒	☐	☒
Ridgebury	☒	☐	☐	☒
Leicester	☒	☐	☐	☒

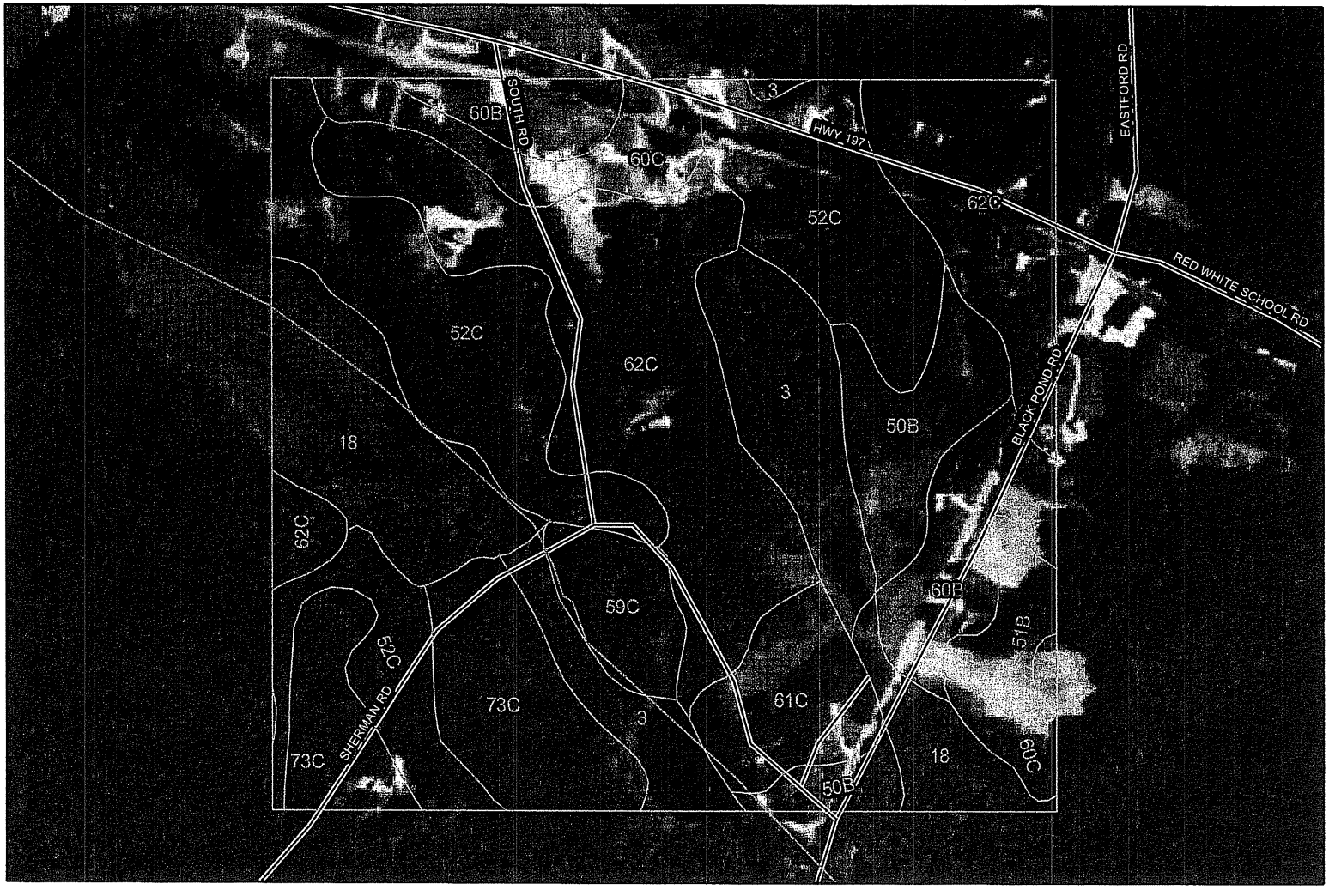
DOMINANT PLANTS:

black birch	
Multiflora rose	
juncus	
carex	

WETLAND NARRATIVE:

Isolated emergent hillside seep wetland. At its point of origin this wetland is characterized by intermittent flow and channelization. This flow becomes diffuse immediately down slope. Flows appear to infiltrate at the eastern tip of the wetland area. This wetland area maintains a hydrologic connection to wetland 1, located down slope, via groundwater flows. Abundant sunlight has encouraged the development of vigorous carex and juncus populations.

Soil Map–State of Connecticut
(Sherman Road, Woodstock, Connecticut)



N

0 50 100 200 300 Meters

0 250 500 1,000 1,500 Feet

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 18N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 6, Mar 22, 2007

Date(s) aerial images were photographed: 4/12/1991

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, extremely stony	8.3	8.5%
18	Catden and Freetown soils	9.6	10.0%
50B	Sutton fine sandy loam, 3 to 8 percent slopes	5.6	5.7%
51B	Sutton fine sandy loam, 2 to 8 percent slopes, very stony	2.0	2.1%
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	20.8	21.4%
59C	Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony	2.8	2.9%
60B	Canton and Charlton soils, 3 to 8 percent slopes	6.5	6.7%
60C	Canton and Charlton soils, 8 to 15 percent slopes	4.9	5.1%
61C	Canton and Charlton soils, 8 to 15 percent slopes, very stony	4.1	4.3%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	23.6	24.4%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	8.7	8.9%
Totals for Area of Interest (AOI)		96.8	100.0%

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

State of Connecticut

Description Category: SOI

Map Unit: 3—Ridgebury, Leicester, and Whitman soils, extremely stony

Ridgebury, Leicester And Whitman Soils, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 50 inches (940 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Ridgebury soils, 35 percent Leicester soils, 15 percent Whitman soils. 10 percent minor components. Ridgebury soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is 20 to 30 inches to densic material. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 2.5 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 3 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 5 inches; fine sandy loam 5 to 14 inches; fine sandy loam 14 to 21 inches; fine sandy loam 21 to 60 inches; sandy loam Leicester soils This component occurs on upland drainageway and depression landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 9 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 7 inches; fine sandy loam 7 to 10 inches; fine sandy loam 10 to 18 inches; fine sandy loam 18 to 24 inches; fine sandy loam 24 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam Whitman soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from gneiss, schist, and granite. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is 12 to 20 inches to densic material. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 1.9 inches (very low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is occasional. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 9 inches; fine sandy loam 9 to 16 inches; fine sandy loam 16 to 22 inches; fine sandy loam 22 to 60 inches; fine sandy loam

Map Unit: 18—Catden and Freetown soils

Catden And Freetown Soils This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 32 to 47 inches (813 to 1194 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Catden soils, 40 percent Freetown soils. 20 percent minor components. Catden soils This component occurs on depression landforms. The parent material consists of woody and herbaceous organic material. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The available water capacity is about 24.4 inches (very high). The weighted average shrink-swell potential in 10 to 60 inches is about 10.0 LEP (very high). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 2 inches; muck 2 to 18 inches; muck 18 to 47 inches; muck 47 to 49 inches; muck 49 to 61 inches; muck Freetown soils This component occurs on depression landforms. The parent material consists of woody and herbaceous organic material. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The available water capacity is about 33.1 inches (very high). The weighted average shrink-swell potential in 10 to 60 inches is about 10.0 LEP (very high). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 4 inches; peat 4 to 10 inches; peat 10 to 22 inches; muck 22 to 35 inches; muck 35 to 41 inches; muck 41 to 55 inches; muck 55 to 71 inches; muck 71 to 91 inches; muck

Map Unit: 50B—Sutton fine sandy loam, 3 to 8 percent slopes

Sutton Fine Sandy Loam, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Sutton soils. 20 percent minor components. Sutton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.5 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2w Typical Profile: 0 to 6 inches; fine sandy loam 6 to 12 inches; fine sandy loam 12 to 24 inches; fine sandy loam 24 to 28 inches; fine sandy loam 28 to 36 inches; gravelly fine sandy loam 36 to 65 inches; gravelly sandy loam

Map Unit: 51B—Sutton fine sandy loam, 2 to 8 percent slopes, very stony

Sutton Fine Sandy Loam, 2 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Sutton soils. 20 percent minor components. Sutton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, gneiss, and schist. The slope ranges from 2 to 8 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.3 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 6 inches; fine sandy loam 6 to 12 inches; fine sandy loam 12 to 24 inches; fine sandy loam 24 to 28 inches; fine sandy loam 28 to 36 inches; gravelly fine sandy loam 36 to 65 inches; gravelly sandy loam

Map Unit: 52C—Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony

Sutton Fine Sandy Loam, 2 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Sutton soils. 20 percent minor components. Sutton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, gneiss, and schist. The slope ranges from 2 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.3 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 6 inches; fine sandy loam 6 to 12 inches; fine sandy loam 12 to 24 inches; fine sandy loam 24 to 28 inches; fine sandy loam 28 to 36 inches; gravelly fine sandy loam 36 to 65 inches; gravelly sandy loam

Map Unit: 59C—Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony

Gloucester Gravelly Sandy Loam, 3 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 50 degrees F. (7 to 10 degrees C.) This map unit is 80 percent Gloucester soils. 20 percent minor components. Gloucester soils This component occurs on upland hill landforms. The parent material consists of sandy and gravelly melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is somewhat excessively drained. The slowest permeability within 60 inches is about 5.95 in/hr (rapid), with about 3.0 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; gravelly sandy loam 4 to 12 inches; gravelly sandy loam 12 to 25 inches; very gravelly loamy sand 25 to 35 inches; very gravelly loamy coarse sand 35 to 60 inches; very gravelly loamy coarse sand

Map Unit: 60B—Canton and Charlton soils, 3 to 8 percent slopes

Canton And Charlton Soils, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 60C—Canton and Charlton soils, 8 to 15 percent slopes

Canton And Charlton Soils, 8 To 15 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 61C—Canton and Charlton soils, 8 to 15 percent slopes, very stony

Canton And Charlton Soils, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 62C—Canton and Charlton soils, 3 to 15 percent slopes, extremely stony

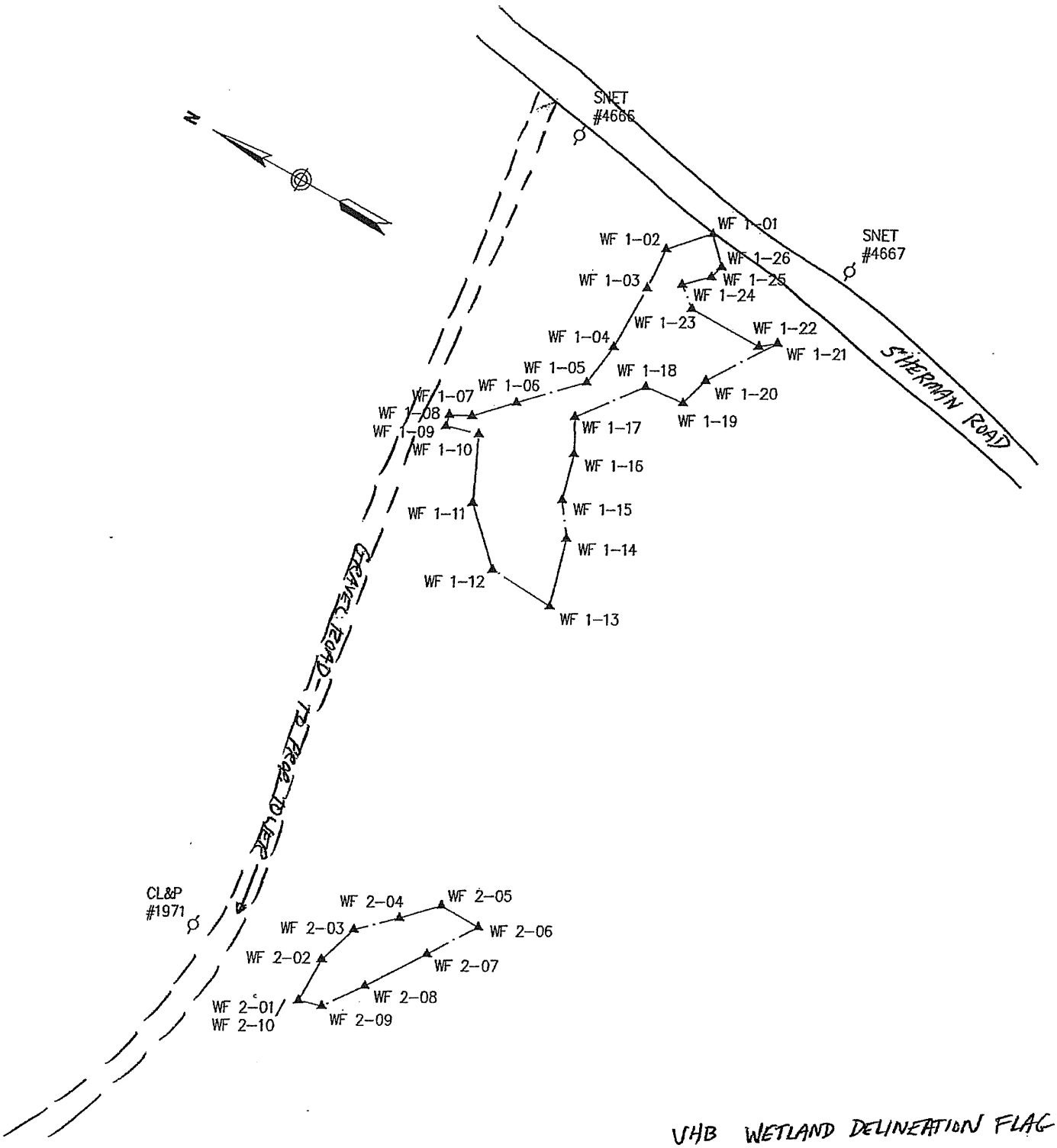
Canton And Charlton Soils, 3 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 73C—Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky

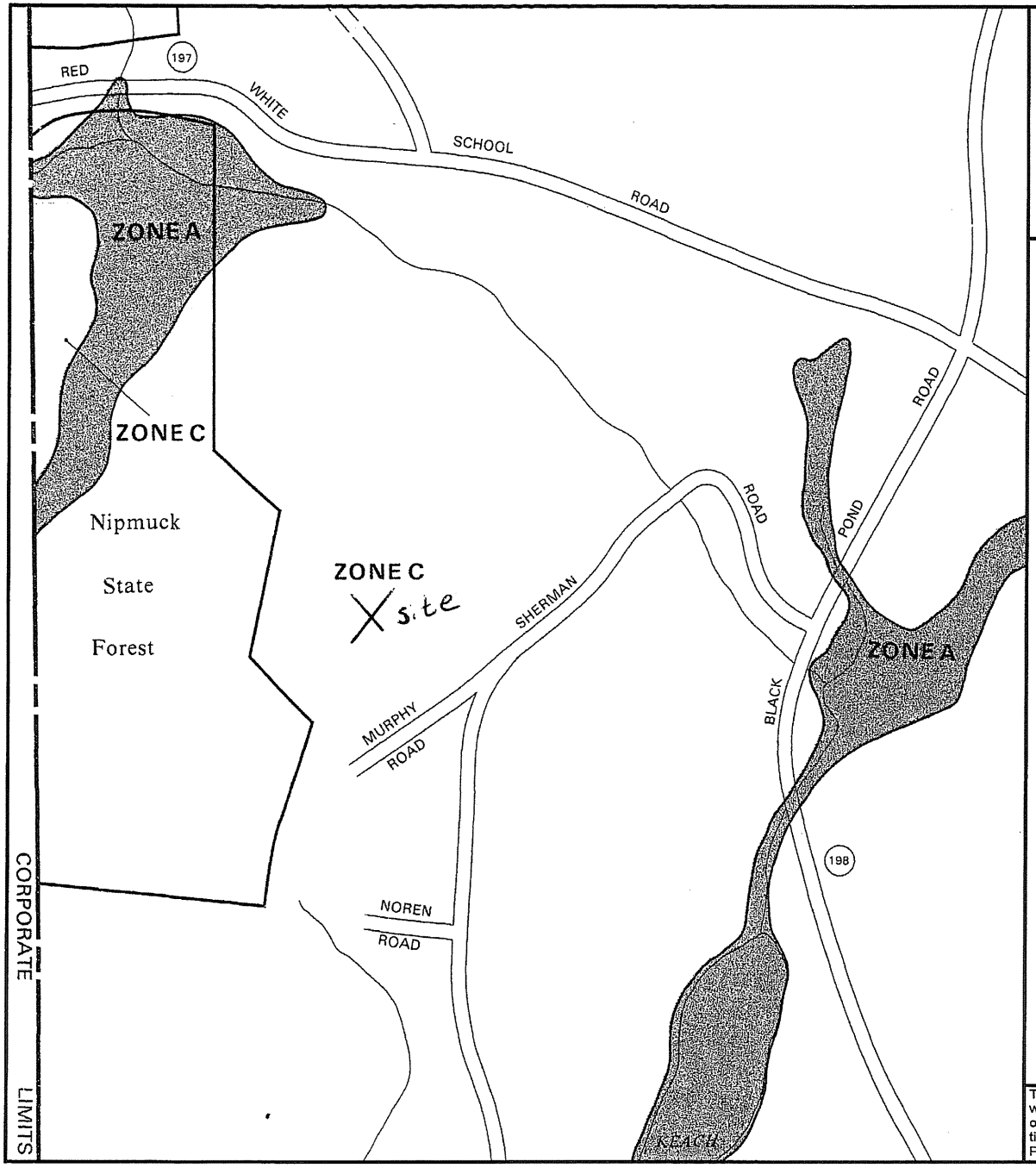
Charlton-Chatfield Complex, 3 To 15 Percent Slopes, Very Rocky This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Charlton soils, 30 percent Chatfield soils. 25 percent minor components. Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam Chatfield soils This component occurs on upland hill and ridge landforms. The parent material consists of melt-out till derived from gneiss, granite, and schist. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 40 inches to bedrock (lithic). The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; highly decomposed plant material 1 to 6 inches; gravelly fine sandy loam 6 to 15 inches; gravelly fine sandy loam 15 to 29 inches; gravelly fine sandy loam 29 to 36 inches; unweathered bedrock

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 6, Mar 22, 2007



VHB WETLAND DELINEATION FLAG SURVEY
Woodstock NW (Sherman Rd)
Matthew Davisson
4-22-08



N

APPROXIMATE SCALE

800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

TOWN OF
WOODSTOCK, CONNECTICUT
WINDHAM COUNTY

PANEL 15 OF 30
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
090120 0015 B

EFFECTIVE DATE:
NOVEMBER 1, 1984

Federal Emergency Management Agency

Zone A	The 100-year or base floodplain. There are six types of A Zones: **A** The base floodplain mapped by approximate methods, *i.e.,* BFEs are not determined. This is often called an unnumbered A Zone or an approximate A Zone. **A1-30** These are known as numbered A Zones (*e.g.,* A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format). **AE** The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones. **AO** The base floodplain with sheet flow, ponding, or shallow flooding. Base flood depths (feet above ground) are provided. **AH** Shallow flooding base floodplain. BFEs are provided. **A99** Area to be protected from base flood by levees or Federal Flood Protection Systems under construction. BFEs are not determined. **AR** The base floodplain that results from the decertification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection.
Zone V and VE	**V** The coastal area subject to a velocity hazard (wave action) where BFEs are not determined on the FIRM. **VE** The coastal area subject to a velocity hazard (wave action) where BFEs are provided on the FIRM.
Zone B and Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
Zone C and Zone X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
Zone D	Area of undetermined but possible flood hazards.

AVIATION SYSTEMS, INC.
Phone: 310-530-3188 Fax: 310-530-3850
crisj@aviationsystems.com
www.aviationsystems.com

FAR PART 77 AIRSPACE OBSTRUCTION REPORT

To:
Kenneth C. Baldwin
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT

Date: September 17, 2008

Location: West Woodstock, CT
Client Case No: Woodstock NW, CT
ASI Case No: 08-S-0606.001

SUMMARY OF FINDINGS:

There are no federal aviation regulatory or operational factors affecting this site and proposed structure. At this location any structure over 200 feet AGL will have to be filed with the FAA. A structure up to 140 feet AGL should receive a routine approval if it were to be filed with the FAA.

SITE DATA:

Structure: Antenna Tower

Coordinates: 41°-58'-42.80" / 072°-05'-41.66" **[NAD 27]**
41°-58'-43.15" / 072°-05'-39.93" **[NAD 83]**

Site Ground Elevation: 905 ' **[AMSL]**
Studied Structure Height (with Appurtenances): 140 ' **[AGL]**
Total Overall Height: 1,045 ' **[AMSL]**

SEARCH RESULTS:

- The nearest public use or military air facility subject to FAR Part 77 is Toutant Airport.
- The studied structure is located 2.13 NM / 12,945 feet NorthWest (306 ° True) of the Toutant Airport Runway 17.
- Other public or private airports or heliports within 3 NM: ☑ None ☐ Printout attached
- AM radio station(s) within 3NM: ☑ None ☐ Printout attached

Highlighted AM stations on printout require notice under FCC Rules and Policy (Ref.: 47 CFR 73.1692).

ASI Case No: 08-S-0606.001

FINDINGS

- **FAA Notice (Ref.: FAR 77.13 (a)(1); FAR 77.13 (a)(2) i, ii,iii):**

  ☑ Not required at studied height.

  ☐ Required at studied height.

  ☑ The No Notice Maximum height is 200 feet AGL.

  IMPORTANT: Our report is intended as a planning tool. If notice is required, actual site construction activities are not advisable until an FAA Final Determination of No Hazard is issued.

- **Obstruction Standards of FAR Part 77 (Ref.: FAR 77.23 (a)(1),(2),(3),(4),(5)):**

  ☑ Not exceeded at studied height.

  ☐ Exceeded at studied height and Extended Study may be required.

  ☐ Maximum nonexceedance height is _____ feet AGL.

- **Marking and Lighting (Ref.: AC 70/7460-1K, Change 1):**

  ☑ Will not be required.

  ☐ Will be required at studied height, if structure exceeds:

  ☐ 200 feet AGL

  ☐ Obstruction Standard

- **Operational Procedures (Ref.: FAR 77.23 (a)(3), (4); FAA Order 7400.2; FAA Order 8260.3B):**

  ☑ Not affected at studied height (FAA should issue a Determination of No Hazard.)

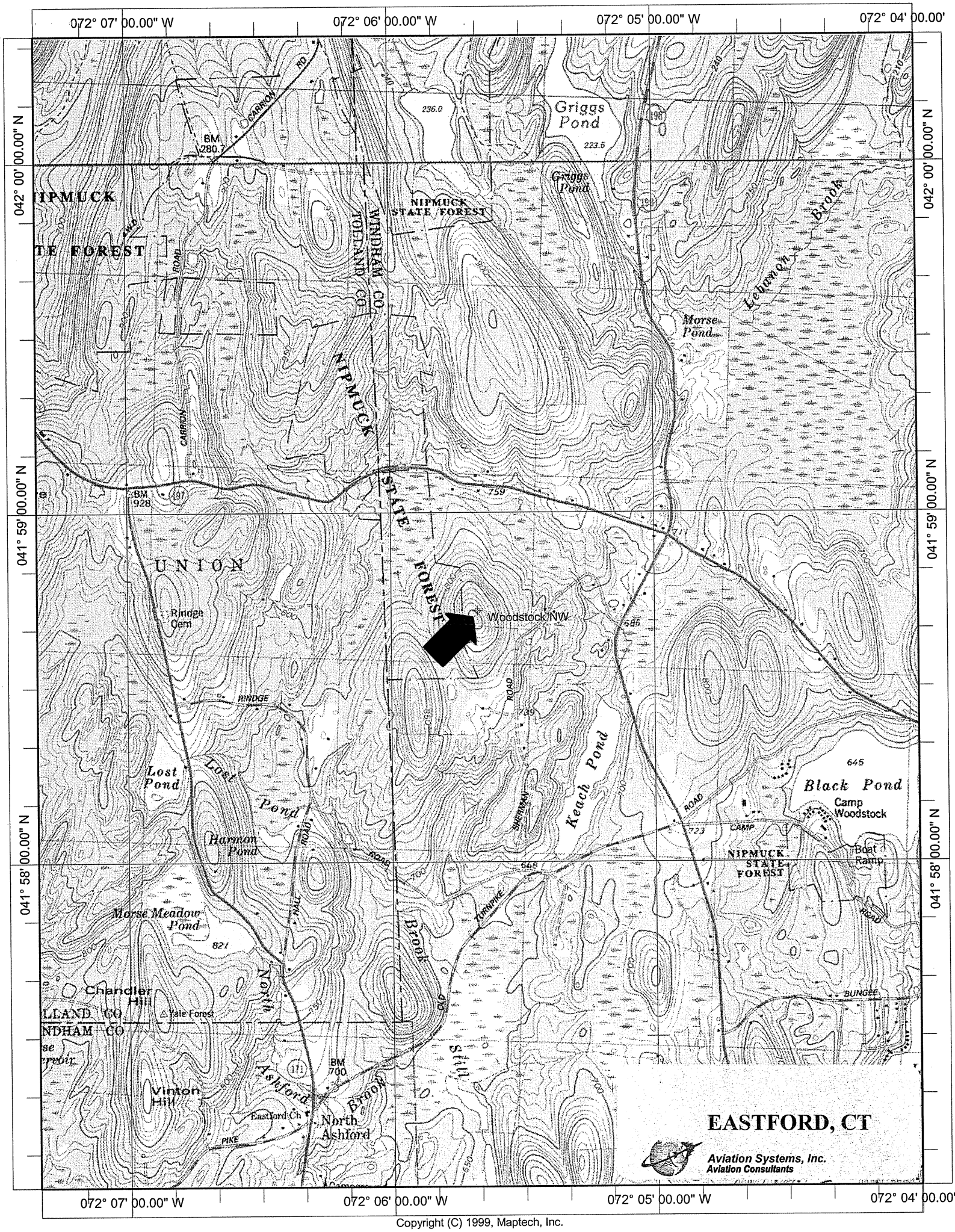
  ☐ Affected at studied height and the FAA will consider the studied structure to be a hazard to air navigation.

  ☐ Maximum height that would not affect operational procedures is _____ feet AMSL.

Conclusions/Comments

Actions:

ASI will file with FAA Region and State ☐ Yes ☑ No



Final Print Date: 6.12.08

OPTION AND LEASE AGREEMENT

This Agreement made this 15th day of ~~June~~ July, 20 08, between Colin G. Hallquest, with a residence located at 40 Sherman Road, Woodstock, Connecticut, 06281, Social Security # [redacted] hereinafter designated LESSOR, and Cellco Partnership d/b/a Verizon Wireless, with its principal offices located at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey, 07920, hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

LESSOR is the owner of that certain real property located off Sherman Road, Woodstock, Windham County, Connecticut, as shown on the Tax Map of the Town of Woodstock as Map 5122, Block 18, Parcel 4, and being further described in Deed Book 298 at Page 157, as recorded in the Office of the Town Clerk (the entirety of LESSOR's property is referred to hereinafter as the "Property"). LESSEE desires to obtain an option to lease a portion of said Property, being described as a 100-foot by 100-foot parcel containing 10,000 square feet (the "Land Space"), together with the non-exclusive right (the "Right of Way") for ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along a twenty (20) foot wide right-of-way extending from the nearest public right-of-way, to the Land Space, said Land Space and Right of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof.

NOW THEREFORE, in consideration of the sum of [redacted] Dollars and No Cents [redacted] to be paid by LESSEE to the LESSOR, which LESSEE will provide upon its execution of this Agreement, the LESSOR hereby grants to LESSEE the right and option to lease said Premises, for the term and in accordance with the covenants and conditions set forth herein.

The option may be exercised at any time on or prior to the date that is one year following the date of full execution of this Agreement. At LESSEE's election and upon LESSEE's prior written notification to LESSOR, the time during which the option may be exercised may be further extended for one additional period of one year through and including the date that is two years following the date of full execution of this Agreement, with an additional payment of [redacted] Dollars and No Cents [redacted] by LESSEE to LESSOR for the option period so extended. The time during which the option may be exercised may be further extended by mutual agreement in writing. If during said option period, or during the term of the lease, if the option is exercised, the LESSOR decides to subdivide, sell or change the status of the Property or his property contiguous thereto he shall immediately notify LESSEE in writing so that LESSEE can take steps necessary to protect LESSEE's interest in the Premises.

This option may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal; to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization; or to any entity which acquires or receives an interest in the majority of communication towers of the LESSEE in the market defined by the Federal Communications Commission in which the Property is located. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld or delayed.

Should LESSEE fail to exercise this option or any extension thereof within the time herein limited, all rights and privileges granted hereunder shall be deemed completely surrendered, this option terminated, and LESSOR shall retain all money paid for the option, and no additional money shall be payable by either Party to the other.

LESSOR shall cooperate with LESSEE in its effort to obtain all certificates, permits and other approvals that may be required by any Federal, State or Local authorities which will permit LESSEE use of the Premises. LESSOR shall take no action which would adversely affect the status of the Property with respect to the proposed use by LESSEE.

The LESSOR shall permit LESSEE, during the option period, free ingress and egress to the Premises to conduct such surveys, inspections, structural strength analysis, subsurface soil tests, and other activities of a similar nature as LESSEE may deem necessary, at the sole cost of LESSEE.

LESSOR agrees to execute a Memorandum of this Option to Lease Agreement, in a form substantially similar to the one attached hereto as Exhibit C-1, which LESSEE may record with the appropriate Recording Officer. The date set forth in the Memorandum of Option to Lease is for recording purposes only and bears no reference to commencement of either term or rent payments.

In the event of termination of this Option to Lease Agreement, LESSEE agrees to execute a Memorandum of Termination of this Option to Lease Agreement in a form substantially similar to the one attached hereto as Exhibit C-2, which LESSOR may record with the appropriate Recording Officer.

Notice of the exercise of the option shall be given by LESSEE to the LESSOR in writing by certified mail, return receipt requested. Notice shall be deemed effective on the date it is posted. On the date of such notice the following agreement shall take effect:

LAND LEASE AGREEMENT

This Agreement, made this 17th day of June, 20 08 between Colin G. Hallquest, with a residence located at 40 Sherman Road, Woodstock, Connecticut, 06281, Social Security # [redacted] hereinafter designated LESSOR and Cellco

Partnership, d/b/a Verizon Wireless, with its principal office located at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920, hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

1. PREMISES. LESSOR hereby leases to LESSEE a portion of that certain parcel of property (the entirety of LESSOR's property is referred to hereinafter as the Property), located off of Sherman Road, Woodstock, Windham County, Connecticut, as shown on the Tax Map of the Town of Woodstock as Map 5122, Block 18, Parcel 4, and being further described in Deed Book 298 at Page 157, as recorded in the Office of the Town Clerk and being described as a 100-foot by 100-foot parcel containing 10,000 square feet (the "Land Space"), together with the non-exclusive right (the "Rights of Way") for ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks over or along a twenty (20) foot wide right-of-way extending from the nearest public right-of-way, Sherman Road, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along one or more rights of way from the Land Space, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof.

In the event any public utility is unable to use the Rights of Way, the LESSOR hereby agrees to grant an additional right-of-way either to the LESSEE or to the public utility at no cost to the LESSEE.

2. SURVEY. LESSOR also hereby grants to LESSEE the right to survey the Property and the Premises, and said survey shall then become Exhibit "B" which shall be attached hereto and made a part hereof, and shall control in the event of boundary and access discrepancies between it and Exhibit "A". Cost for such work shall be borne by the LESSEE.

3. TERM. This Agreement shall be effective as of the date of execution by both Parties, provided, however, the initial term shall be for five (5) years and shall commence on the Commencement Date (as hereinafter defined) at which time rental payments shall commence and be due at a total annual rental of [redacted] Dollars and No Cents [redacted] which shall be increased by three percent [redacted] above the previous year's annual rental on the anniversary of the Commencement Date, to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR or to such other person, firm or place as LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date by notice given in accordance with Paragraph 23 below. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE. The Agreement shall commence based upon the date LESSEE commences installation of the equipment on the Premises. In the event the date LESSEE commences installation of the equipment on the Premises falls between the 1st and 15th of the month, the Agreement shall commence on the 1st of that month and if the date installation commences falls between the 16th and 31st of the month,

then the Agreement shall commence on the 1st day of the following month (either the "Commencement Date").

LESSOR and LESSEE agree that they shall acknowledge in writing the Commencement Date. LESSOR and LESSEE acknowledge and agree that initial rental payment(s) shall not actually be sent by LESSEE until thirty (30) days after a written acknowledgement confirming the Commencement Date. By way of illustration of the preceding sentence, if the Commencement Date is January 1 and the written acknowledgement confirming the Commencement Date is dated January 14, LESSEE shall send to the LESSOR the rental payments for January 1 and February 1 by February 13.

4. EXTENSIONS. This Agreement shall automatically be extended for four (4) additional five (5) year terms unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least six (6) months prior to the end of the then current term.

5. EXTENSION RENTALS. The annual rental during the extension terms shall increase by [redacted] percent [redacted] above the previous year's annual rental on the anniversary of the Commencement Date.

6. ADDITIONAL EXTENSIONS. If at the end of the fourth (4th) five (5) year extension term this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least three (3) months prior to the end of such term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of five (5) years and for five (5) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least three (3) months prior to the end of such term. Annual rental during each such additional five (5) year term shall increase by [redacted] percent [redacted] above the previous year's annual rental on the anniversary of the Commencement Date. The initial term and all extensions shall be collectively referred to herein as the "Term".

7. USE; GOVERNMENTAL APPROVALS. LESSEE shall use the Premises for the purpose of constructing, maintaining, repairing and operating a communications facility and uses incidental thereto. A security fence consisting of chain link construction or similar but comparable construction may be placed around the perimeter of the Premises at the discretion of LESSEE (not including the access easement). All improvements, equipment, antennas and conduits shall be at LESSEE's expense and their installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its utilities, equipment, antennas and/or conduits or any portion thereof and the frequencies over which the equipment operates, whether the equipment, antennas, conduits or frequencies are specified or not on any exhibit attached hereto, during the Term. It is understood and agreed that LESSEE's ability to use the Premises is contingent upon its obtaining after the execution date of this Agreement all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities as well as satisfactory soil boring tests which will permit LESSEE use of the Premises as set forth above. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status

of the Property with respect to the proposed use thereof by LESSEE. In the event that (i) any of such applications for such Governmental Approvals should be finally rejected; (ii) any Governmental Approval issued to LESSEE is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; (iii) LESSEE determines that such Governmental Approvals may not be obtained in a timely manner; (iv) LESSEE determines that any soil boring tests are unsatisfactory; (v) LESSEE determines that the Premises is no longer technically compatible for its use, or (vi) LESSEE, in its sole discretion, determines that it will be unable to use the Premises for its intended purposes, LESSEE shall have the right to terminate this Agreement. Notice of LESSEE's exercise of its right to terminate shall be given to LESSOR in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by LESSEE, or upon such later date as designated by LESSEE. All rentals paid to said termination date shall be retained by LESSOR. Upon such termination, this Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each Party to the other hereunder. Otherwise, the LESSEE shall have no further obligations for the payment of rent to LESSOR.

8. INDEMNIFICATION. Subject to Paragraph 9 below, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents.

9. INSURANCE.

a. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or to the Property, resulting from any fire, or other casualty of the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, or either of them. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

b. LESSEE agrees that at its own cost and expense, LESSEE will maintain commercial general liability insurance with limits not less than $1,000,000 for injury to or death of one or more persons in any one occurrence and $500,000 for damage or destruction to property in any one occurrence. LESSEE agrees that it will include the LESSOR as an additional insured.

c. LESSOR hereby acknowledges that all portions of the Property within one hundred fifty feet (150') of the Land Space Premises (hereinafter referred to as the "Insurance Buffer") are currently being used solely for agricultural, forestry or non-commercial purposes. In the event that the current use of the Insurance Buffer changes during the Term, LESSOR agrees

that at such time and in the future, and at its own cost and expense, LESSOR will maintain comprehensive general liability and property liability insurance with liability limits of not less than $1,000,000 for injury to or death of one or more persons in any one occurrence and $500,000 for damage or destruction to property in any one occurrence.

10. LIMITATION OF LIABILITY. Except for indemnification pursuant to paragraphs 8 and 28, neither Party shall be liable to the other, or any of their respective agents, representatives, employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

11. ANNUAL TERMINATION. Notwithstanding anything to the contrary contained herein, provided LESSEE is not in default hereunder beyond applicable notice and cure periods, LESSEE shall have the right to terminate this Agreement upon the annual anniversary of the Commencement Date provided that three (3) months prior notice is given to LESSOR.

12. INTERFERENCE. LESSEE agrees to install equipment of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to any equipment of LESSOR or other lessees of the Property which existed on the Property prior to the date this Agreement is executed by the Parties. In the event any after-installed LESSEE's equipment causes such interference, and after LESSOR has notified LESSEE in writing of such interference, LESSEE will take all commercially reasonable steps necessary to correct and eliminate the interference, including but not limited to, at LESSEE's option, powering down such equipment and later powering up such equipment for intermittent testing. In no event will LESSOR be entitled to terminate this Agreement or relocate the equipment as long as LESSEE is making a good faith effort to remedy the interference issue. LESSOR agrees that LESSOR and/or any other tenants of the Property who currently have or in the future take possession of the Property will be permitted to install only such equipment that is of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to the then existing equipment of LESSEE. The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore, either Party shall have the right to equitable remedies, such as, without limitation, injunctive relief and specific performance.

13. REMOVAL AT END OF TERM. LESSEE shall, upon expiration of the Term, or within ninety (90) days after any earlier termination of the Agreement, remove its building(s), antenna structure(s) (except footings that do not extend above the ground surface level), equipment, conduits, fixtures and all personal property and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that all of the equipment, conduits, fixtures and personal property of LESSEE shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable Laws (as defined in Paragraph 32 below). If such time for removal causes LESSEE to remain on the Premises after termination of this Agreement,

LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until such time as the removal of the building, antenna structure, fixtures and all personal property are completed.

14. HOLDOVER. LESSEE has no right to retain possession of the Premises or any part thereof beyond the expiration of that removal period set forth in Paragraph 13 herein, unless the Parties are negotiating a new lease or lease extension in good faith. In the event that the Parties are not in the process of negotiating a new lease or lease extension in good faith, LESSEE holds over in violation of Paragraph 13 and this Paragraph 14, then the rent then in effect payable from and after the time of the expiration or earlier removal period set forth in Paragraph 13 shall be increased to one hundred and ten percent (110%) of the rent applicable during the month immediately preceding such expiration or earlier termination.

15. RIGHT OF FIRST REFUSAL. If LESSOR elects, during the Term (i) to sell or otherwise transfer all or any portion of the Property, whether separately or as part of a larger parcel of which the Property is a part, or (ii) grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, with or without an assignment of this Agreement to such third party, LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the same terms and conditions of such offer. If LESSEE fails to meet such bona fide offer within thirty (30) days after written notice thereof from LESSOR, LESSOR may sell or grant the easement or interest in the Property or portion thereof to such third person in accordance with the terms and conditions of such third party offer. For purposes of this Paragraph, any transfer, bequest or devise of LESSOR's interest in the Property as a result of the death of LESSOR, whether by will or intestate succession, shall not be considered a sale of the Property for which LESSEE has any right of first refusal.

16. RIGHTS UPON SALE. Should LESSOR, at any time during the Term decide (i) to sell or transfer all or any part of the Property to a purchaser other than LESSEE, or (ii) to grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, such sale or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferce shall recognize LESSEE's rights hereunder under the terms of this Agreement. To the extent that LESSOR grants to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE for the purpose of operating and maintaining communications facilities or the management thereof and in conjunction therewith, assigns this Agreement to said third party, LESSOR shall not be released from its obligations to LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of this Agreement.

17. QUIET ENJOYMENT. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises.

18. TITLE. LESSOR represents and warrants to LESSEE as of the execution date of this Agreement, and covenants during the Term that LESSOR is seized of good and sufficient title and interest to the Property and has full authority to enter into and execute this Agreement. LESSOR further covenants during the Term that there are no liens, judgments or impediments of title on the Property, or affecting LESSOR's title to the same and that there are no covenants, easements or restrictions which prevent or adversely affect the use or occupancy of the Premises by LESSEE as set forth above.

19. INTEGRATION. It is agreed and understood that this Agreement contains all agreements, promises and understandings between LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either LESSOR or LESSEE in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing signed by the Parties or in a written acknowledgment in the case provided in Paragraph 3. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not affect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, in law or in equity.

20. GOVERNING LAW. This Agreement and the performance thereof shall be governed, interpreted, construed and regulated by the Laws of the State in which the Property is located.

21. ASSIGNMENT. This Agreement may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal or to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of LESSEE shall constitute an assignment hereunder.

21A. SUBLEASING. LESSEE may sublease the Premises within its sole discretion. Any sublease that is entered into by LESSEE shall be subject to the provisions of this Agreement and shall be binding upon the successors, assigns, heirs and legal representatives of the respective parties hereto. The term "Sublease", "Sublet", "Sublessee" and any other similar term shall apply to any situation by which LESSEE allows a third party (a "sublessee") use of the Premises for co-location, whether it be by formal sublease, license or other agreement. All rights and responsibilities of LESSEE set forth in this Agreement shall be enjoyed by and binding on any third party.

22. NOTICES. All notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: Colin G. Hallquest

40 Sherman Road

Woodstock, CT 06281

LESSEE: Cellco Partnership
d/b/a Verizon Wireless
180 Washington Valley Road
Bedminster, New Jersey 07921
Attention: Network Real Estate

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

23. SUCCESSORS. This Agreement shall extend to and bind the heirs, personal representative, successors and assigns of the Parties hereto.

24. SUBORDINATION AND NON-DISTURBANCE. Delete the first sentence of this paragraph if SNDAs for all existing encumbrances are obtained prior to Lease execution. LESSOR shall obtain not later than fifteen (15) days following the execution of this Agreement, a Non-Disturbance Agreement, as defined below, from its existing mortgagee(s), ground lessors and master lessors, if any, of the Property. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a "Mortgage") by LESSOR which from time to time may encumber all or part of the Property or right-of-way; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Property, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the "Non-Disturbance Agreement"), and shall recognize LESSEE's right to remain in occupancy of and have access to the Premises as long as LESSEE is not in default of this Agreement beyond applicable notice and cure periods. The Non-Disturbance Agreement shall include the encumbering party's ("Lender's") agreement that, if Lender or its successor-in-interest or any purchaser of Lender's or its successor's interest (a "Purchaser")

acquires an ownership interest in the Property, Lender or such successor-in-interest or Purchaser will (1) honor all of the terms of the Agreement, (2) fulfill LESSOR's obligations under the Agreement, and (3) promptly cure all of the then-existing LESSOR defaults under the Agreement. Such Non-Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non-Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Property, (3) agrees to give Lender copies of whatever notices of default LESSEE must give LESSOR, (4) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR, (5) agrees to not pay rent more than one month, or one year in the event the rent is paid annually, in advance and (6) agrees that no material modification or material amendment of the Agreement will be binding on Lender unless it has been consented to in writing by Lender. LESSOR and LESSEE agree that, for the purposes of Paragraph 24, nonmaterial amendments or modifications shall include, but shall not be limited to, the following: (i) any extension of the term of the Agreement, (ii) any addition to, alteration, modification, or replacement of LESSEE's equipment, (iii) any relocation of LESSEE's equipment, (iv) any increase in the rent, and (v) any decrease in the rent, provided however, that such an amendment shall become material should the decrease in rent result in rent lower than the amount then prescribed by the unamended Agreement. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or other real property interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

25. RECORDING. LESSOR agrees to execute a Memorandum of this Agreement, in a form substantially similar to the one attached hereto as Exhibit C-1, which LESSEE may record with the appropriate recording officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either the Term or rent payments.

In the event of termination of this Agreement, LESSEE agrees to execute a Memorandum of Termination of this Agreement in a form substantially similar to the one attached hereto as Exhibit C-2, which LESSOR may record with the appropriate Recording Officer.

26. DEFAULT.

a. In the event there is a breach by LESSEE with respect to any of the provisions of this Agreement or its obligations under it, including the payment of rent, LESSOR shall give LESSEE written notice of such breach. After receipt of such written notice, LESSEE shall have fifteen (15) days in which to cure any monetary breach and thirty (30) days in which to

cure any non-monetary breach, provided LESSEE shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSEE commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSOR may not maintain any action or effect any remedies for default against LESSEE unless and until LESSEE has failed to cure the breach within the time periods provided in this Paragraph.

b. In the event there is a breach by LESSOR with respect to any of the provisions of this Agreement or its obligations under it, LESSEE shall give LESSOR written notice of such breach. After receipt of such written notice, LESSOR shall have thirty (30) days in which to cure any such breach, provided LESSOR shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSOR commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSEE may not maintain any action or effect any remedies for default against LESSOR unless and until LESSOR has failed to cure the breach within the time periods provided in this Paragraph. Notwithstanding the foregoing to the contrary, it shall be a default under this Agreement if LESSOR fails, within five (5) days after receipt of written notice of such breach, to perform an obligation required to be performed by LESSOR if the failure to perform such an obligation interferes with LESSEE's ability to conduct its business on the Property; provided, however, that if the nature of LESSOR's obligation is such that more than five (5) days after such notice is reasonably required for its performance, then it shall not be a default under this Agreement if performance is commenced within such five (5) day period and thereafter diligently pursued to completion.

27. REMEDIES. Upon a default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation on the defaulting Party's behalf, including but not limited to the obtaining of reasonably required insurance policies. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. In the event of a default by either Party with respect to a material provision of this Agreement, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate the Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Premises are located; provided, however, LESSOR shall use reasonable efforts to mitigate its damages in connection with a default by LESSEE. If LESSEE so performs any of LESSOR's obligations hereunder, the full amount of the reasonable and actual cost and expense incurred by LESSEE shall immediately be owing by LESSOR to LESSEE, and LESSOR shall pay to LESSEE upon demand the full undisputed amount thereof with interest thereon from the date of payment at the greater of (i) ten percent (10%) per annum, or (ii) the highest rate permitted by applicable Laws. Notwithstanding the foregoing, if LESSOR does not pay LESSEE the full undisputed amount within thirty (30) days of its receipt of an invoice setting forth the amount due from LESSOR, LESSEE may offset the full undisputed amount, including all accrued interest, due against all fees due and owing to LESSOR until the full undisputed amount, including all accrued interest, is fully reimbursed to LESSEE.

28. ENVIRONMENTAL.

a. LESSOR will be responsible for all obligations of compliance with any and all environmental and industrial hygiene laws, including any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene conditions or concerns as may now or at any time hereafter be in effect, that are or were in any way related to activity now conducted in, on, or in any way related to the Property, unless such conditions or concerns are caused by the specific activities of LESSEE in the Premises.

b. LESSOR shall hold LESSEE harmless and indemnify LESSEE from and assume all duties, responsibility and liability at LESSOR's sole cost and expense, for all duties, responsibilities, and liability (for payment of penalties, sanctions, forfeitures, losses, costs, or damages) and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is in any way related to: a) failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene concerns or conditions as may now or at any time hereafter be in effect, unless such non-compliance results from conditions caused by LESSEE; and b) any environmental or industrial hygiene conditions arising out of or in any way related to the condition of the Property or activities conducted thereon, unless such environmental conditions are caused by LESSEE.

29. CASUALTY. In the event of damage by fire or other casualty to the Premises that cannot reasonably be expected to be repaired within forty-five (45) days following same or, if the Property is damaged by fire or other casualty so that such damage may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, then LESSEE may, at any time following such fire or other casualty, provided LESSOR has not completed the restoration required to permit LESSEE to resume its operation at the Premises, terminate this Agreement upon fifteen (15) days prior written notice to LESSOR. Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment, as of such termination date, with respect to payments due to the other under this Agreement. Notwithstanding the foregoing, the rent shall abate during the period of repair following such fire or other casualty in proportion to the degree to which LESSEE's use of the Premises is impaired.

30. CONDEMNATION. In the event of any condemnation of all or any portion of the Property, this Agreement shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever occurs first. If as a result of a partial condemnation of the Premises or Property, LESSEE, in LESSEE's sole discretion, is unable to use the Premises for the purposes intended hereunder, or if such condemnation may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, LESSEE may, at

LESSEE's option, to be exercised in writing within fifteen (15) days after LESSOR shall have given LESSEE written notice of such taking (or in the absence of such notice, within fifteen (15) days after the condemning authority shall have taken possession) terminate this Agreement as of the date the condemning authority takes such possession. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to the equipment, conduits, fixtures, its relocation costs and its damages and losses (but not for the loss of its leasehold interest). Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment as of such termination date with respect to payments due to the other under this Agreement. If LESSEE does not terminate this Agreement in accordance with the foregoing, this Agreement shall remain in full force and effect as to the portion of the Premises remaining, except that the rent shall be reduced in the same proportion as the rentable area of the Premises taken bears to the total rentable area of the Premises. In the event that this Agreement is not terminated by reason of such condemnation, LESSOR shall promptly repair any damage to the Premises caused by such condemning authority.

31. SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY. The submission of this Agreement for examination does not constitute an offer to lease the Premises and this Agreement becomes effective only upon the full execution of this Agreement by the Parties. If any provision herein is invalid, it shall be considered deleted from this Agreement and shall not invalidate the remaining provisions of this Agreement. Each of the Parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such Party has the full right, power and authority to enter into and execute this Agreement on such Party's behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Agreement.

32. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, rules, regulations, ordinances, directives, covenants, easements, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (a) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises (other than general office use); and (b) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises.

33. SURVIVAL. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement. Additionally, any provisions of this Agreement which require performance subsequent to the termination or expiration of this Agreement shall also survive such termination or expiration.

34. CAPTIONS. The captions contained in this Agreement are inserted for convenience only and are not intended to be part of the Agreement. They shall not affect or be utilized in the construction or interpretation of the Agreement.

35. REAL ESTATE TAXES. LESSEE agrees to pay for any documented increase in real estate taxes levied against the Premises that are directly attributable to the improvements constructed by LESSEE. LESSOR agrees to provide LESSEE with documentation evidencing the increase and how such increase is attributable to LESSEE's use. LESSEE reserves the right to challenge any such assessment and LESSOR agrees to cooperate with LESSEE in connection with any such challenge, and any such challenge shall be at LESSEE's expense.

END OF TEXT; SIGNATURES OF THE PARTIES APPEAR ON THE NEXT PAGE.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

LESSOR: Colin G. Hallquest

BY (SIGNATURE): Colin G. Hallquest

PRINT NAME: COLIN G. HALLQUEST

DATE: 6/17/09

WITNESS NAME: TIM WENTWORTH

WITNESS SIGNATURE:

LESSEE: Cellco Partnership, d/b/a Verizon Wireless

BY (SIGNATURE):

PRINT NAME: David R. Heverling

TITLE: Area Vice President, Network, Northeast Area

DATE: 7/15/08

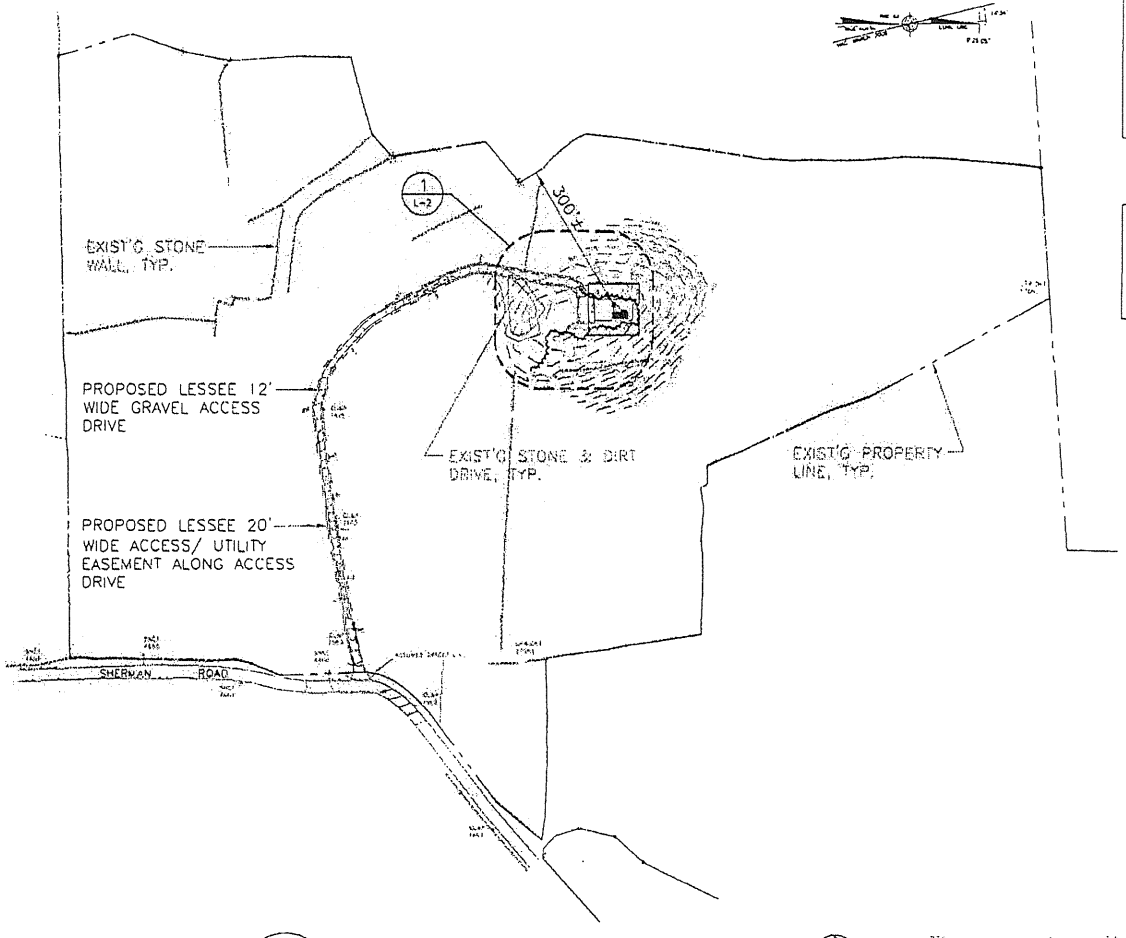
WITNESS NAME: Diane Gazzola

WITNESS SIGNATURE: Diane Gazzola

Exhibit "A"

(Sketch of Premises within Property)

See attached lease exhibit drawings prepared by Natcomm, consisting of Drawings L-1, L-2 and L-3, dated 3/28/08.



1 / L-1 COMPOUND LOCATION PLAN

SCALE: 1" = 225'

NORTH

GRAPHIC SCALE

(IN FEET)

1 inch = 225 ft.

LEASE EXHIBIT

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.

PRELIM. TOWER COORDINATES: (TAKEN IN FIELD) LAT.: 41°-58'-42.3" LNG.: 72°-05'-39.8"

GROUND ELEVATION: 908.1' ± A.M.S.L. (BASED ON TOPO MAP)

NOTE:

EXISTING STONE/DIRT DRIVE TO BE IMPROVED FOR A 12' GRAVEL ACCESS DRIVE FROM SHERMAN ROAD TO THE PROPOSED COMPOUND.

REVISIONS		
A	[illegible]	[illegible]

Cellco Partnership d.b.a. verizon wireless

NATCOMM
p: 203.488.0580
f: 203.488.8587
w: nat-eng.com
e: info@nat-eng.com
63-2 N. Branford Rd.
Branford, CT 06405

WOODSTOCK NW, CT

SHERMAN ROAD
WOODSTOCK, CT (N281)

PROJECT NO:	01646
DRAWN BY:	DMD
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	03/27/24

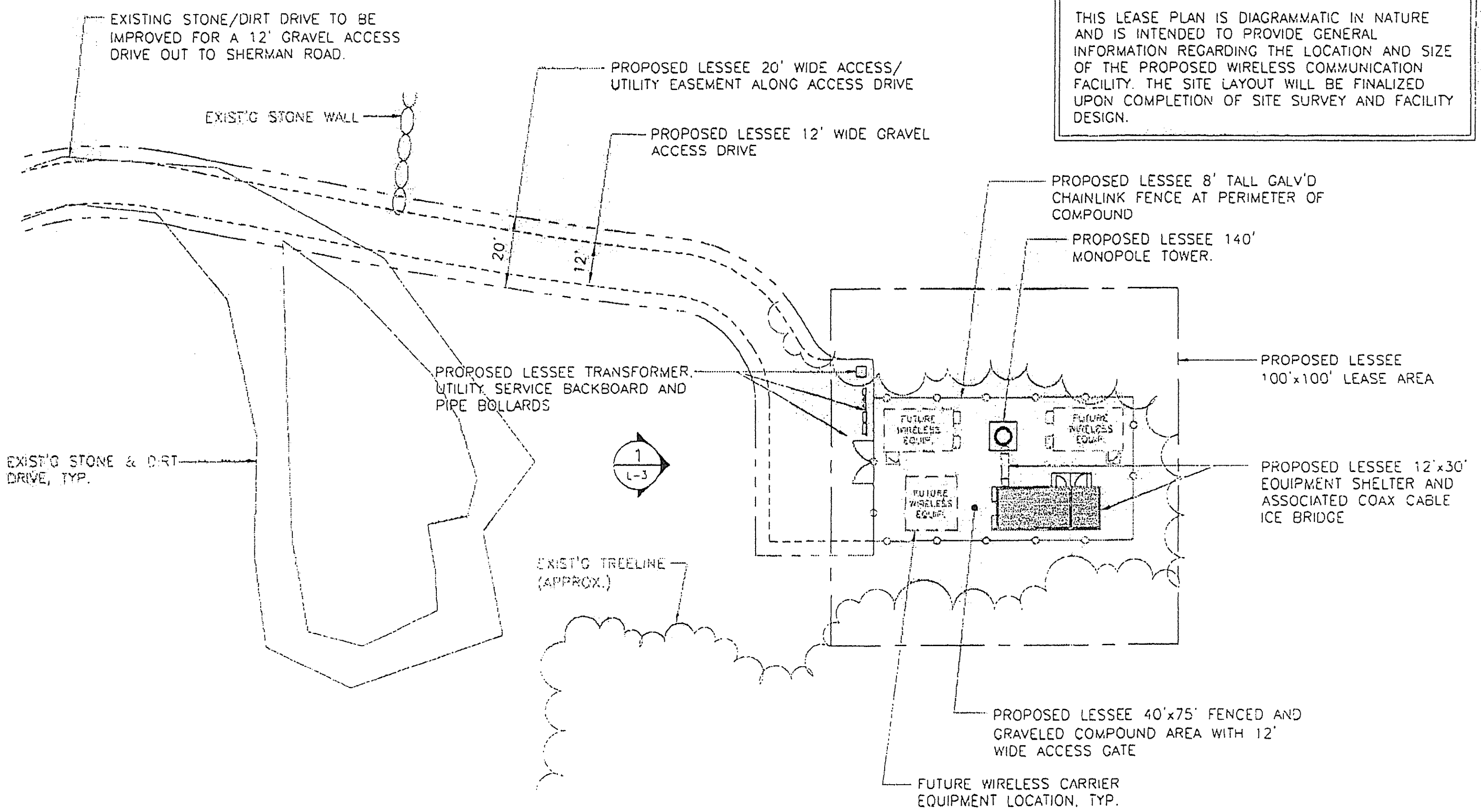
LEASE EXHIBIT

L-1

SHT. 1 OF 3

LEASE EXHIBIT

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.



1 / L-2 **COMPOUND PLAN**

SCALE: 1" = 30'

NORTH

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

REVISIONS

Cellco Partnership
d.b.a. verizon wireless

NATCOMM

WOODSTOCK NW, CT

SHERMAN ROAD
WOODSTOCK CT 06281

PROJECT NO:	
DRAWN BY:	DMG
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	

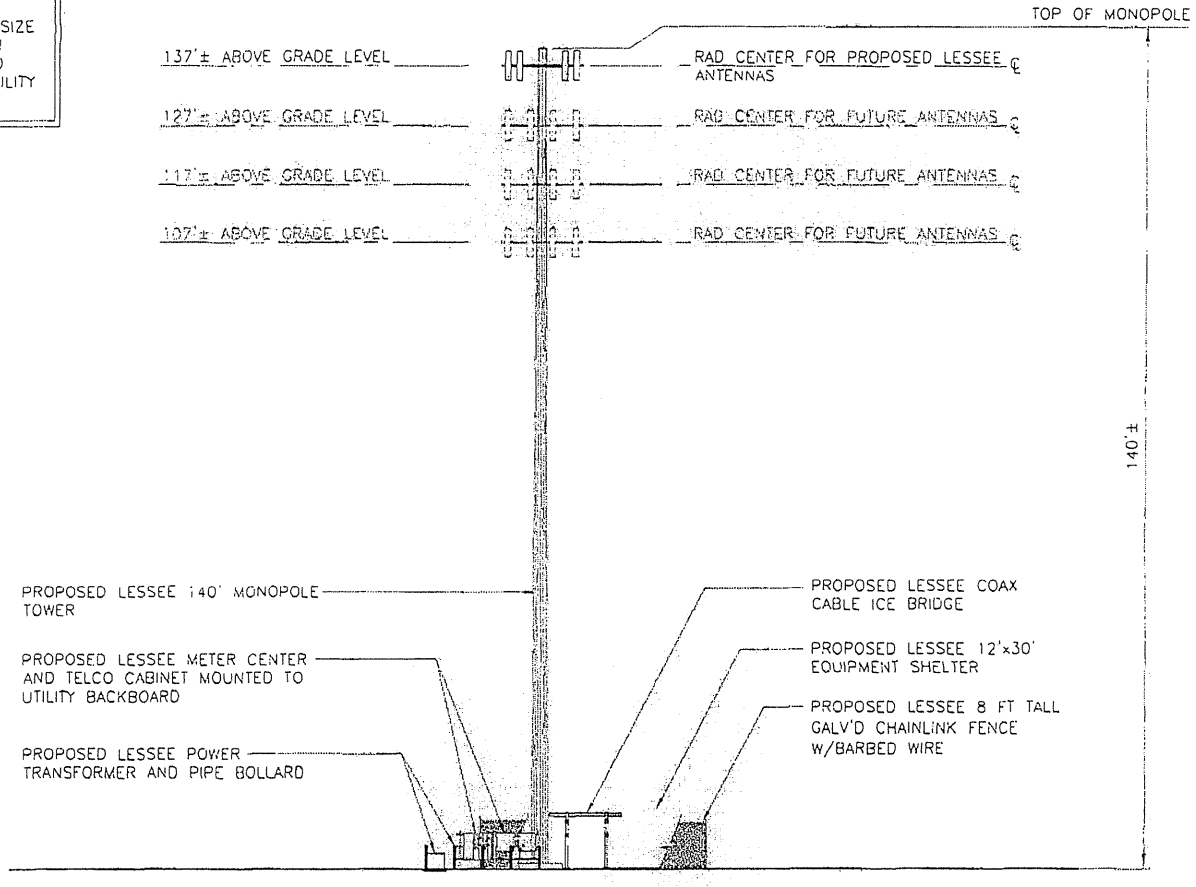
LEASE EXHIBIT

L-2

DWG. 2 OF 3

LEASE EXHIBIT

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.



1 / L-3 COMPOUND AND TOWER ELEVATION

SCALE: 1" = 20'

GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

REVISIONS		
#	DATE	LEASE EXHIBIT - PAYSON

Cellco Partnership d.b.a. Verizon wireless

NATCOMM
p. 203.488.0580
f. 203.488.8587
e. info@natcomm.com
63-2 N. Branford Rd
Branford, CT 06405

WOODSTOCK NW, CT

SHERMAN ROAD
WOODSTOCK, CT 06281

PROJECT NO:	05243
DRAWN BY:	DMC
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	03/27/08

LEASE EXHIBIT

L-3

DWG. 3 OF 3