STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF GLOBAL SIGNAL ACQUISTIONS II FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE RE-LOCATION, CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS FACILITY AT 1919 BOSTON POST ROAD, GUILFORD, CONNECTICUT	DOCKET NO. _____ DATE: October 19, 2007

APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

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APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

I. Introduction

A. Purpose and Authority

Pursuant to Chapter 277a, Sections 16-50g *et seq.* of the Connecticut General Statutes ("CGS"), as amended, and Sections 16-50j-1 *et seq.* of the Regulations of Connecticut State Agencies ("RCSA"), as amended, Global Signal Acquisitions II[1] (the "Applicant") hereby submits an application and supporting documentation (collectively, the "Application") for a Certificate of Environmental Compatibility and Public Need for the re-location, re-construction, maintenance and operation of a wireless communications facility currently existing on the property located at 1919 Boston Post Road (the "Existing Facility) to another location on the same property (the "Re-located Facility") in the Town of Guilford. The proposed Facility is a necessary component in the network plans of T-Mobile, Nextel, Sprint, Verizon Wireless and AT&T Wireless to provide personal wireless communications services in the State of Connecticut and New Haven County. The

[1] At the time of the filing of the technical report, the Existing Facility was owned by Global Signal. In the interim, the Existing Facility was sold in an acquisition by Crown Atlantic Company LLC. The ground lessee of the Existing Facility is now STC 5. Global Signal Acquisitions II is the sublessee of STC 5 and has the authority to submit this Application.

proposed Re-located Facility will allow the above-mentioned wireless communications providers to continue to provide service in the Town of Guilford along Interstate I-95 and the Boston Post Road, as well as in adjacent areas.

B. Executive Summary

A 150 foot telecommunications tower currently exists on the property located at 1919 Boston Post Road. On May 22, 1997, the Guilford Planning and Zoning commission approved an application for a special permit for Sprint Spectrum, LP to construct a 130 foot monopole at 1919 Boston Post Road, and a special permit was issued on June 4, 1997. A copy of that approval is attached hereto as Exhibit A. Subsequent to the construction of the Existing Facility, regulatory jurisdiction over the Existing Facility became the province of the Council. See Westport v. Connecticut Siting Council, 260 Conn. 46 (2002).

On February 14, 2003, Sprint Sites USA filed a petition for a declaratory ruling, Petition No. 613, with the Council for a twenty foot extension of the existing monopole. The Council made a determination that the modifications to the Existing Facility would not result in an adverse environmental impact, and in fact the modifications were necessary to allow Nextel, T-Mobile and AT&T to provide adequate wireless coverage to this area. A copy of the approval is attached hereto as Exhibit B.

The property consists of three parcels (collectively the "Property"): (1) The parcel on which the Existing Facility is located is owned by Roger Stone and is listed as Map 79, Lot 35 in the Guilford Tax Assessor's records; (2) two adjacent parcels where the Facility would be re-located are owned by Developers Diversified Realty ("DDR") and are listed as Map 79, Lot 34 and Map 79, Lot 36A in the Guilford Tax Assessor's records. DDR currently has a long term lease for the Roger Stone parcel. The Property totals 28.22

acres. The Property is located in the SCW Service Center West Zoning District. The Existing Facility needs to be re-located because DDR is in the process of obtaining necessary approvals to construct a lifestyle retail development on the Property and the current location of the Existing Facility is within the footprint of a proposed building.

Global Signal proposes to dismantle the Existing Facility, which is located on the northwest portion of the Property and construct the Re-located Facility on the northeast corner of the Property ("Site"). As demonstrated on the plans attached hereto as Exhibit C, it proposes to re-construct the existing 150 foot tall steel monopole in an approximately 3,050 square foot compound area.[2] The proposed Re-located Facility will be the same height as the Existing Facility, which was previously approved by the Council in Petition 613. In addition, the compound size will be the same as the compound at the Existing Facility.

The equipment compound will be enclosed by an 8-foot tall, garden fence. The Re-located Facility would be designed to accommodate all of the tenants on the Existing Facility. These include: T-Mobile, Nextel, Sprint, Verizon Wireless and AT&T.

Vehicular access will be provided via a paved driveway which will also be used by the proposed commercial development at the Property. Utility service will extend underground from the Boston Post Road to the Re-Located Facility. No water or sanitary facilities are required and once built, the Facility will generate minimal traffic because each of the collocating entities will only need to visit the Re-located Facility about once a month to perform routine maintenance and inspection.

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[2] Due to the structural issues associated with tower removal and reconstruction the existing monopole will not be used. A new 150 ft monopole will be purchased and existing equipment will be re-used to the extent possible.

Included in this Application and the exhibits attached hereto, are survey-based plans, attached hereto as Exhibit C, and other information detailing the Re-located Facility proposed at the Property and potential environmental impacts associated therewith. The Applicant respectfully submits that the reports and other supporting documentation included in this Application contains the relevant site specific information as required by Statute and the regulations of the Connecticut Siting Council (the "Siting Council" or "Council"). A copy of the Council's Community Antenna Television and Telecommunication Facilities Application Guide with page references from this Application is also included in Exhibit D.

C. The Applicant

Global Signal is a wireless infrastructure company that owns, operates and maintains telecommunications towers throughout the country, including the State of Connecticut. Its home office is located in Canonsburg, PA. Global Signal specializes in providing wireless infrastructure to licensed wireless carriers and data providers. It has successfully developed new wireless facilities throughout the Northeast and has specifically acquired existing towers from telecommunication providers in Connecticut. Global Signal's goal is to develop, operate and maintain quality communication facilities to be shared and used by numerous wireless providers that will benefit the community, as well as the service providers. The company and its affiliated entities, including STC 5, the lessee of the Existing Facility and Crown Atlantic Company, LLC are licensed by the Federal Communications Commission ("FCC") to construct and operate a personal wireless services system in Connecticut, which has been interpreted as a "cellular system" within the meaning of CGS Section 16-50i(a)(6).

Correspondence and/or communications regarding this Application shall be addressed to the attorneys for the applicants:

Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Attention: Julie Kohler, Esq.
Carrie L. Larson, Esq.

D. Application Fee

Pursuant to RCSA Section 16-50v-1a(b), a check made payable to the Siting Council in the amount of $1,000.00 accompanies this Application. The estimated total construction cost is $215,000.00. As such, the applicable application fee is $1,000.00 in accordance with RCSA Section 16-50v-1a(b).

E. Compliance with CGS Section 16-50*l*(c)

Global Signal is not engaged in generating electric power in the State of Connecticut. As such, the proposed Facility is not subject to CGS Section 16-50r. The proposed Re-located Facility has not been identified in any annual forecast reports. As such, the proposed Re-located Facility is not subject to CGS Section 16-50*l*(c).

II. Service and Notice Required by CGS Section 16-50*l*(b)

Pursuant to CGS 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. A certificate of service, along with a list of the parties served with a copy of the Application is included in Exhibit E. Pursuant to CGS 16-50*l*(b), notice of the Applicant's intent to submit this application was published on two occasions in The New Haven Register and The Shoreline Times. Copies of the published legal notices are included in Exhibit F. The publisher's affidavit of service will be forwarded upon receipt. Further, in

compliance with CGS 16-50/(b), notices were sent to each person appearing of record as owner of a property which abuts the Property. Certification of such notice, a sample notice letter, and the list of property owners to whom the notice was mailed are included in Exhibit G.

III. Statements of Need and Benefits

A. Statement of Need

As the Council is aware, the United States Congress, through adoption of the Telecommunications Act of 1996, recognized the important public need for high quality telecommunication services throughout the United States. The purpose of the Telecommunication Act's overhaul of the Communications Act of 1934 was to "provide for a competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies to all Americans." H.R. Conf. Rep. No. 104-458, 206, 104th Cong., Sess. 1 (1996). With respect to wireless communications services, the Telecommunications Act of 1996 expressly preserved State and/or local land use authority over wireless facilities, placed several requirements and legal limitations on the exercise of such authority and preempted State or local regulatory oversight in the area of emissions as more fully set forth in 47 U.S.C. § 332(c)(7). In essence, Congress struck a balance between legitimate areas of State and/or local regulatory control over wireless infrastructure and the public's interest in its timely deployment to meet the public need for wireless services.

The Existing Facility is an integral component of T-Mobile, Nextel, Sprint, Verizon Wireless and New Cingular Wireless's wireless networks in this area of the State of Connecticut. The Existing Facility currently fills a gap in coverage the coverage for all of these wireless carriers' networks in the Guilford area, specifically along Interstate I-895

and Boston Post Road. The proposed Re-located Facility would continue to fill the existing gaps in coverage for these wireless carriers and, in conjunction with other existing and future facilities in Guilford and surrounding towns, is needed by T-Mobile, Nextel, Sprint, Verizon Wireless and New Cingular Wireless to provide its wireless services to people living in and traveling through this area of the State.

Included herein as Exhibits H and I are propagation plots prepared by T-Mobile and Nextel filed in support of petition 613T, showing coverage from existing and approved surrounding sites both with and without the Existing Facility. These propagation plots clearly demonstrate the need for a site in the area, the effectiveness of the Existing Facility and the necessity of the proposed Re-located Facility to maintain effective coverage in this area of Guilford. Based on the location of the proposed Re-located Facility and the lack of coverage in this area, Global Signal can not readily predict a point in time at which the Facility might reach maximum capacity.

B. Statement of Benefits

People today are using their wireless devices more and more as their primary form of communication for both personal and business needs. Modern devices allow for calls to be made, the internet to be reached and other services to be provided irrespective of whether a user is mobile or stationary and provided network service is available.

Wireless devices have become integral to the telecommunications needs of the public and their benefits can no longer be considered a luxury. Indeed, in an effort to ensure the benefits of wireless technologies to all Americans, Congress enacted the Wireless Communications and Public Safety Act of 1999 (the "911 Act"). The purpose of this legislation was to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless

communications services. In enacting the 911 Act, Congress found that networks that would provide for the rapid, efficient deployment of emergency services would enable faster delivery of emergency care with reduced fatalities and severity of injuries. With each year since passage of the 911 Act, additional anecdotal evidence supports the public safety value of improved wireless communications in aiding lost, ill or injured individuals such as motorists, hikers and boaters.

As an outgrowth of the 911 Act, the FCC mandated wireless carriers, such as T-Mobile, to provide enhanced 911 services ("E911") as part of their communications networks. These services ultimately allow 911 public safety dispatchers to identify a wireless caller's geographical location within several hundred feet. The carriers that are currently located on the Existing Facility and will be co-locating on the Re-located Facility have deployed and continue to deploy network technologies to implement the FCC's E911 mandates. The proposed Re-located Facility in Guilford will become an integral component of each of these carriers' E911 network in this area of the state.

C. Technological Alternatives

The FCC licenses granted to wireless carriers authorize them to provide cellular and PCS services in this area of the State through deployment of a network of wireless transmitting sites. The proposed Re-located Facility is a necessary component of T-Mobile, Sprint/Nextel, Verizon Wireless and New Cingular's wireless network.

Repeaters, microcell transmitters, distributed antenna systems and other types of transmitting technologies are not a practicable or feasible means to providing service within the sizeable coverage gap in this area. Significant terrain variations and tree cover in Guilford and the surrounding area, as well as other practical considerations limit the use of such technologies. As such, they are not an alternative to the proposed Re-

located Facility. The Applicant submits that there are no equally effective technological alternatives to re-location and re-construction of the Existing Facility for providing reliable personal wireless services in this area of Connecticut.

IV. Site Selection and Tower Sharing

A. Site Selection

As discussed, the Existing Facility was originally approved for the Property by the Guilford Planning and Zoning Commission in 1997. See Exhibit A. Subsequent to the construction of the Existing Facility, regulatory jurisdiction over the Existing Facility became the province of the Council. On February 14, 2003, Sprint Sites USA filed a petition for a declaratory ruling, Petition No. 613, with the Council for a twenty foot extension of the existing monopole. The Council made a determination that the modifications to the Existing Facility would not result in an adverse environmental impact, and in fact the modifications were necessary to allow Nextel, T-Mobile, AT&T and New Cingular to provide adequate wireless coverage to this area. See Exhibit B. Global Signal identified ten (10) towers, either existing or proposed, within approximately 4 miles of the site search area. All are shown in the table of "Surrounding Site Information" included in Exhibit J.

The Property is proposed to be the location of new development that will enhance and benefit the residents of Guilford. In order for the Property to be developed in a productive manner, the Existing Facility must be relocated to a different location on the Property. Global Signal has agreed to relocate the Existing Facility in order to accommodate this development. The purpose of this application, then, is simply to relocate the Existing Facility, and will not involve making any changes to the design or collocations. The only change that will occur is that, with the merger of New Cingular

Wireless and AT&T, AT&T has determined that it will only require one set of antennas on the Re-located Facility. Therefore, Global Signal respectfully represents that both the Guilford Planning and Zoning Commission, in 1997 and the Council, in 2003, have determined that the Property is the ideal location in this area of Guilford for the location of a facility and requests a waiver of the Council's requirement in the Application Guideline to provide a USGS map showing rejected sites.

B. Tower Sharing

The Existing Facility and proposed Re-located Facility are prime examples of the benefits of tower sharing. The Existing Facility has six (6) carriers co-locating on it including both Cingular equipment and AT&T Wireless equipment. Due to the merger of Cingular and AT&T Wireless into New Cingular Wireless (now AT&T), AT&T now only requires one set of equipment on the Re-located Tower. To promote the sharing of wireless facilities in the Guilford area, the Re-located Facility can accommodate the remaining five (5) antenna platforms and equipment for the wireless carriers that currently co-locate on the Existing Facility. Other than removing one of the two sets of equipment on the Existing Facility for New Cingular Wireless/AT&T, all of the carriers on the Existing Facility have committed to re-locating on the Re-located Facility. Details of the design of the Re-located Facility are included in Exhibit C.

V. Facility Design

Global Signal will lease a 3,050 square foot parcel within the approximately 28.22 acre Property. The proposed Facility would at a minimum require the construction of a 150 foot high self-supporting monopole. The following is a table of the wireless carriers on the Existing Facility and the proposed heights for each carrier on the Re-located Facility.

WIRELESS CARRIER	EXISTING HEIGHT	PROPOSED HEIGHT
T-Mobile	150 feet	150 feet
Nextel	140 feet	140 feet
Sprint	130 feet	130 feet
Verizon Wireless	120 feet	120 feet
New Cingular Wireless	110 feet	New Cingular Wireless – 110 feet
AT&T Wireless	100 feet	New Cingular Wireless – 110 feet

As shown in Exhibit C, each carrier would occupy equipment shelters, approximately 12 foot by 20 foot in size, with the exception of Verizon Wireless which will occupy a shelter of 12 foot by 30 foot, within a 50 foot by 61 foot equipment compound. In addition, Sprint/Nextel, while maintaining two sets of antennas on the tower, will occupy one equipment shelter. The compound would be enclosed by a garden fence, eight (8) feet in height and will match the exterior of the retail buildings in the development proposed by DDR.

Vehicular access to the Re-located Facility would extend from Boston Post Road over a proposed paved driveway that would also be used by the proposed commercial development on the Property. Construction of the new driveway will not result in the removal of any trees of 6" in diameter or greater. See Exhibit C, tree inventory letter. Underground utility connections would extend from Boston Post Road to the compound. Exhibit C contains the specifications for the proposed Re-located Facility at the Property

including a site plan, a compound plan, tower elevation, access map and other relevant information. Exhibit K contains a wetlands delineation report. Exhibit L contains visual resources evaluation including a computer-based, predictive viewshed model and photosimulations. Some of the relevant information included in these exhibits for the Property reveals that:

- The property is classified in the SCW Service Center West zoning district;
- No wetlands are found within 129 feet of the proposed Re-located Facility or new access drive;
- The property currently contains the Existing Facility, a small self-storage facility and a small commercial building with associated parking and is proposed to be developed as a lifestyle retail development;
- Minimal grading of the proposed access drive and minimal grading of the proposed compound area would be required for the construction of the proposed Re-located Facility and all of the proposed grading is required to be performed as part of the retail development on the Property regardless of the proposed Re-located Facility;
- Minimal clearing would be required for development of the proposed access drive and compound area;
- The proposed Re-located Facility will have no effect on historic or architectural resources, See copy of Archeological Study attached hereto as Exhibit M and Exhibit N, copy of correspondence from the State Historic Preservation Office; and
- The proposed Re-located Facility will have no impact on water flow, water quality, or air quality and will not emit any noise.

VI. Environmental Compatibility

Pursuant to CGS Section 16-50p, the Council is required to find and to determine as part of the Application process any probable environmental impact of the facility on the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forest and parks, air and water purity and fish and wildlife. As demonstrated in this Application and the accompanying Attachments and documentation, the proposed Facility will have no significant adverse environmental impacts.

A. Visual Assessment

The visual impact of the proposed Re-located Facility would vary from different locations around the towers depending upon factors such as vegetation, topography, distance from the towers, and the location of structures around the towers. Exhibit L contains a computer-based, predictive viewshed model which depicts the potential impact of the proposed Facility from surrounding views for the Property as well as a Visual Resource Evaluation. In addition, the Visual Resource Evaluation compares the visibility of the Existing Facility with the proposed visibility of the Re-located Facility. Overall, the Re-located Facility will have virtually the same visual impact as the Existing Facility.

Global Signal retained Vanasse Hangen Brustlin ("VHB") to prepare the Visual Resource Evaluation. On June 14, 2006, VHB conducted a balloon float test at 150 feet AGL at the Site of the Re-located Facility in order to evaluate the potential viewshed associated with the proposed Facility. VHB sought to determine the visibility impact of the Re-located Facility, accounting for local, state and federal historic, hiking and recreational sites within the study area, as well as within a two-mile radius of the proposed Property ("Study Area").

The Visual Resources Evaluation demonstrates that the proposed Re-located Facility will have virtually the same visual impact as the Existing Facility and will be as inconspicuous as possible. The topography and the mature vegetation in the area will significantly limit the visual impact of the proposed Re-located Facility.

The existing vegetation in the area of the proposed Property is mature, mixed deciduous hardwood species with an average estimated height of 65 feet. Based on the viewshed analysis contained in Exhibit L, areas from which the proposed Re-located Facility will be at least partially visible comprise only 51 acres, which is less than one percent (>1%) of the entire Study Area. Of note, the total acreage currently experiencing views of the Existing Facility is 54 acres. Therefore, the proposed Re-located Facility will actually result in a net decrease of total areas from which the proposed Re-located Facility will be visible. The visibility of the Re-located Facility will be largely confined to the US Route 1 transportation corridor. Generally, the Re-located Facility will be visible from those locations that currently feature views of the Existing Facility. Only two (2) residences will have year-round views of the Re-located Facility and approximately ten (10) residences will have limited seasonal views of the Re-located Facility.

The compound area will have a de minimis visual impact as it will be screened by the proposed garden fencing. In addition, the Property itself will provide a visual buffer of the compound since the compound itself will be tucked in behind one of the proposed retail buildings. Finally, the tower and antenna installations will be painted a color to blend in with the trees in the vicinity to further reduce the overall visibility of the Property.

These Visual Resources demonstrate that, even from most of the areas where the Facility will be visible, the tower is unobtrusive. Accordingly, the proposed Re-located Facility will not result in an unacceptable adverse visual impact.

As the Visual Resources confirm, the location of the proposed Re-located Facility at the proposed Property will not have a significant visual impact on the surrounding area. In addition, the Visual Resources confirm that the location of the proposed Re-located Facility at the Property will not have a significant visual impact on any hiking or recreational sites, scenic highways or historic sites. In particular, there are no anticipated views from Route 77, a state-designated scenic roadway or from the Cockaponset State Forest.

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

B. Solicitation of State Agency Comments

Global Signal submitted requests for review and comment for the Property to the Connecticut State Historic Preservation Officer ("SHPO") and Department of Environmental Protection ("DEP") representatives responsible for the Natural Diversity Data Base and endangered species review. Given the nature of the terrain and soil on the Property, no impacts are anticipated.

Copies of DEP's and SHPO's correspondence are included in Exhibit N.

C. Power Density Analysis

In August 1996, the FCC adopted a standard for exposure to Radio Frequency ("RF") emissions from telecommunications facilities like those proposed in this Application. To ensure compliance with applicable standards, Global Signal includes, as Exhibit O, a copy of the power density calculations submitted with Petition 613T. The worst-case calculation of power density for operation of all of the carriers currently co-

locating on the Existing Facility would be approximately 31.58 % of the applicable FCC/ANSI standards.

D. Other Environmental Factors

The proposed Re-located Facility would be unmanned, requiring monthly maintenance visits by each carrier that will last approximately one hour. All of the proposed carriers' equipment at the Re-located Facility would be monitored 24 hours a day, 7 days a week from remote locations. The proposed Re-located Facility at the Property would not require a water supply or wastewater utilities. No outdoor storage or solid waste receptacles will be needed. Further, the proposed Re-located Facility will not create or emit any smoke, gas, dust or other air contaminants, noise, odors or vibrations. The construction and operation of the proposed Re-located Facility will have no significant impact on the air, water, or noise quality at the Property.

Global Signal has evaluated the Property in accordance with the FCC's regulations implementing the National Environmental Policy Act of 1969 ("NEPA"). A copy of the NEPA report is attached hereto as Exhibit P. The Property was not identified as a wilderness area. No National Parks, National Forests, National Parkways or Scenic Rivers, State Forest, State Designated Scenic Rivers or State Gamelands are located in the vicinity of the Property. The Property is not located in or adjacent to any areas identified as a federal wildlife preserve. Further, according to the site survey and wetlands delineation report, attached hereto at Exhibit K, no federally regulated wetlands or watercourses will be impacted by the proposed Facility. In addition, the NEPA report indicates that the proposed Re-located Facility is not located in a floodplain as defined by the Federal Emergency Management Agency ("FEMA"). As such, and based on the information contained in other reports included in this Application, the Property is

categorically excluded from any requirement for further environmental review by the FCC in accordance with NEPA and no permit is required by that agency prior to construction of the proposed Facility. See 47 C.F.R. §§ 1.1306(b) and 1.1307(a).

VII. Consistency with the Guilford Land Use Regulations

Pursuant to the Council's Application Guide, included in this section is a narrative summary of the consistency of the project with the local municipality's zoning and wetland regulations and plan of conservation and development. A description of the zoning classification of the Property and the planned and existing uses of the proposed site locations are also detailed in this section.

A. Guilford Plan of Conservation and Development

The Guilford Plan of Conservation and Development (the "Plan"), a copy of which is included in the bulk filing, was adopted in 2002. Wireless communications facilities are not specifically addressed in the Plan. However, Section 2.6 of the Plan (Policy C) discusses promoting compatible and sustainable economic development and notes that "[d]eveloping and maintaining a strong local economy is essential to enhance the community's resources . . provide employment opportunities, and support the provision of the broad number of amenities and services desired by Guilford's growing population. See Bulk Filing, Plan at p.32. The Plan articulates that the Boston Post Road West area, where the Property is located, is targeted for economic development. Id. at 34. As discussed earlier, the entire reason that the Existing Facility needs to be re-located on the Property is because of a proposed commercial/retail development on the Property. Accordingly, Global Signal respectfully submits that the proposed Re-located Facility, which will permit the continued provision of needed wireless communications service

within the Town and, at the same time, make way for economic development is consistent with the Town's Plan.

B. Guilford Zoning Regulations and Zoning Classification

According to the Town's zoning map and municipal tax records, the Property is classified in the SCW Service Center West zoning district.

Section 273-95 of the Town's Zoning Regulations discusses communications towers, antennas and facilities. That section defines "Communication Tower" as "[a] structure that is intended to support equipment used to transmit and/or receive telecommunications signals." See Bulk Filing, Zoning Regulations, § 273-95. Section 273-95 states that the purpose of the communications tower regulations is "(1) to accommodate the need for communications towers while regulating their location and number; (2) to avoid potential damage to adjacent property from these facilities; (3) to reduce the number of communications towers, facilities and sites needed in the future; and (4) to minimize the adverse visual effects through regulations on the Town-wide basis." Id.

Section §273-95 of the Town's Zoning Regulations goes to set forth the Town's recommended zoning requirements for wireless communications facilities. See Bulk Filing, Zoning Regulations, § 273-95. Consistency of the proposed Re-located Facility at the Property with these standards and requirements are illustrated in the following table.

Standards and Dimensional Requirements

Regulation Section	Requirement of Regulation	Proposal
Section 273-95	**Maximum Height of Tower**	**Site**
(D) (8)	Shall not exceed the minimum technical requirements of the facility	Proposed Height is 150 feet, the minimum required by the carriers on the Existing Facility. Of note, this height was approved by the Council in Petition 613.
Section 273-95	**Setback**	**Site**
(D) (9)	Facility treated as an accessory structure in underlying zone and must meet setback requirements for a principle structure on the lot. For SCW Zone: Front-yard: 75 Feet Rear-yard: 20 Feet Side-yard: 15 Feet	Actual Setbacks: Front-yard: 422 feet Rear-yard: 388 feet Side-yard: 94 feet
Section 273-95 (D) (5)	**Visual Impact**	**Site**
	Mitigation efforts required including landscaping, fencing, painting	Proposed 8 foot garden fence; Applicant will paint tower in accordance with recommendations of the Town and the Council
Section 273-95 (D) (4)	**Joint Use**	**Site**

	For new towers, tower must be constructed to accommodate 3 carriers and other communications companies	Proposed Re-located Facility will accommodate five (5) wireless carriers
Section 273-95 (D) (6)	**Lighting**	**Site**
	No lighting permitted unless required by Town or by the FAA	None proposed
Section 273-95 (D) (7)	**Advertising**	**Site**
	No commercial advertising permitted	None proposed

C. Planned and Existing Land Uses

The proposed Re-located Facility will be located in the northeastern corner of an approximately 28.22 acre property. The Property currently contains the Existing Facility, a self-storage facility and a small commercial building. DDR proposes to develop a lifestyle retail development on the Property. Commercial development is found in the surrounding area along the Boston Post Road and residential development is found in the surrounding areas beyond the Boston Post Road and abutting commercial developments. Consultation with municipal officials and observations did not indicate any known or planned changes in surrounding land uses other than the development proposed at the Property.

D. Guilford Inland Wetlands and Watercourses Regulations

The Guilford Inland Wetlands and Watercourses Regulations ("Local Wetlands Regulations") regulate certain activities conducted in or adjacent to "wetlands" as defined therein. One such regulated activity is "any removal or deposition of material or any obstruction, construction, alteration or pollution" of such wetland and in areas adjacent to

a wetland or watercourse. See Bulk Filing, Inland Wetlands and Watercourses Regulations, § 271-6. Wetlands buffers/upland review areas are defined as 100 feet measured horizontally from the boundary of any wetland or watercourse. See Bulk Filing, Inland Wetlands and Watercourses Regulations, § 271-6.

According to the site survey, field investigations conducted at the Property as well as the wetlands report attached hereto as Exhibit K, no watercourses or wetlands are located within 129 feet of the proposed Property. In accordance with the Connecticut Soil Erosion Control Guidelines, as established by the Council of Soil and Water Conservation, soil erosion control measures and other best management practices will be established and maintained throughout the construction of the proposed Re-located Facility.

VIII. Consultations with Local, State and Federal Officials

A. Local Consultations

CGS Section 16-50*l*(e) requires an applicant to consult with the local municipality in which a proposed facility may be located and with any adjoining municipality having a boundary of 2,500 feet from the proposed facility concerning the proposed and alternate sites of the facility.

On July 24, 2006, Global Signal submitted a letter and a technical report to the Town of Guilford with respect to the proposed Re-located Facility at the Property. A copy of the letter to the Town of Guilford is attached hereto as Exhibit Q. The technical report, a copy of which is being bulk filed, included specifics about the proposed Property, the necessity of re-locating the Existing Facility and addressed the public need for the facility, the site selection process and the environmental effects of the proposed Re-located Facility.

On August 3, 2006, attorneys for both the Applicant and DDR met with officials from the Town of Guilford including the First Selectman and the Town's Tower Committee. During Global Signal's follow-up with the Town, the First Selectman indicated that he did not have any concerns about the proposal particularly in light of the fact that the proposal simply involves re-locating the Existing Facility on the Property.

B. Consultations with State Officials

As noted in Section VI.B of this Application, Global Signal consulted with and requested review of the proposed Re-located Facility from DEP and SHPO. Exhibit N contains DEP and SHPO's correspondence for the Property.

C. Consultation with Federal Agencies

Global Signal has received a determination from the Federal Aviation Administration ("FAA") for the Property, which is included in Exhibit R. The results indicate the proposed Facility would not require FAA registration, let alone FAA review as a potential air navigation obstruction or hazard. As such, no FAA lighting or marking would be required for the towers proposed in this Application.

As discussed supra, Global Signal has evaluated the Property in accordance with the FCC's regulations implementing the National Environmental Policy Act of 1969 ("NEPA") and evaluated whether any of the proposed construction falls under NEPA's "listed categories." The "listed" categories, included in 47 CFR §1.1307, are activities that may affect wilderness areas, wilderness preserves, endangered or threatened species, critical habitats, National Register historic districts, sites, buildings, structures or objects, Indian religious sites, flood plains and federal wetlands. As noted in Section VI.D of this Application, Global Signal conducted a review for the Property and determined that the Property does not fall under any of the NEPA "listed" categories of 47 CFR §1.1307.

Therefore, the proposed Re-located Facility does not require review by the FCC pursuant to NEPA. A copy of the NEPA report is attached hereto as Exhibit P.

IX. Estimated Cost and Schedule

A. Overall Estimated Cost

The total estimated cost of construction for the proposed Re-located facility is $215,000.00. This estimate includes:

(1) Tower and foundation costs (including installation) of approximately $120,000;

(2) Site development costs of approximately $30,000; and

(3) Utility installation costs of approximately $30,000; and

(4) De-commissioning Existing Facility costs of approximately $35,000.

B. Overall Scheduling

Site preparation and engineering would commence immediately following Council approval of Global Signal's Development and Management ("D&M") Plan and is expected to be completed within three (3) to four (4) weeks. Installation of the monopole, antennas and associated equipment is expected to take eight (8) weeks. The duration of the total construction schedule is approximately eight (8) weeks. Facility integration and system testing is expected to require an additional two (2) weeks after the construction is completed.

X. Conclusion

This Application and the accompanying materials and documentation clearly demonstrate that the Existing Facility is currently fulfilling the public need for improved wireless services and that, therefore, the Re-located Facility should be approved in order to continue to provide improve wireless services to the Guilford area. The foregoing information and attachments also demonstrate that the proposed Re-located Facility will not have any substantial adverse environmental effects. The Applicant respectfully submits that the public need for the proposed Re-located Facility has already been previously established by prior approvals of the Existing Facility by both the Town and the Council and that the clearly established public need outweighs any potential environmental effects resulting from the re-location and re-construction of the proposed Re-located Facility at the Property. As such, the Applicant respectfully requests that the Council grant a Certificate of Environmental Compatibility and Public Need to Global Signal for a proposed re-location and reconstruction of a wireless telecommunication facility at 1919 Boston Post Road, Guilford, Connecticut.

Respectfully Submitted,

By: _____

Attorneys for the Applicants
Julie D. Kohler, Esq.
jkohler@cohenandwolf.com
Carrie L. Larson, Esq.
clarson@cohenandwolf.com
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Tel. (203) 368-0211
Fax (203) 394-9901

THE OLD STONE HOUSE

TOWN OF GUILFORD

GUILFORD PLANNING & ZONING COMMISSION

GUILFORD, CONNECTICUT 06437

SETTLED IN 1639

TELEPHONE 453-8039
FAX 453-8467

May 22, 1997

Sprint Spectrum LP
9 Barnes Industrial Road
Wallingford, CT. 06492

Gentlemen:

At its regular meeting on May 21, 1997, the Guilford Planning & Zoning Commission took the following action:

VOTED; That the Guilford Planning & Zoning Commission approve a Special Permit for Sprint Spectrum, LP, to construct a communication tower and related facilities at 1919 Boston Post Road, Assessor's Map 79, Lot 35 as shown on the following documents;

1. "Guilford West - Stone, Site Plan", dated 11/14/96, Rev. 5/19/97.

2. "Guilford West - Stone, Construction Layout and Elevation", dated 11/14/96, Rev. 4/15/97.

3. "Guilford West - Stone Details", dated 11/14/96;

All of the above prepared by Goodkind and O'Dea, Inc., Consulting Engineers and Planners.

This Application is Approved with the following conditions:

1. That prior to issuance of a building permit for the communications facility, a permit from DOT be secured for the new driveway.

This Special Permit Application is Approved, based upon a finding that it conforms with Section 39J of the Guilford Zoning Regulations. In particular this new tower facility;

a. is located in a commercial zone,
b. will have minimal adverse impact on any scenic site or vista.
c. is proposed to be constructed in such a manner as to be able to accommodate additional antennas, in accordance with Section 39 J.4.L.

This Special Permit is effective on June 4, 1997 and upon filing with the Town Clerk.

Very truly yours,

Robert A. Guadagno/pr

Robert A. Guadagno
Secretary

RAG/pr
cc: Scott Patterson, Esq.
Roger W. Stone

NOTICE OF SPECIAL PERMIT

You are hereby notified that on May 21, 1997 the Guilford Planning & Zoning Commission granted your application for a Special Permit effective June 4, 1997 and upon filing this notice with the Guilford Town Clerk as follows:

1. Owner of Record: Sprint Spectrum

2. Description of Premises: 1919 Boston Post Road; Guilford, CT.

3. Applicable Zoning Regulations: Section 39J

4. Nature of Special Permit: Communication Facilities

5. Conditions: That prior to issuance of a building permit for the communications facility, a permit from DPT be secured fc the new driveway.

6. Reasons: This Application is approved based upon a finding that it complies with the Zoning Regulations - OR - This Special Permit Application is Approved, based upon a finding that it conforms with Section 39J of the Guilford Zoning Regulations. In particular this new tower facility; a. is located in a commercial zone, b. will have minimal adverse impact on any scenic site or vista, c. is proposed to be constructed in such a manner as to be able to accommodate additional antennas, in accordance with Section 39 J.4.L.

The Special Permit is effective on June 4, 1997 and upon filing with the Town Clerk.

Guilford Planning & Zoning Commission

By _____
Its Town Planner

Certification

This is to certify that the foregoing is a true copy of a Special Permit issued by the Guilford Planning & Zoning Commission on May 21, 1997.

Guilford Planning & Zoning Commission

By _____
Its Clerk

NOTICE: For this SPECIAL PERMIT to be effective, you must record the certified copy on the Guilford Land Records in the Town Clerk's office.

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 10, 2003

Scott T. Penner
Hurwitz & Sagarin LLC
147 North Broad Street
P.O. Box 112
Milford, CT 06460-0112

RE: **PETITION NO. 613T** - Sprint Sites USA petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing telecommunications facility located at 1919 Boston Post Road, Guilford, Connecticut.

Dear Mr. Penner:

At a public meeting held on April 9, 2003, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated February 14, 2003.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Pamela B. Katz
Chairman

PBK/CML

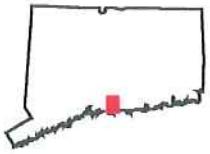
Enclosure: Staff Report dated April 9, 2003

c: Honorable Carl A. Balestracci, Jr., First Selectman, Town of Guilford
M. William McAvoy, Jr., Zoning Enforcement Officer, Town of Guilford

\\ctmiddat\projects\41176.00\graphics\figures\csc_aerial.pdf

Vanasse Hangen Brustlin, Inc.

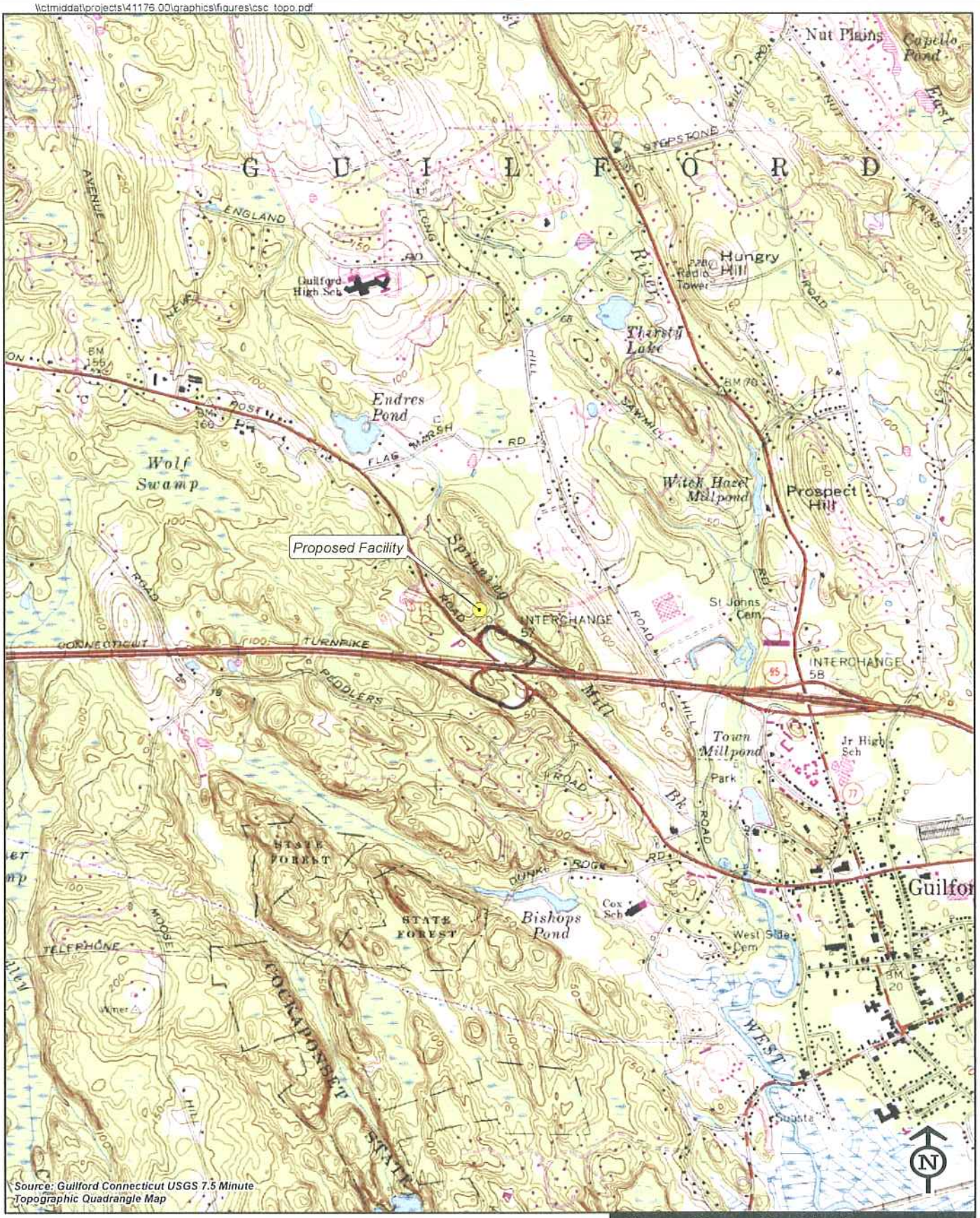
200 100 0 200
Feet



Quadrangle Location

Aerial Photograph
Proposed Tower Relocation
1919 Boston Post Road
Guilford, Connecticut

\\ctmiddat\projects\41176.00\graphics\figures\csc_topo.pdf



1,000 500 0 1,000 Feet

Quadrangle Location

Vanasse Hangen Brustlin, Inc.

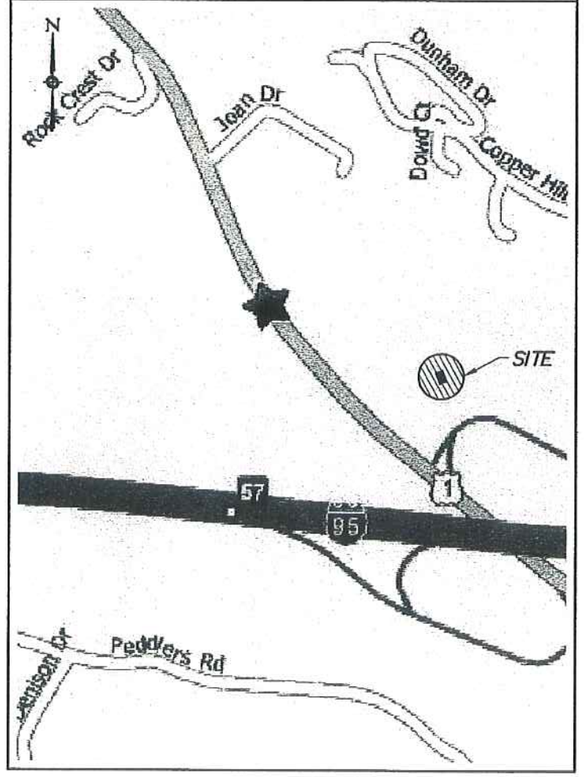
USGS Topographic Map
Proposed Tower Relocation
1919 Boston Post Road
Guilford, Connecticut

WIRELESS COMMUNICATIONS FACILITY

GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

VICINITY MAP — NO SCALE



PROJECT SUMMARY

SITE NAME:	GUILFORD
SITE ADDRESS:	1919 BOSTON POST ROAD GUILFORD, CONNECTICUT
JURISDICTION:	CONNECTICUT SITING COUNCIL
GOVERNING CODE:	CONNECTICUT STATE BUILDING AND LIFE SAFETY CODE
MAP:	79
LOT:	35
ZONE:	SCW (SERVICE CENTER WEST ZONING DISTRICT)
OWNER:	C & K REAL ESTATE, LLC
APPLICANT:	GLOBAL SIGNAL
ARCHITECT:	URS CORPORATION A.E.S. 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067
M/E/P ENGINEER:	URS CORPORATION A.E.S. 500 ENTERPRISE ROCKY HILL, CT 06067
GEODETIC COORDINATES:	LATITUDE 41° 17' 57.48" LONGITUDE 72° 42' 19.16"
GROUND ELEVATION:	ELEVATION 99.4'

LEGEND

SYMBOL	DESCRIPTION
	SECTION OR DETAIL NUMBER SHEET WHERE DETAIL/SECTION OCCURS
1	ELEVATION NUMBER
	SHEET WHERE ELEVATION OCCURS

ABBREVIATIONS

MIN.	MINIMUM
V.I.F.	VERIFY IN FIELD
O.C.	ON CENTER
PSF	POUND/SQUARE FOOT
TYP.	TYPICAL
FT.	FEET
SQ.FT.	SQUARE FEET
N/A	NOT APPLICABLE

SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET – GENERAL NOTES AND LEGENDS
SC-1	EXISTING SITE PLAN
SC-2	SITE PLAN
SC-3	COMPOUND PLAN
SC-4	TOWER ELEVATION
SC-5	ABUTTERS MAP

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
LICENSED ARCHITECT
No. 14310

PROJECT NO: 36928481

JOB NO: GS1-001

DRAWN BY: RRH

CHECKED BY:

ISSUED FOR		
0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

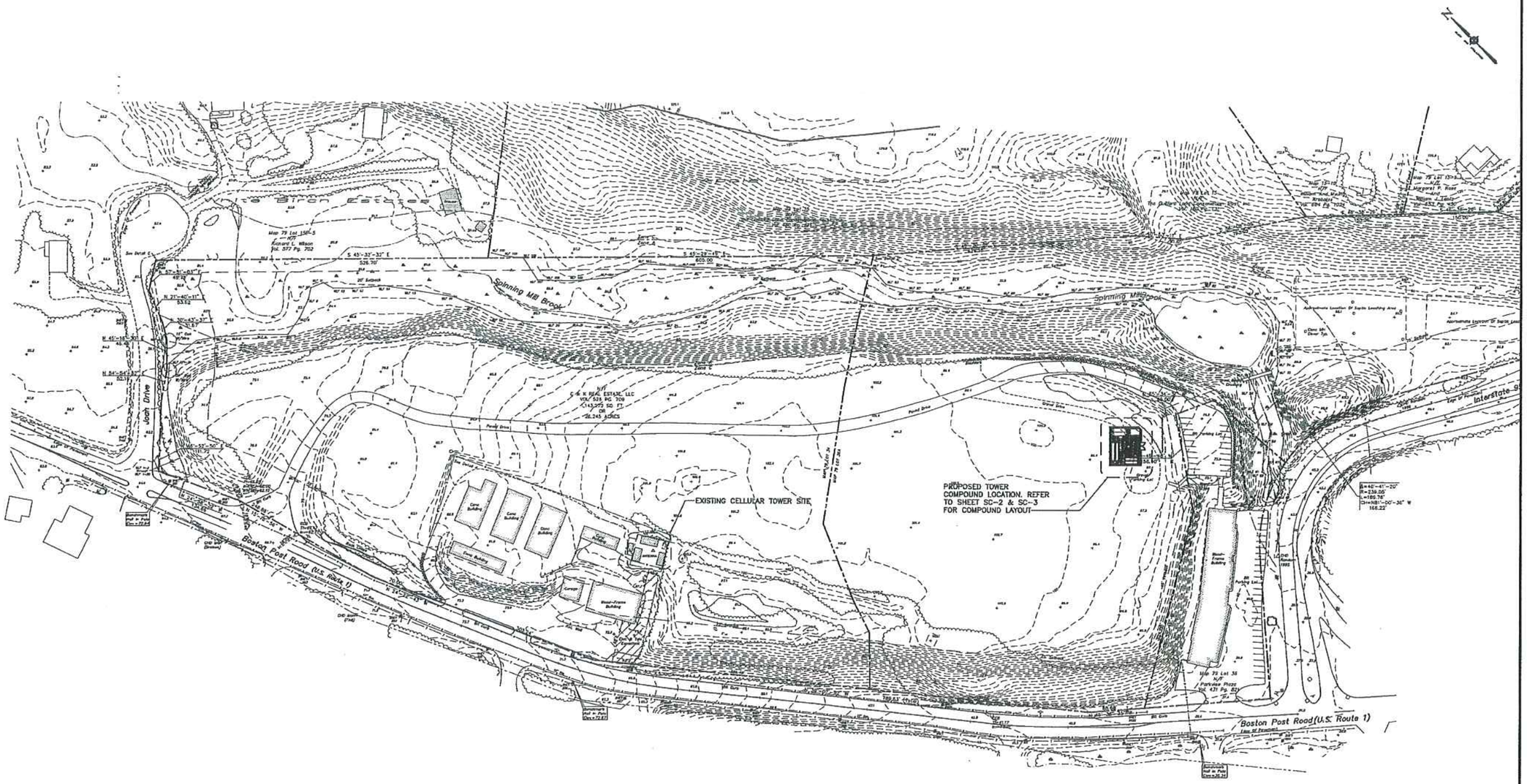
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

TITLE SHEET-
GENERAL NOTES
AND LEGENDS

T-1



1 SC-1 EXISTING SITE PLAN
SCALE: 1"=80'-0"

0 40 80 160 240

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
LICENSED ARCHITECT
NO. 4319

PROJECT NO:	36928481
JOB NO:	GS1-001
DRAWN BY:	WRB
CHECKED BY:	

ISSUED FOR

0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

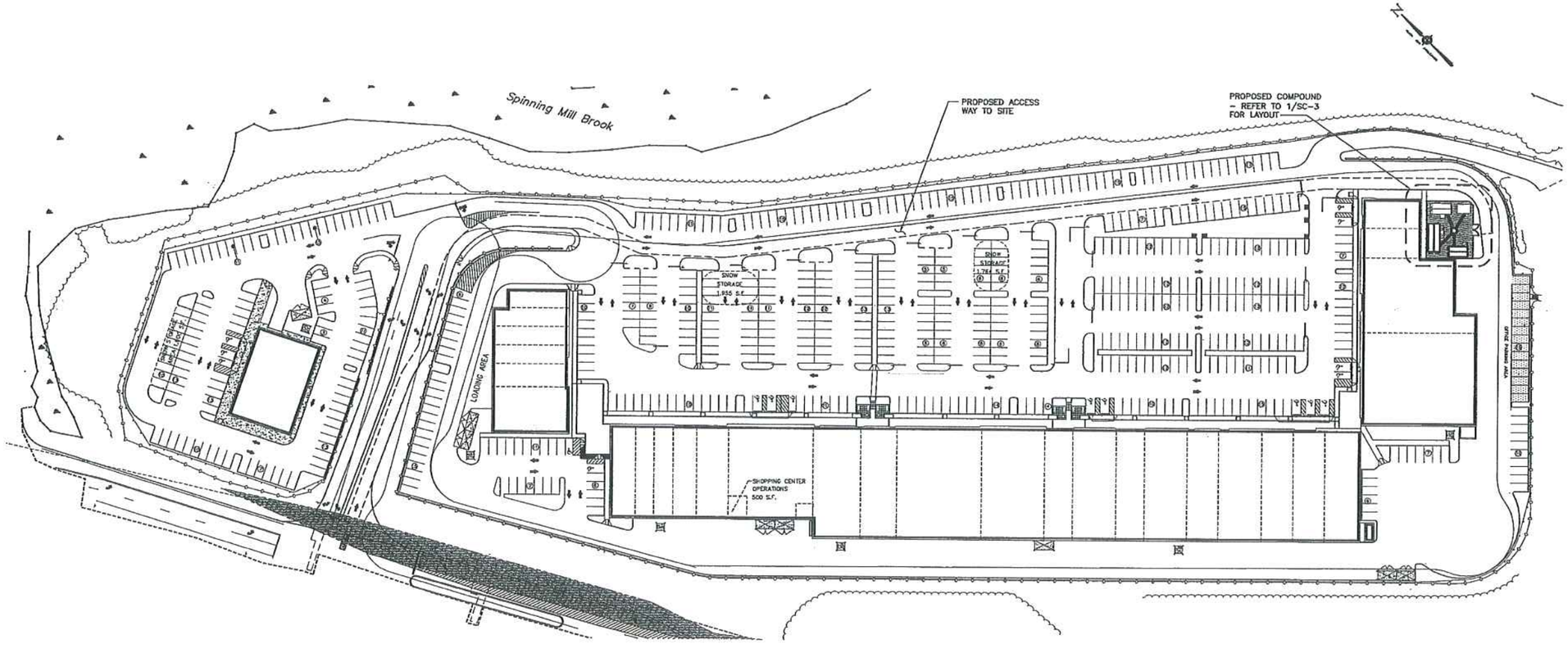
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

EXISTING SITE PLAN

SC-1



1 SC-2 PROPOSED SITE PLAN
SCALE: 1"=60'-0"

0 30 60 120 180

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
NO. 13110
REGISTERED ARCHITECT

PROJECT NO: 36928481

JOB NO: GS1-001

DRAWN BY: PJS

CHECKED BY:

ISSUED FOR		
0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

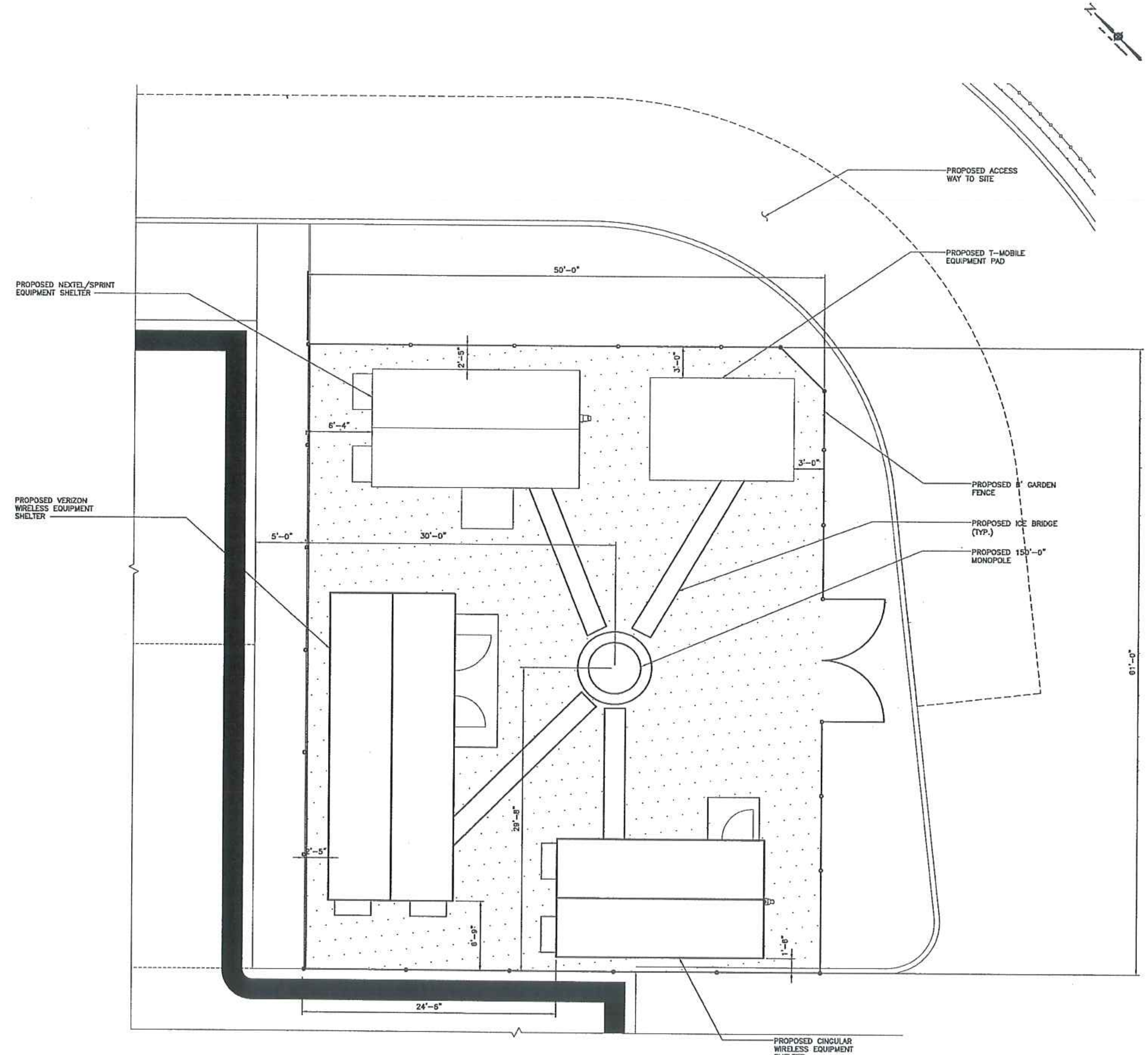
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

SITE PLAN

SC-2



1 SC-3 COMPOUND PLAN
SCALE: 1"=5'-0"

0 1 2 3 4 5 10 15

A&E FIRM

URS CORPORATION AES

500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
NO. 4310
LICENSED ARCHITECT

PROJECT NO: 36928481

JOB NO: GS1-001

DRAWN BY: PJS

CHECKED BY:

ISSUED FOR

0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO GLOBAL SIGNAL IS STRICTLY PROHIBITED.

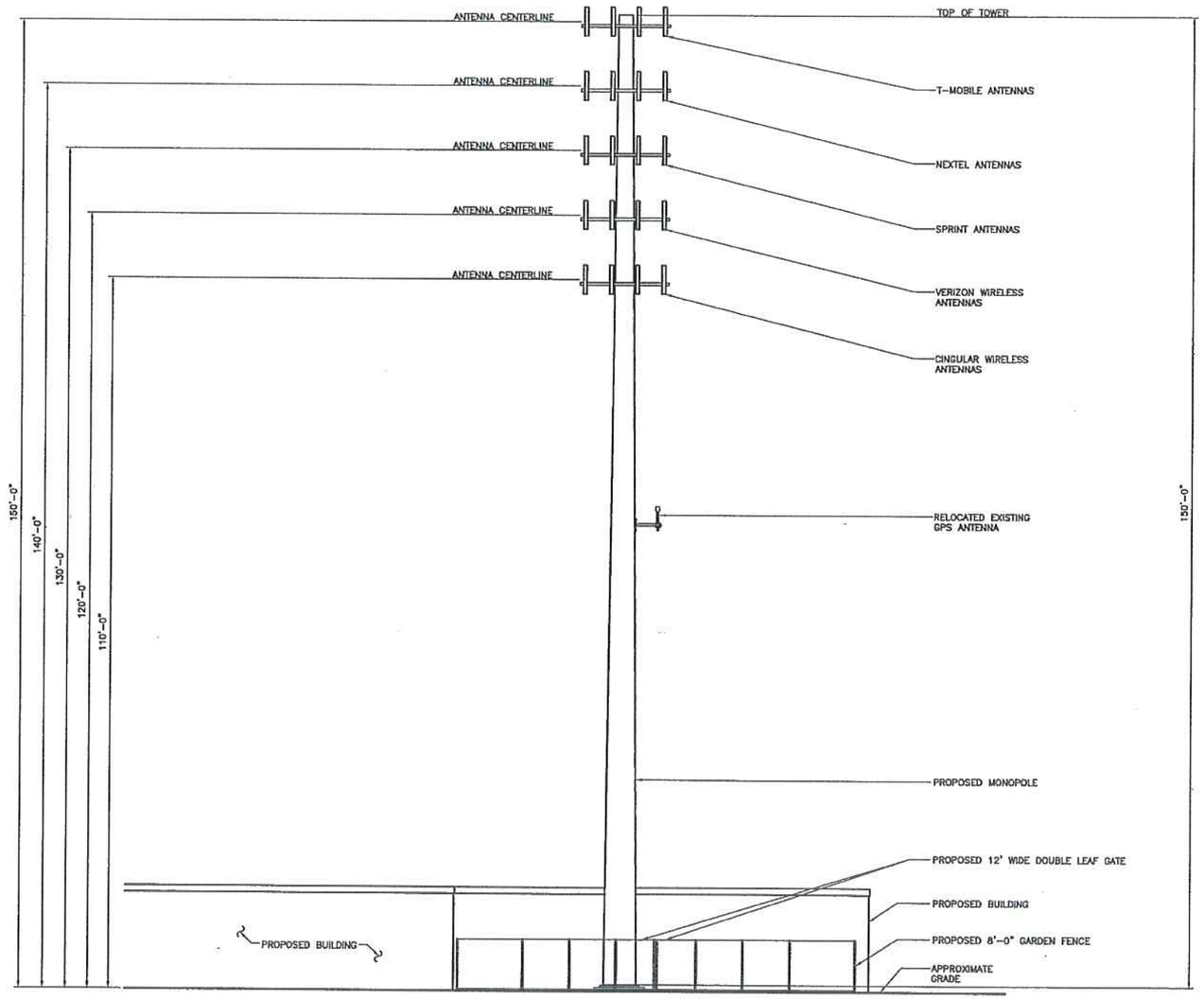
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

COMPOUND PLAN

SC-3



1 SC-4 TOWER ELEVATION
SCALE: 1" = 10'-0"
0 5 10 20 30

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
LICENSED ARCHITECT

PROJECT NO: 36928481
JOB NO: GS1-001
DRAWN BY: PJS
CHECKED BY:

ISSUED FOR		
0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

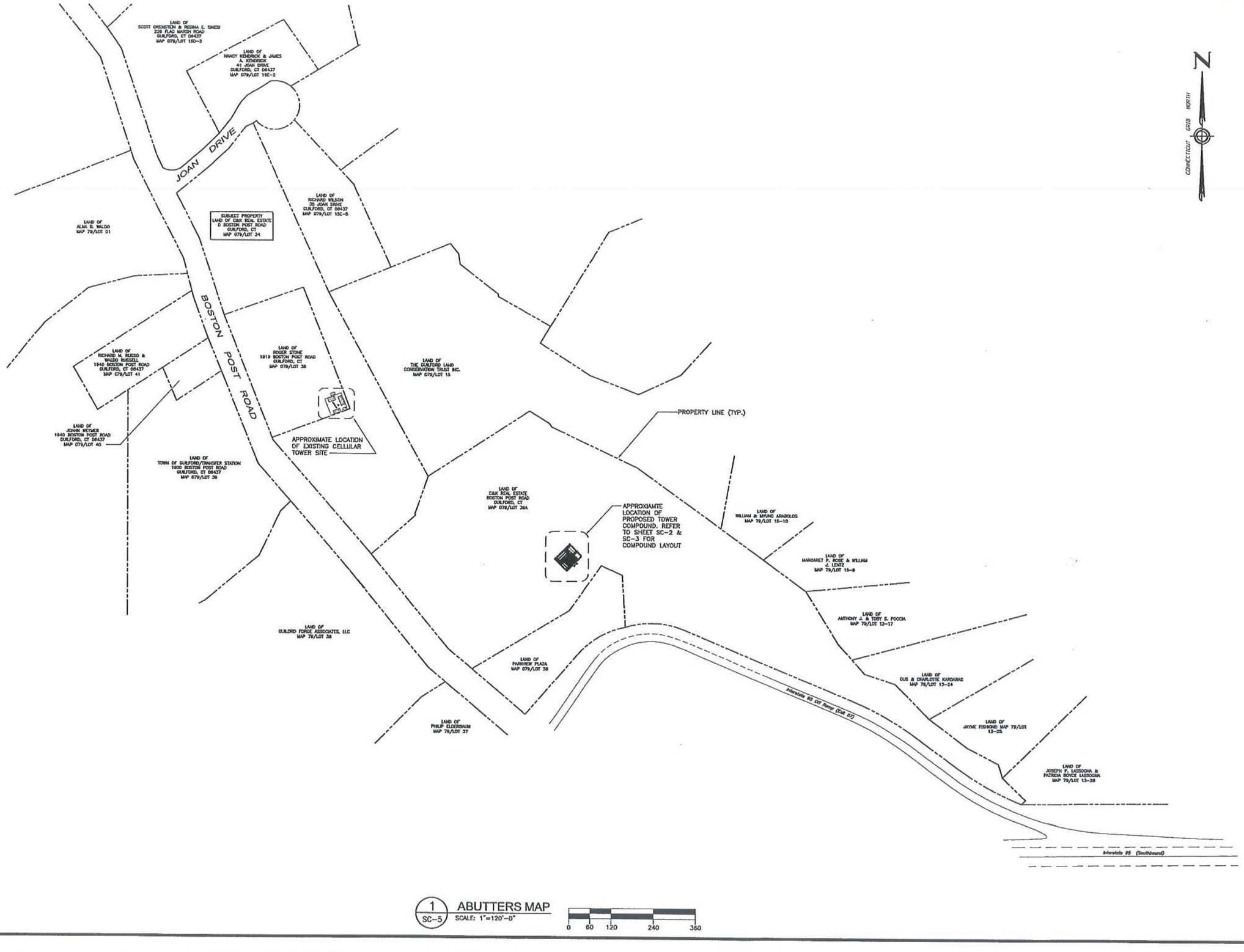
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

TOWER ELEVATION

SC-4



1 SC-5 ABUTTERS MAP
SCALE: 1"=120'-0"

A&E FIRM

URS CORPORATION AES

500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROSE
No. 24910
LICENSED ARCHITECT

PROJECT NO: 36928481

JOB NO: GS1-001

DRAWN BY: RRH

CHECKED BY:

ISSUED FOR		
0	05-25-06	REVIEW
1	07-10-06	REVIEW
2	07-11-06	REVIEW
3	10-17-06	REVIEW
4	11-30-06	REVIEW
5	12-04-06	REVIEW
6	10-17-07	SITING COUNCIL

GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

ABUTTERS MAP

SC-5

URS

January 29, 2007

Carrie L. Larson
Cohen and Wolf, P.C.
1115 Broad Street
P.O. Box 1821
Bridgeport, Connecticut 06601
Phone : 203-368-0211

Reference: **Guilford**
1919 Boston Post Road
Guilford, Connecticut 06437
36928481.00003

Dear Ms. Larson:

URS Corporation has reviewed the above mentioned site located at 1919 Boston Post Road and has determined that a total of zero trees 6" in diameter or greater will need to be removed for the purpose of constructing the proposed telecommunications facility and its access road from Boston Post Road.

If you should have any questions, please call.

Sincerely,
URS Corporation AES

Douglas J. Roberts, AIA
Project Manager

DJR/mks

cc: CF/FB/PP

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991

Application Guideline	Location in Application
(A) An Executive Summary on the first page of the application with the address, proposed height, and type of tower being proposed. A map show in the location of the proposed site should accompany the description;	I.B. Executive Summary, pages 2-4 Exhibit C, Site Plans
(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;	I.B. Executive Summary, pages 2-4 V. Facility Design, pages 10-13 Exhibit C, Site Plans
(C) A statement of the purpose for which the application is made;	IA Authority and Purpose, page 1 IV.B Tower Sharing, page 10
(D) A statement describing the statutory authority for such application;	I.A. Purpose and Authority, page 1
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, or other organized group, it shall also give the state under the laws of which it was created or organized;	I.C. The Applicant, pages 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;	I.C. The Applicant, pages 4-5
(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;	III.A. Statement of Need, pages 6-7 III.C. Technological Alternatives, pages 7-8 Exhibit H, T-Mobile's Radio Frequency Coverage Plots Exhibit I – Nextel's Radio Frequency Coverage Plots
(H) A statement of the benefits expected from the proposed facility with as much specific information as is practicable;	III.B. Statement of Benefits, pages 7-8
(I) A description of the proposed facility at the proposed prime and alternative sites including:	I.B. Executive Summary, pages 2-4 III.A. Statement of Need, pages 6-7 V. Facility Design, pages 10-13

Application Guideline	Location in Application
(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 radiofrequency 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 capability would be reached for the proposed facility and for facilities that would be integrated with the proposed facility.	VI.C. MPE Limits/Power Density Analysis, pages 15-16 Exhibit O, Power Density Calculations Exhibit H, T-Mobile's Radio Frequency Coverage Plots Exhibit I, Nextel's Radio Frequency Coverage Plots Exhibit C, Site Plans
(J) A description of the named sites, including : (1) The most recent U.S.G.S. topographic quadrangle map (scale 1 inch = 2000 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 =	Exhibit C, Site Plans V. Facility Design, pages 10-13

Application Guideline	Location in Application
200 feet) of the lot or tract on which the facility is proposed to be located showing the 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, fall zones, existing and proposed contour elevations, 100 year flood zones, waterways, 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 = 1000 feet) showing the proposed site, access roads, and all abutting properties.	
(K) A statement explaining mitigation measures for the proposed facility including: (1) Construction techniques designed to specifically 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.	V. Facility Design, pages 10-13 III.C. Technological Alternatives, pages 8-9 Exhibit C, Site Plans (driveway design)
(L) A description of the existing and planned land uses of the named sites and surrounding areas;	VII.C. Planned and Existing Land Uses, Page 20
(M) A description of the scenic, natural, historic, and recreational characteristics of the named sites and surrounding areas including officially designated nearby	Exhibit L, Visual Resource Evaluation Report.

Application Guideline	Location in Application
hiking trails and scenic roads;	
(N) Sight line graphs to the named sites from visually impacted areas such as residential developments, recreational areas, and historic sites;	Exhibit L, Visual Resource Evaluation Report. Applicant respectfully requests a waiver from the sight line graphs requested in the Council's guidelines given the extensive and comprehensive visual analysis, including viewshed maps and photosimulations from such visual receptors as included in Exhibit J.
(0) 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;	Exhibit J
(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;	IV. Site Selection and Tower Sharing, pages 9-10
(Q) A description of the technological alternatives and a statement containing justification for the proposed facility;	III.C. Technological Alternatives, pages 8-9
(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;	IV. Site Selection and Tower Sharing, pages 9-10 Given the existence of the Existing Facility and the nature of this Application, the Applicant respectfully requests a waiver from this filing requirement
(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 geographical features compared to the proposed site(s);	IV. Site Selection and Tower Sharing, pages 9-10 Exhibit J, Surrounding Site Information
(T) A statement describing hazards to	VI.C. MPE Limits/Power Density

Application Guideline	Location in Application
human health, if any, with such supporting data and references to regulatory standards;	Analysis, pages 15-16 Exhibit O, Power Density Analysis Bulk Filing
(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;	IX.A. Overall Estimated Cost, page 23
(V) A schedule showing the proposed program of site acquisition, construction, completion, operation and relocation or removal of existing facilities for the named sites;	IX.B . Overall Scheduling, page 23
(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; and	VI.A. Visual Assessment, page 13-15
(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	VI.B., page 15 VI.C., pages 15-16 VI.D., pages 16-17 VII., pages 17-20 VIII., pages 21-22
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	Exhibit N Bulk Filing VII. Consistency with the Town of Guilford’s Land Use Regulations, pages 17-20

Application Guideline	Location in Application
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.	
(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;	Exhibit C
(Z) Such information as the applicant may consider relevant.	

CERTIFICATION OF SERVICE

I hereby certify that on this, the 19th day of October, 2007, copies of the Application and Attachments were sent by Federal Express to the following:

GUILFORD CITY OFFICIALS

Carl Balestracci, Jr., First Selectman
Guilford Town Hall
31 Park Street
Guilford, CT 06437

Planning and Zoning Commission
c/o Shirley Girioni, Chair
Guilford Town Hall
31 Park Street
Guilford, CT 06437

Inland Wetlands Commission
c/o Doug Summerton, Chair
Guilford Town Hall
31 Park Street
Guilford, CT 06437

Conservation Commission
c/o Jennifer Allcock, Chair
Guilford Town Hall
31 Park Street
Guilford, CT 06437

Zoning Board of Appeals
c/o Louise Graver, Chair
Guilford Town Hall
31 Park Street
Guilford, CT 06437

STATE OFFICIALS

Office of the Attorney General
State of Connecticut
Attorney General Richard Blumenthal
P.O. 120
Hartford, CT 06141

Senator Joseph Lieberman
One Constitution Plaza, 7th Floor
Hartford, CT 06103

Senator Christopher Dodd
Putnam Park
100 Great Meadow Road
Wethersfield, CT 06109

Congresswoman Rosa L. DeLauro
2262 Rayburn House Office Building
Washington, DC 20515

Main District Office
59 Elm Street
New Haven, CT 06510

State Representative
Deborah Heinrich
11 Beaver Pond Road
Madison, CT 06443-2328

Legislative Office Building
Room 5005
Hartford, CT 06106-1591

State Representative
Patricia Widlitz
12 Island Bay Circle
Guilford, CT 06437

Legislative Office Building
Room 4034
Hartford, CT 8585

State Senator
Edward Meyer
Legislative Office Building
Room 1000
Hartford, CT 06106-1591

South Central Regional Council of Governments
127 Washington Avenue, 4th Floor West
North Haven, Connecticut 06473 – 1715

State of Connecticut
Department of Environmental Protection
c/o Gina McCarthy, Commissioner
79 Elm Street
Hartford, CT 06106

Department of Public Health
c/o J. Robert Galvin, Commissioner
410 Capitol Avenue, MS#13COM
Hartford, CT 06106

State of Connecticut
Department of Argriculture
c/o F. Philip Prelli, Commissioner
165 Capitol Avenue
Hartford, CT 06106

State of Connecticut
Department of Public Utility Control
c/o Donald W. Downes, Chairman
10 Franklin Square
New Britain, CT 06051

State of Connecticut
Office of Policy and Management
c/o Robert L. Genuario, Secretary
450 Capitol Avenue
Hartford, CT 06106

State of Connecticut
Department of Economic and Community
c/o Joan McDonald, Commissioner
505 Hudson Street
Hartford, CT 06106

State of Connecticut
Department of Transportation
c/o Ralph J. Carpenter, Commissioner
2800 Berlin Turnpike
Newington, CT 06131-7546

State of Connecticut
Council on Environmental Quality
c/o Karl J. Wagener, Executive Director
79 Elm Street
Hartford, CT 06106

State Historic Preservation Officer
c/o Timothy R. Beeble, Chairman
59 South Prospect Street
Hartford, CT 06106

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

FEDERAL AGENCIES

Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Federal Aviation Administration
New England Regional Office
12 New England Executive Park
Burlington, MA 01803

Dated October 19, 2007

By: _____

Attorneys for the Applicant
Julie D. Kohler, Esq.
jkohler@cohenandwolf.com
Carrie L. Larson, Esq.
clarson@cohenandwolf.com
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Tel. (203) 368-0211
Fax (203) 394-9901

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 for a Certificate of Environmental Compatibility and Public Need (the "Application") to be submitted to the Connecticut Siting Council ("Council") on or about September 28, 2007 by Global Signal Acquisitions II ("Global Signal or Applicant"). The Application proposes to re-locate and re-construct an existing 150-foot tall steel monopole in an approximately 4,000 square foot compound area (the "Facility") on a 26.245 acre parcel of property located at 1919 Boston Post Road, Guilford, CT (the "Property"). The Property consists of two parcels, the parcel on which the existing Facility is located is owned by Roger Stone and the adjacent property where the Facility would be re-located is owned by C & K Real Estate, LLC. Developers Diversified Realty currently has a long term lease for the Roger Stone Parcel and a contract to purchase the C & K Real Estate, LLC parcel. The Property is located in the SCW Service Center West Zoning District.

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10 Franklin Square
New Britain, CT 06051

Town of Guilford
Selectmen's Office
31Park Street
Guilford, CT 06437

Planning & Zoning Department
Town of Guilford
50 Boston Street
Guilford, CT 06437

All inquiries should be addressed to the Connecticut Siting Council, or to Global Signal through the person listed below.

Julie Donaldson Kohler, Esq.
Carrie L. Larson, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
PO Box 1821
Bridgeport, CT 06601-1821
(203)368-0211
Its Attorney

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 following abutting landowners:

Wilson, Richard
Mailing: 35 Joan Drive, Guilford, CT 06437
Premises: Same

Guilford Land Cons. Trust, Inc.
Mailing: P. O. Box 200, Guilford, CT 06437
Premises: 0 Russet Drive, Guilford, CT 06437

Arabolos, William and Myong
Mailing: 138 Russet Drive, Guilford, CT 06437
Premises: Same

Rose, Margaret P.
Mailing: 134 Russet Drive, Guilford, CT 06437
Premises: Same

Poccia, Anthony and Toby S.
Mailing: 35 Windfall Lane, Guilford, CT 06437
Premises: Same

Karadares, Gus and Charlotte
Mailing: 49 Windfall Lane, Guilford, CT 06437
Premises: Same

Pensa, Jonathan L. and Jennifer
Mailing: 51 Windfall Lane, Guilford, CT 06437
Premises: Same

Iassogna, Patricia
Mailing: 55 Windfall Lane, Guilford, CT 06437
Premises: Same

Orenstein, Scott and Sinesi, Regina E.
Mailing: 226 Flag Marsh Road, Guilford, CT 06437
Premises: Same

Kendrick, Nancy and James A.
Mailing: 41 Joan Drive, Guilford, CT 06437
Premises: Same

Russo, Richard M. and Waldo, Russell
Mailing: 787 Nut Pains Road Guilford, CT 06437
Premises: 1940 Boston Post Road, Guilford, CT 06437

Weymer, JoAnn
Mailing: 1930 Boston Post Road, Guilford, CT 06437
Premises: Same

Town of Guilford, Transfer Station
Mailing: c/o 31 Park Street, Guilford, CT 06437
Premises: 1900 Boston Post Road, Guilford, CT 06437

Guilford Forge Associates, LLC
Mailing: P. O. Box 315, Guilford, CT 06437
Premises: 1840 Boston Post Road, Guilford, CT 06437

Elderbaum, Philip
Mailing: c/o P. O. Box 346, Guilford, CT 06437
Premises: 1800 Boston Post Road, Guilford, CT 06437

Waldo, Alma B.
Mailing: 89 State Street, Guilford, CT 06437
Premises: 0 Boston Post Road, Guilford, CT 06437

Auto Associates Inc.
Mailing: 1984 Boston Post Road, Guilford, CT 06437
Premises: Same

Auitable, Ralph and Blanca Iris
Mailing: 1992 Boston Post Road, Guilford, CT 06437
Premises: Same

Breeden, Eric and Signe
Mailing: 2004 Boston Post Road, Guilford, CT 06437
Premises: Same

Romano, Frank J., Jr.
Mailing: c/o 687 West Lake Ave, Guilford, CT 06437
Premises: 0 Boston Post Road, Guilford, CT 06437

Noguera, Maria
Mailing: P. O. Box 616, Guilford, CT 06437
Premises: 2010 Boston Post Road, Guilford, CT 06437

State of Connecticut
Mailing: 110 Bartholomew, Hartford, CT 06106
Premises: 0 Boston Post Road, Guilford, CT

C&K Real Estate
Mailing: 787 Nut Plains Road, Guilford, CT 06437
Premises: 0 Boston Post Road, Guilford, CT

C&K Real Estate
Mailing: 787 Nut Plains Road, Guilford, CT 06437
Premises: 1795 Boston Post Road, Guilford, CT

Stone, Roger
Mailing: 33 Ternune Ave, Branford, CT 06405
Premises: 1919 Boston Post Road, Guilford, CT

C&K Real Estate
Mailing: 787 Nut Plains Road, Guilford, CT 06437
Premises: 0 Boston Post Road, Guilford, CT

Cynthia Eckstrom and Richard Eckstrom
Premises: 0 Peddlers Road 06437
Mailing 751 Mulberry Point Road, Guilford 06437

Kenneth Ross and Rose Ross
Premises: 361 Peddlers Road, Guilford, CT 06437
Mailing: Same

Joseph J. Russo
Premises: 1575 Boston Post Road, Guilford, CT 06437
Mailing: Same

Bishop BW & Sons, Inc.
Premises: 1355 Boston Post Road, Guilford, CT 06437
Mailing: Same

Eagle Family Health, LLC
Premises: 1591 Boston Post Road, Guilford, CT 06437
Mailing: 825 East Cromwell Road, Rocky Hill, CT 06067

Louis and Judith Secki
Premises: 1675 Boston Post Road, Guilford, CT 06437
Mailing: Same

Dated October 19, 2007

By: _____

Attorneys for the Applicant
Julie D. Kohler, Esq.
jkohler@cohenandwolf.com
Carrie L. Larson, Esq.
clarson@cohenandwolf.com
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Tel. (203) 368-0211
Fax (203) 394-9901

COHEN and WOLF P.C.
ATTORNEYS AT LAW

CARRIE L. LARSON

Please Reply to Bridgeport
Writer's Telephone: (203) 368-0211
E-Mail: clarson@cohenandwolf.com

October 1, 2007

Via Certified Mail/
Return Receipt Requested

To Whom It May Concern:

As an abutting property owner, this is to notify you that Global Signal Acquisitions II (the "Applicant"), is filing an application with the Connecticut Siting Council regarding the re-location and construction of an existing telecommunications facility located at 1919 Boston Post Road. The application will be submitted to the Connecticut Siting Council on or after Monday, October 1, 2007 and the Applicant will request to be put on a future agenda.

The application involves the re-location and construction of an existing telecommunications facility located at 1919 Boston Post Road (the "Property"). Currently, a 150-foot monopole and associated equipment compound is located at 1919 Boston Post Road in the northwest portion of the Property. The application involves dismantling the existing facility and re-locating it to the northeastern portion of the Property, approximately 700 feet away from its existing location on the Property. The newly-constructed facility will still contain a 150-foot monopole and associated compound.

Enclosed please find a copy of the Legal Notice that ran in The New Haven Register on Monday, September 24 and Wednesday, September 26, as well as in The Shoreline Times on Tuesday, September 25 and Saturday, September 29.

Should you have any further questions or concerns regarding this matter, please contact our office or the Connecticut Siting Council, whose address is in the Legal Notice.

Respectfully,

Carrie L. Larson

CLL:lv
Enclosure

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Carrie L. Larson, Esq.
Cohen and Wolf, P.C.
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PO Box 1821
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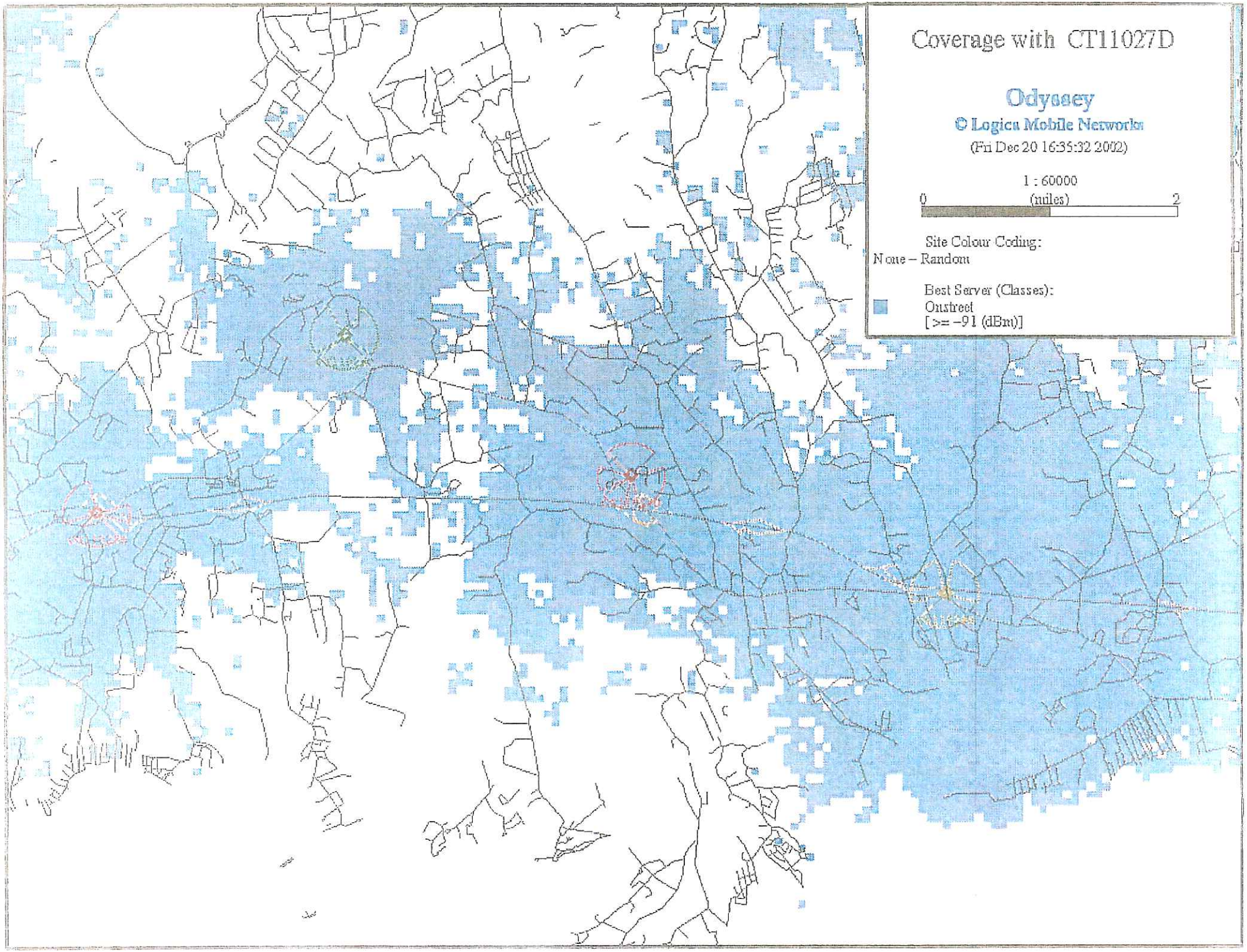
(203)368-0211
Its Attorney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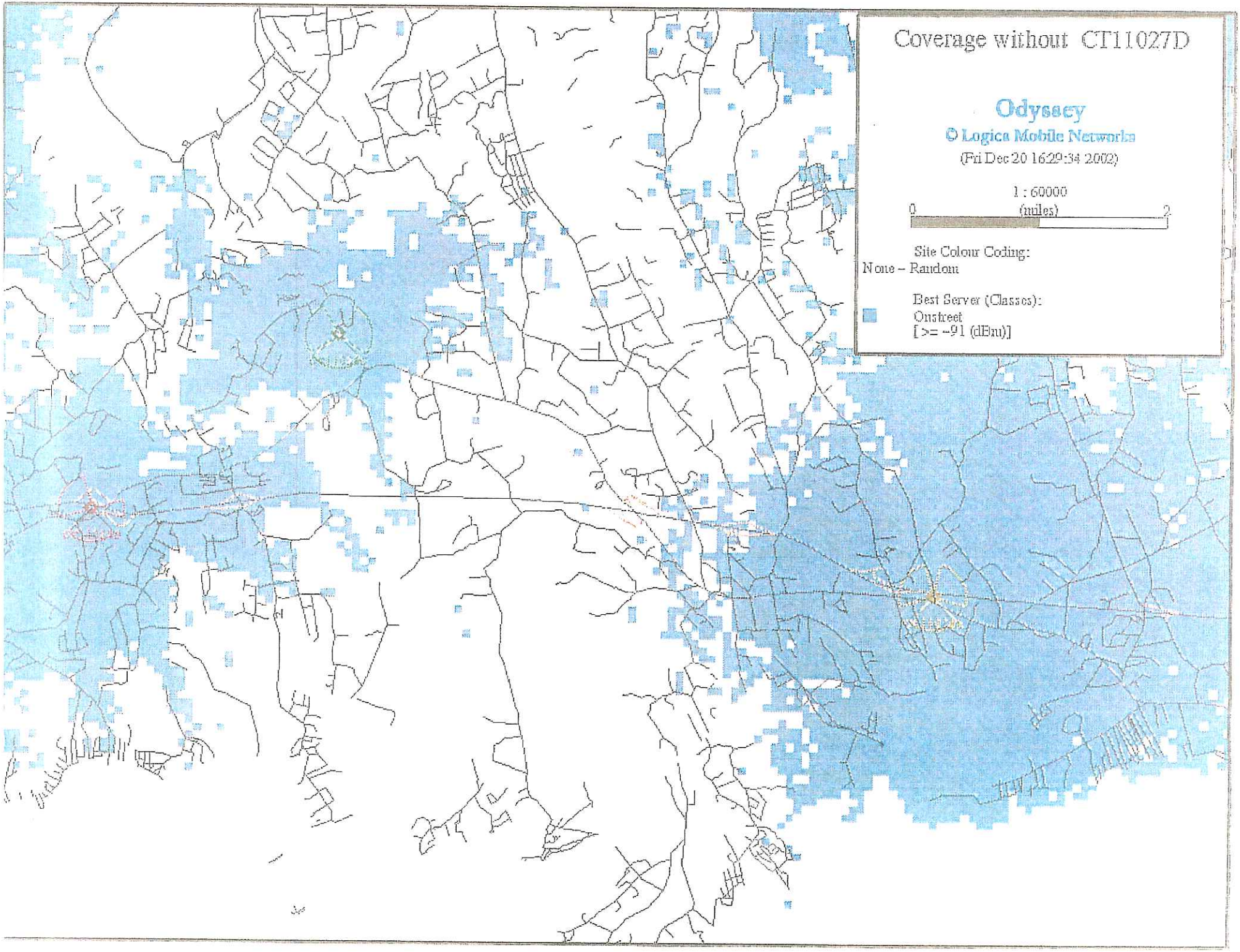
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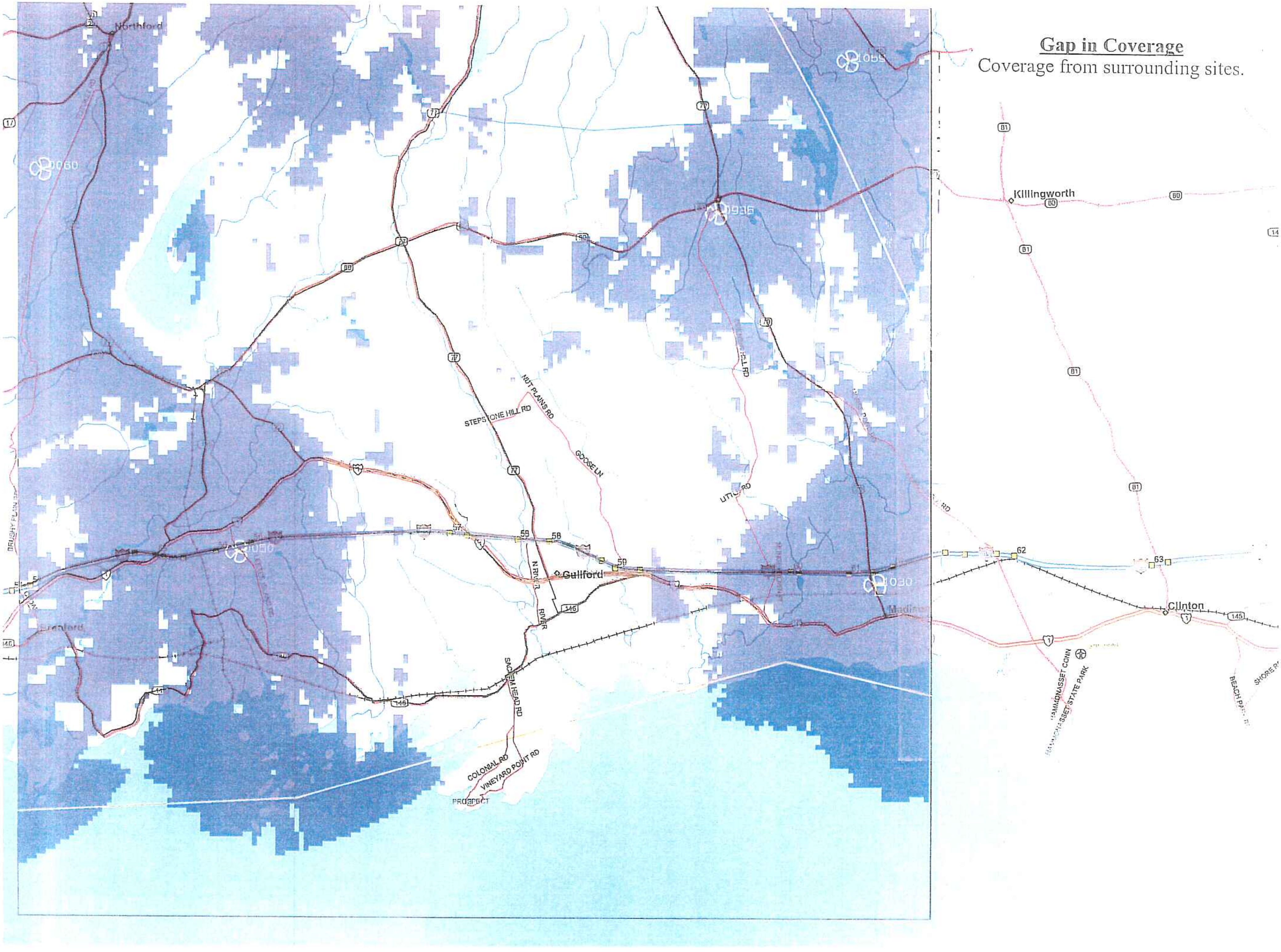
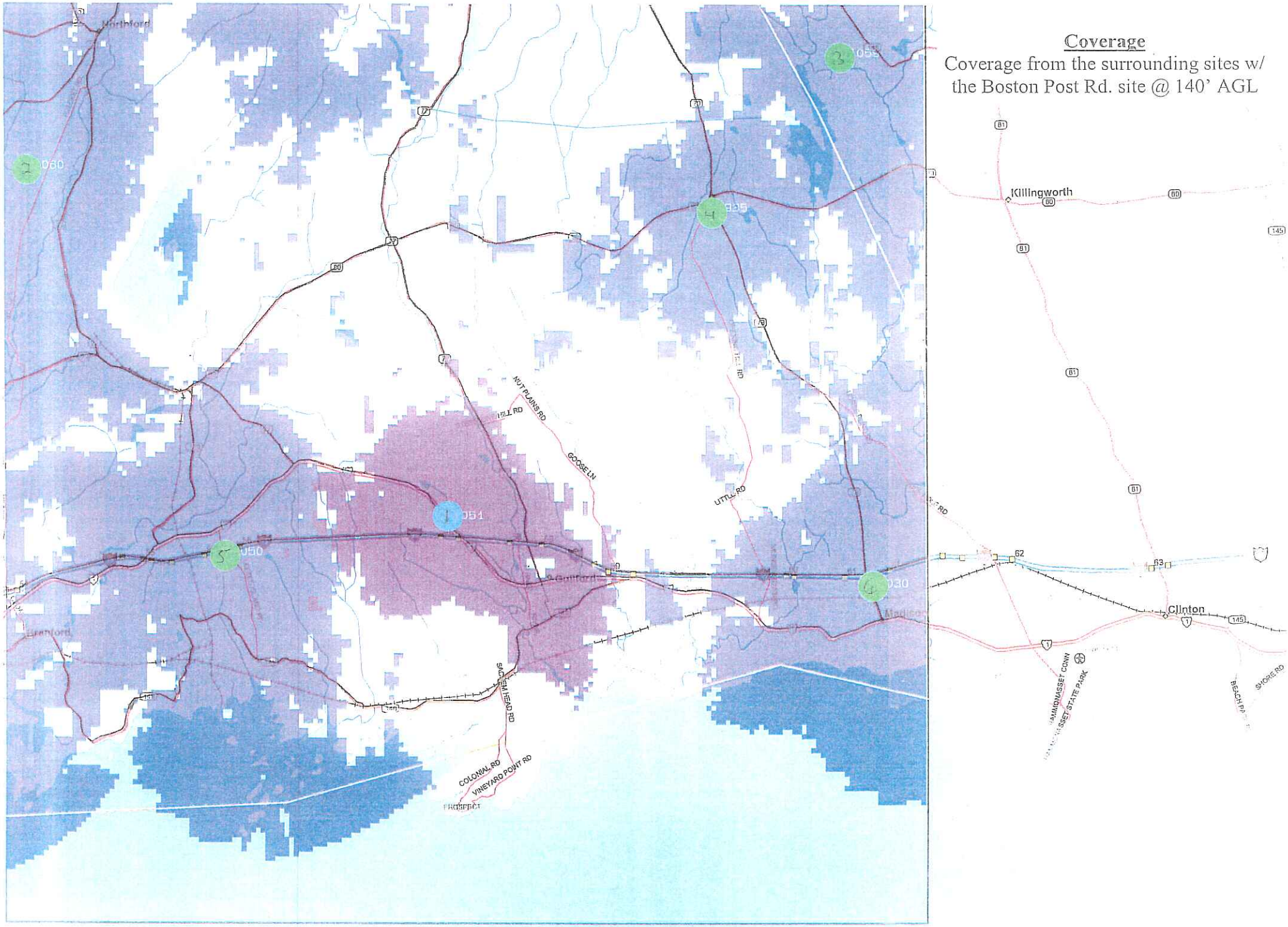


Gap in Coverage

Coverage from surrounding sites.



Coverage

Coverage from the surrounding sites w/ the Boston Post Rd. site @ 140' AGL

EXISTING TOWER LISTING

There are 10 communications towers located within approximately four miles of the site search area for the proposed Guilford site, including the site proposed to be re-located in this application. None of these existing towers would not provide adequate coverage to the target area.

OWNER/OPERATOR	TOWER LOCATION	HEIGHT	SOURCE
Barbra, Robert	Leetes Island Road Branford	30.5’	FCC Database
SBA Properties, Inc.	39 Ciro Road New Haven	53.6’	FCC Database
Sprint Spectrum	2381 Long Hill Road Guilford	180’	CSC Database
SNET Cellular	119 Tanner Marsh Road Guilford	150’	CSC Database
BAM	131 Manor Road Guilford	150’	CSC Database
Global Signal	1919 Boston Post Road Guilford	150’	CSC Database
AT&T	201 Granite Road Guilford	100’	CSC Database
Sprint	21 Acorn Road Branford	150’	CSC Database
Town of Guilford	31 Park Street Guilford	100’	CSC Database
Town of Guilford	400 Church Street Guilford	40’	CSC Database

ENVIRONMENTAL PLANNING SERVICES

WETLAND DELINEATION AND RECONNAISSANCE SURVEY

PREPARED FOR:

BL COMPANIES

February 7, 2005

89 BELKNAP ROAD WEST HARTFORD, CONNECTICUT 06117
PHONE (860) 236-1578 FAX

ENVIRONMENTAL PLANNING SERVICES

INTRODUCTION

This report documents the results of investigations conducted by Environmental Planning Services (EPS) at a site located on the north side of Boston Post Road (RT 1) and the west side of Joan Drive in Guilford, CT. EPS was retained to flag the limits of inland wetlands at the site and conduct preliminary wildlife and wetland functional assessments. Field visits were conducted on January 17 and 31, 2005.

The site's wildlife value in relation to the surrounding area was also assessed using GIS (Geographic Information System) data obtained from the CT Department of Environmental Protection. Because wildlife species do not recognize man-made boundaries, a landscape scale analysis is important to better understand the site's overall biological value.

WETLANDS

At the Federal level, four agencies are principally involved with wetland identification and delineation: Army Corp of Engineers (ACOE), Environmental Protection Agency (US EPA), Fish and Wildlife Service (F&WS), and Natural Resources (formerly Soil) Conservation Service (NRCS). Each of these agencies has developed techniques for identifying the limits of wetlands for various purposes. The ACOE and USEPA are responsible for making jurisdictional determinations of wetlands regulated under Section 404 of the Clean Water Act (formerly known as the Federal Water Pollution Control Act, 33 U.S.C.1344). The regulatory definition of wetlands used by the USEPA and ACOE for administering the Section 404 program is: those areas that are inundated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (EPA, 40 CFR 230.3 and 33 CFR 328.3).

The working definition is based on the fact that wetlands possess three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology, which is the driving force creating all wetlands. These three parameters are also referred to an mandatory technical criteria, and if three are met for an area, it must be identified as a wetland. Such wetlands are often referred to as jurisdictional wetlands. The requirements of 33 CFR Part 328.3 apply once the limits of the jurisdictional wetland (or watercourses) are defined, if the proposed site activity results in the deposition of dredged or fill material into a wetland or water of the U.S. Deposition of fill is defined liberally, to include material deposited ahead of the machine, as a result of bulldozing or scraping soil out of an area.

However, the primary wetland jurisdiction in the state of Connecticut is at the municipal level under state enabling legislation (Connecticut Inland Wetlands and Watercourses Act). The ACOE has overlapping jurisdiction, but for permitting purposes, local project approvals (Site Plan Approval) typically start at the local level.

89 BELKNAP ROAD WEST HARTFORD, CONNECTICUT 06117
PHONE (860) 236-1578 FAX

The requirements of 33 CFR Part 328.3 do not apply with respect to determining the limits of regulated wetlands or watercourses under the Connecticut Inland Wetlands and Watercourses Act. Connecticut wetlands are defined as areas of poorly drained, very poorly drained, floodplain, and alluvial soils. Watercourses are defined as bogs, swamps, or marches, as well as lakes, ponds, rivers, streams, etc., whether man-made, permanent or intermittent. The limits of jurisdiction are typically similar to federal wetlands, but there are important exceptions, especially in floodplains. In addition, under the Connecticut Wetlands and Watercourses Act, the municipal wetland agency has the ability to establish an upland review area, typically 50- to 100-feet from the limit of the wetland/watercourse. The municipal agency may restrict certain activities within the upland review area, however the ACOE typically does not.

Therefore, our determination of the presence of regulated wetlands or watercourse on the site or adjacent to the site has been made by a soil scientist, based on criteria established in the Connecticut Inland Wetlands and Watercourses Act, i.e., areas of poorly drained, very poorly drained, floodplain, and alluvial soils. The wetlands were delineated by walking across the parcel in question on January 17, 2005, and examining the upper 20" of the soil profile with a spade and auger. Those areas meeting the requirements noted above were marked with pink plastic flagging tape numbered with the following sequences: WL 1-1 through 64 (includes flags 1-1 through 1-21) and WL 65-110.

Wetland soils on the site consist of Raypol soils. The Raypol series consists of very deep, poorly drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to gently sloping soils in shallow drainageways and low-lying positions on terraces and plains. The soils have a water table at or near the surface much of the year.

The non-wetland soils were not examined in detail, exceptas was necessary to delineate the wetland boundary. They consist of Hollis-rock outcrop complex and Udorthent soils. The Hollis series consists of shallow, well drained and somewhat excessively drained soils formed in a thin mantle of glacial till derived mainly from gneiss, schist, and granite. They are nearly level to very steep upland soils on bedrock controlled hills and ridges. Depth to hard bedrock ranges from 10 to 20 inches. Bedrock outcrops vary from few to many.
Udorthents is a miscellaneous land type used to denote moderately well to excessively drained earthen material which has been so disturbed by cutting, filling, or grading that the original soil profile can no longer be discerned.

Under Connecticut law, local municipal Wetland Agencies enforce the State of Connecticut enabling legislation. They also have the authority under the statute to regulate activity in an upland review area adjacent to wetlands. The depth or width of this upland review area is determined by each municipality, but is typically 50-100 feet from the wetland boundary. The New England District ACOE does not enforce a buffer zone or upland review area. The ACOE believes that their jurisdiction ends at the limit of the jurisdictional wetlands.

It is important to note that the Nationwide permits promulgated by the ACOE under Section 404 of the Clean Water Act do not apply in Connecticut. Instead, ACOE has issued General Permits that cover activity that meets certain area restrictions and other criteria, and which has been granted a local Inland Wetland Permit and all necessary state wetland and environmental permits. Under the CT Programmatic General Permit (as it applies to filling of non-tidal wetlands), total wetland impacts (direct plus indirect) totaling less than 5000 sq. ft. are permitted without further processing by the ACOE, provided that the CT and local permits are in place, and provided further that the impacts have been minimized to the maximum extent practical. The ACOE retains the right to require an individual permit in their sole discretion, and they meet monthly with the CTDEP, US Region 1 EPA, US Fish and Wildlife Service, and US National Marine Fisheries Service to review all applications that meet the area requirements of the General Permit. If any of these agencies object, the ACOE will require an individual permit. The New England ACOE typically does not "validate" wetland determinations in the absence of a pending permit application, but if requested, they have done so in the past.

WETLAND FUNCTIONS AND VALUES

The following information provides a brief description of the characteristics of the site's wetlands as well as their principal functions. This summary is based on field observations made during wetland delineation work as well as a brief review of natural resource GIS data pertaining to the site.

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. wooded swamp) flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The flanking forested wetlands consist of fairly typically wooded wetland habitat. The non-wetland areas of the site have undergone some significant clearing, filling and regrading in the past and consist mainly of old field habitat. The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat. The site provides moderate to moderately high quality values for these functions

WILDLIFE HABITAT

The site contains both wetland and non-wetland habitat types. Their locations are shown on the attached "Wildlife Habitat Map". Their characteristics are described below.

Wetland Habitats

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. "wooded swamp") flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The brook ranges from level and meandering to rocky and high-gradient. A small pond, likely man-made is located within the brook at the site's southeastern end.

The flanking forested wetlands consist of fairly typically wooded swamp habitat. The tree canopy consists mainly of Red Maple (*Acer rubrum*) and Black Birch (*Betula lenta*) with scattered Hemlock (*Tsuga canadensis*). The shrub layer consists of Pepperbush (*Clethra spp.*) and Spicebush (*Lindera benzoin*) with scattered Mountain Laurel (*Kalmia latifolia*) and Greenbriar (*Smilax spp.*).

The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat.

Upland Habitats

The majority of the non-wetland areas of the site have undergone some significant clearing, filling and re-grading in the past and consist mostly of "old field" habitat. The vegetation consists mainly of a variety of herbaceous vegetation (grasses, forbs) and Autumn Olive* (*Elaeagnus umbellata*) with scattered Multiflora Rose* (*Rosa multiflora*) Red Cedar (*Juniperus virginiana*) and Sumac (*Rhus spp.*). Old field "edges" consist mainly of young black birch and Cottonwood (*Populus deltoides*). A small portion of the southeastern area of the site is mixed hardwood forest consisting mainly of black birch, Red Oak (*Quercus rubrum*), Black Oak (*Quercus velutina*), and American Beech (*Fagus grandifolia*).

OVERALL WILDLIFE VALUE

The site is suitable habitat for a variety of songbird and mammalian species associated with riparian and early-succesional (open, unforested) habitats. The past disturbance (cutting, filling, re-grading) which has occurred on the site has likely had a negative impact on the overall wildlife value of the site. Small scale clearing of vegetation typically has little or no negative impacts to wildlife and can often be a benefit to many species. However it is the filling and re-grading of the land associated with that clearing that tends to have a deleterious affect on wildlife. The site is not likely to support a diversity of amphibian species.

NATURAL DIVERSITY DATABASE REVIEW

The Connecticut Department of Environmental Protection's Natural Diversity Database program represents current documented data showing the known locations of any endangered, threatened or special concern species and significant natural communities. Submission to the database for information regarding a given site is done if the subject site:

1. Occurs within a designated NDDB area
2. Overlaps a water body that has been designated a NDDB area
3. Is upstream or downstream (by less than ½ a mile) from a NDDB area

---

* Invasive, non-native species

The most recent maps dated June 2004 were reviewed. The subject site does not fit any of the above criteria. Therefore, no information request was made to the DEP's Natural Diversity Database Program regarding review of the proposed activities. A topographic map showing the natural diversity database areas relative to the subject site has been attached in this report.

STATE-LISTED SPECIES

State-listed species represent species listed as endangered, threatened or special concern by the Connecticut Endangered Species Act. Suitable habitat was found on the site for one species of special concern[1], the Wood Turtle (*Clemmys insculpta*). The wood turtle inhabits riparian habitats bordered by floodplain, woodlands or meadows. Terrestrial habitats used during the summer include pastures, old fields, woodlands, powerline cuts, and railroad beds, bordering on or adjacent to streams and rivers[2]. Because the site contains a perennial stream bordered by old field habitat, and wood turtle are known to occur in the town of Guilford, the use of this site by wood turtle cannot be ruled out on the basis of habitat conditions. Spring-summer surveys would be required to confirm the presence of wood turtle on this site.

FLOODZONES AND AQUIFERS

The area surrounding Spinning Mill Brook is located within the FEMA's floodzone A. The site is not located within any aquifer protection areas but is located in close proximity to the Guilford Well field, a preliminary aquifer protection area operated by the Connecticut Water Company.

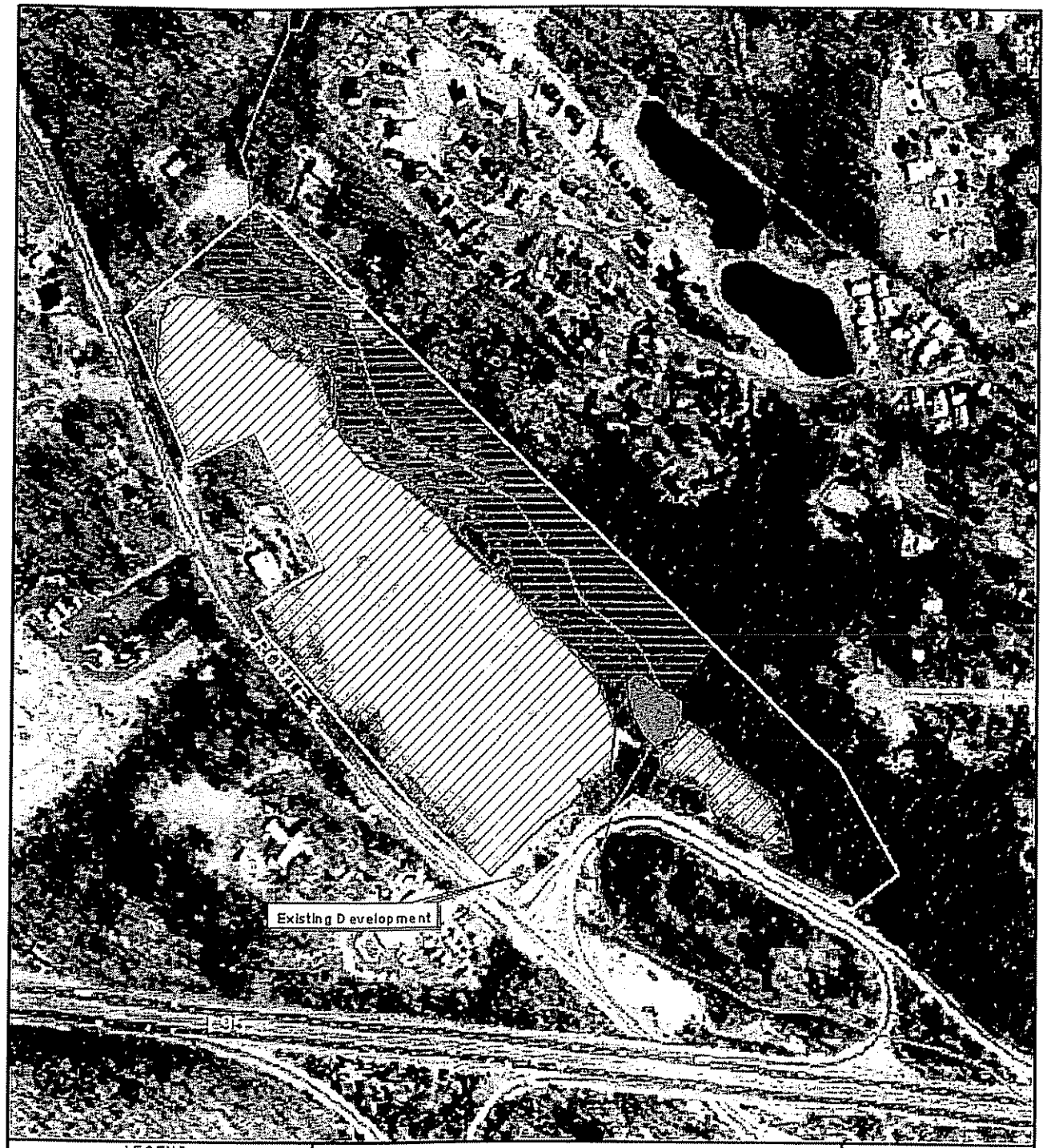
Respectfully submitted,

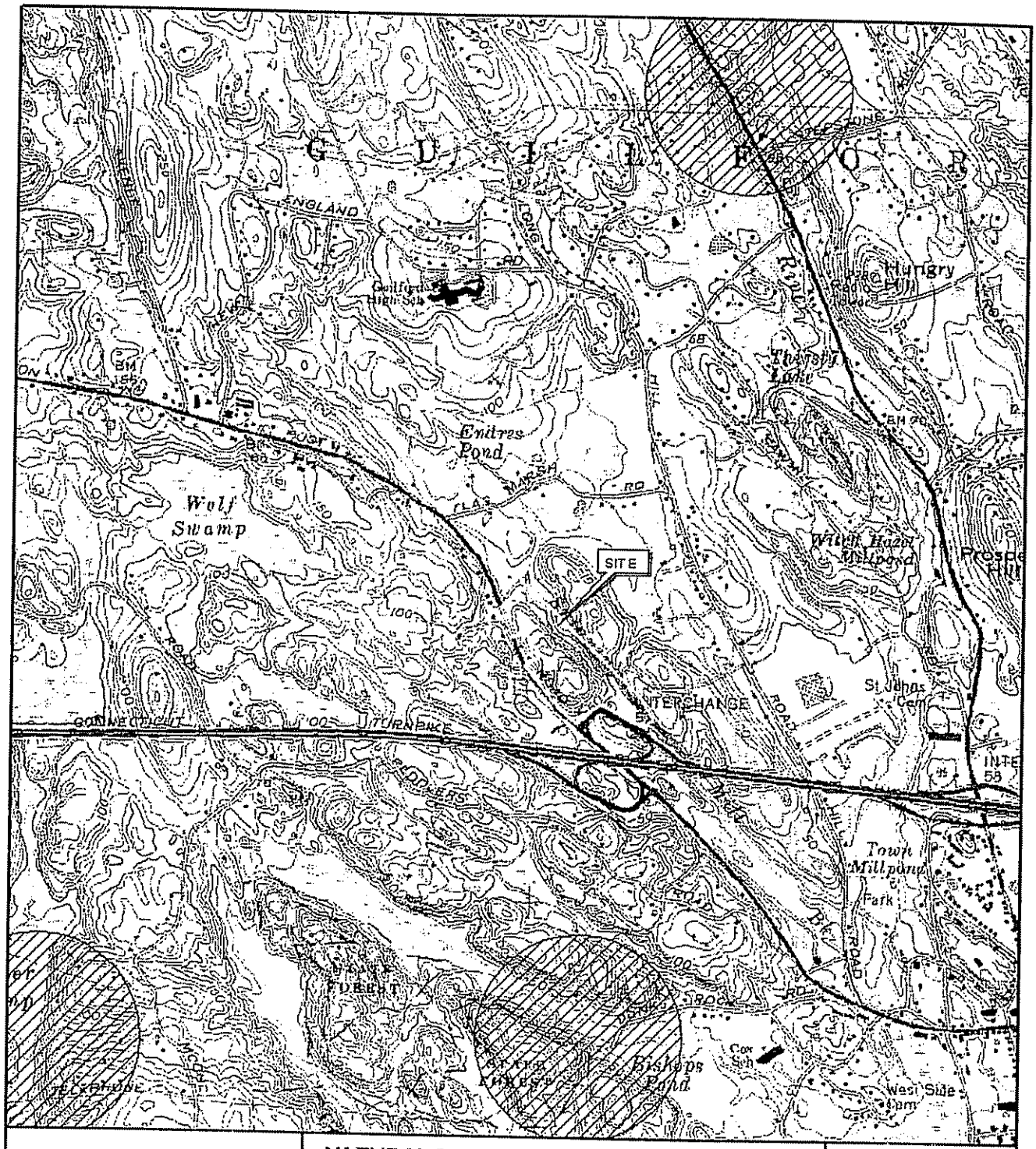
Michael S. Klein, Principal
Registered Soil Scientist
Certified Professional Wetland Scientist

---

[1] "Species of Special Concern" means any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state (CT Endangered Species Act).

[2] Klemens, M. W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. CT DEP Bulletin 112


Existing Development
LEGEND
Wooded Swamp-Riparian Forest Floodplain Complex
Pond
Property Boundary
Old Field
Spinning Mill Brook
Mixed Hardwood Forest (unmarked areas)
WILDLIFE HABITAT MAP
Route 1 and Jones Drive, Guilford
Map showing wildlife habitats based on CT DEP aerial photograph (1995) This map is intended for general planning purposes only
Environmental Planning Services, West Hartford, CT (860) 236-1578
N
SCALE
80 0 80 Feet



KEY

Site Boundary

NDDB Areas

NATURAL DIVERSITY DATABASE MAP

USGS topographic map showing the CT DEP's natural diversity database areas (maps dated June 2004) This map is intended for general planning purposes only

N

SCALE

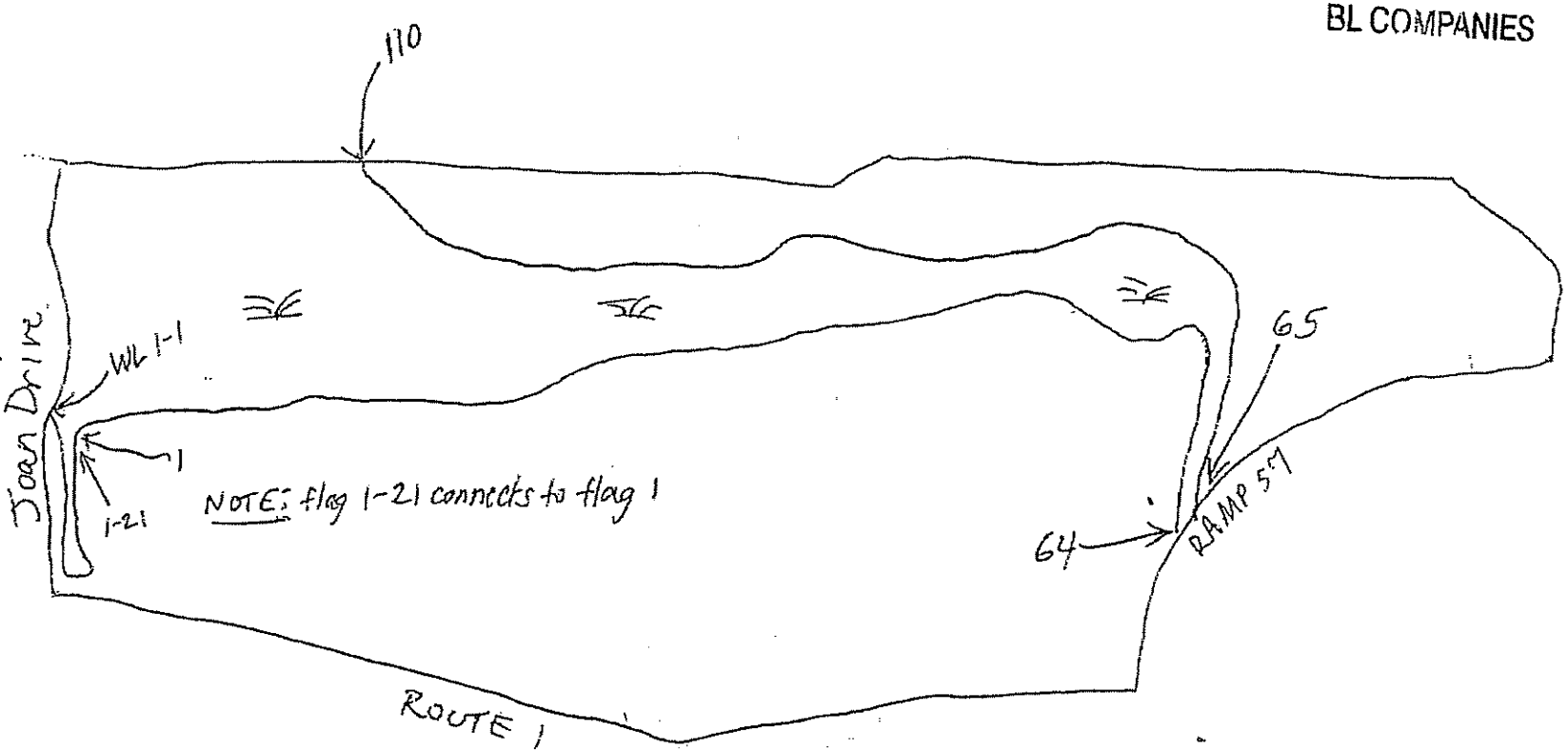
400 0 400 800 Feet

Environmental Planning Services, West Hartford, CT (860) 236-1578

WETLAND FLAGGING SKETCH

Environmental Planning Services
89 Belknap Road
West Hartford, CT 06117
860-236-1578

& Report is in the mail.



SITE LOCATION:	
FROM:	Eric Davison Phone: 860-803-0938 (cell) Email: edavison@snet.net
TO:	Jen Marks
DATE:	1/17/05

Note: the information shown on this sketch, including the wetland Boundary, is approximate. This map is intended for surveying purposes only.

Visual Resource Evaluation Report

Proposed Wireless Telecommunications Tower Relocation

1919 Boston Post Road
(US Route 1)
Guilford, Connecticut

Prepared for Global Signal
301 North Cattleman Road, Suite 300
Sarasota, FL 34232

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

July 2006

Visual Resource Evaluation

Global Signal seeks to relocate an existing 150-foot tall monopole tower located on property at 1919 Boston Post Road in the Town of the Guilford, Connecticut ("host property"). The relocated monopole ("Facility") would be similar in height and design to the existing tower, but located approximately 700 feet to the northeast on the host property in order to accommodate future commercial development within this area. This Visual Resource Evaluation was conducted to approximate the visibility of the relocated Facility within a two-mile radius of the Site ("Study Area").

Project Introduction

The proposed Facility includes the construction of a 150-foot tall monopole and associated ground equipment to be located within a fenced enclosure at the base of the tower. The proposed Facility would replace an existing 150-foot tall monopole tower currently located on the host property. The proposed project area is located at approximately 100 feet Above Mean Sea Level (AMSL). Access to the proposed Facility will be achieved via a parking area to be constructed in conjunction with the future commercial development of the host property.

Site Description and Setting

The host property includes approximately 26.24 acres of land and is identified in the Town of Guilford land records as Map 79/Lot 35 (see Photolog Documentation map contained in Attachment A). In addition to the existing telecommunications facility, the host property is currently occupied by a small single story commercial building and associated parking area located along US Route 1 and a self-storage facility located adjacent to the existing monopole. The majority of the host property is currently open and undeveloped. A photograph of the proposed project area is included in Attachment B. Land use within the general vicinity of the proposed Facility is mainly comprised of various small-scale commercial establishments located along US Route 1, highway infrastructure associated with Interstate 95 and medium-density residential parcels.

The topography in the Study Area is generally characterized by gently rolling hills that range in elevation from approximately 10 feet above mean sea level (AMSL) to approximately 240 feet AMSL. The tree cover within the Study Area consists mainly of mixed deciduous hardwood species. The tree canopy occupies approximately 5,595 acres of the 8,042-acre study area (70%). During the in-field activities associated with this analysis, an infrared laser range finder was used to accurately determine the average tree canopy height throughout the Study Area. Numerous trees were selected for measurement and the average tree canopy established, in this case 65 feet. In total, the Study Area features approximately 65 acres of open water. In addition, the Study contains roughly 84 linear miles of roadways.

■

METHODOLOGY

To estimate the visibility associated with the proposed Facility, VHB incorporates a two-fold approach utilizing 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 where the proposed 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, existing vegetation and any significant structures/objects that may act to obstruct potential views. Data incorporated in the model includes 7.5 minute digital elevation models (DEMs) and a digital forest layer for the project area. The DEMs were produced by the United States Geological Survey (USGS) in 1982 at a 30 meter resolution. The forest layer was derived through on-screen digitizing in ArcView® GIS from 2004 digital orthophotos with a 0.5 foot pixel resolution. For comparative purposes, VHB also calculated the areas of visibility for the existing site location.

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 provides a reference for comparison once the tree canopy is established and also assists in the evaluation of potential seasonal visibility of the proposed Facility. A conservative tree canopy height of 50 feet is then used to prepare a preliminary viewshed map for use during the Study Area reconnaissance. The average height of the tree canopy is determined in the field using a hand-held infra-red laser range finder. The average tree canopy height is incorporated into the final viewshed map; in this case, 65 feet was identified as the average tree canopy height. The forested areas within the Study Area were then overlaid on the DEM with a height of 65 feet added and the visibility calculated. The forested areas are then 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. This analysis was conducted in 30-foot

increments from 150 feet down to 30 feet for the proposed relocated site and the results consolidated into a single thematic layer in order to determine the approximate amount of the tower structure that would be visible from any given location.

Also included on the map is a data layer, obtained from the Connecticut State Department of Environmental Protection (CTDEP), which depicts various land and water resources such as state parks and forests, recreational facilities, dedicated open space and CTDEP boat launches among other categories. This layer is useful in identifying potential visual impacts to any sensitive receptors that may be located within the Study Area. As shown on the attached viewshed map, portions of the Cockaponset State Forest and several large parcels owned by the Guilford Land Conservation Trust, Inc. are contained within Study Area. Lastly, based on a review of available data published by the Connecticut Department of Transportation and discussions with town staff in Guilford, it was determined that Route 77 which traverses the eastern portion of the Study Area is a state-designated scenic roadway.

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 2004 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 June 14, 2006 Vanasse Hangen Brustlin Inc., (VHB) conducted a "balloon float" at the proposed Facility in order to evaluate the potential viewshed within the Study Area. The balloon float consisted of raising and maintaining an approximate three-foot diameter, helium-filled weather balloon at the proposed site location at a height of 150 feet. During the balloon float, weather conditions were mostly sunny. The temperature was approximately 75 degrees Fahrenheit with calm winds.

Photographic Documentation

Once the balloon was secured at a height of 150 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 and refine the results of the preliminary viewshed map and to verify where the balloon was, and was not, visible above and/or through the tree canopy. The balloon was photographed from a number of different vantage points to document the actual view towards the proposed Facility. The locations and orientations of the photos are described below:

1. View from Boston Post Road (US Route 1) at Joan Drive, looking southeast.

2. View from Boston Post Road (US Route 1), looking northwest.
3. View from Boston Post Road (US Route 1) south of Interstate 95, looking northwest.
4. View from Boston Post Road (US Route 1) north of Interstate 95, looking northeast.
5. View from River Road at Guilford Land Trust Car Pull-Off area, looking northwest.

Photographs of the balloon from the view points listed above were taken with a Nikon Digital Camera COOLPIX 5700, which has a lens focal length equivalent to a 35 mm camera with a 38 to 115 mm zoom. "The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.[1]" The optical zoom lens for the Nikon COOLPIX was set at a range of 50 mm to 70 mm for the purposes of this Visual Resource Evaluation.

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

Photographic Simulation

Photographic Simulations were generated for the five locations identified above. The Photographic Simulations represent a scaled depiction of the proposed monopole from these locations. The height of the Facility is determined based on the location of the balloon in the photographs 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 relocated 150-foot monopole would be visible above the tree canopy comprise approximately 51 acres; less than one percent of the 8,042 acre Study Area. Of this total, approximately 16 acres of visibility occurs on the host property which is mostly open and undeveloped. In comparison, the existing 150-foot tall monopole is currently visible from roughly 54 acres within the Study Area. As depicted on the viewshed map, year-round visibility for both the existing site location and the proposed relocation is largely confined to the US Route 1 transportation corridor with the exception of several smaller areas of visibility located to the north/northwest of the host property. This is consistent with observations made in the field during the conduct of the balloon float as little

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

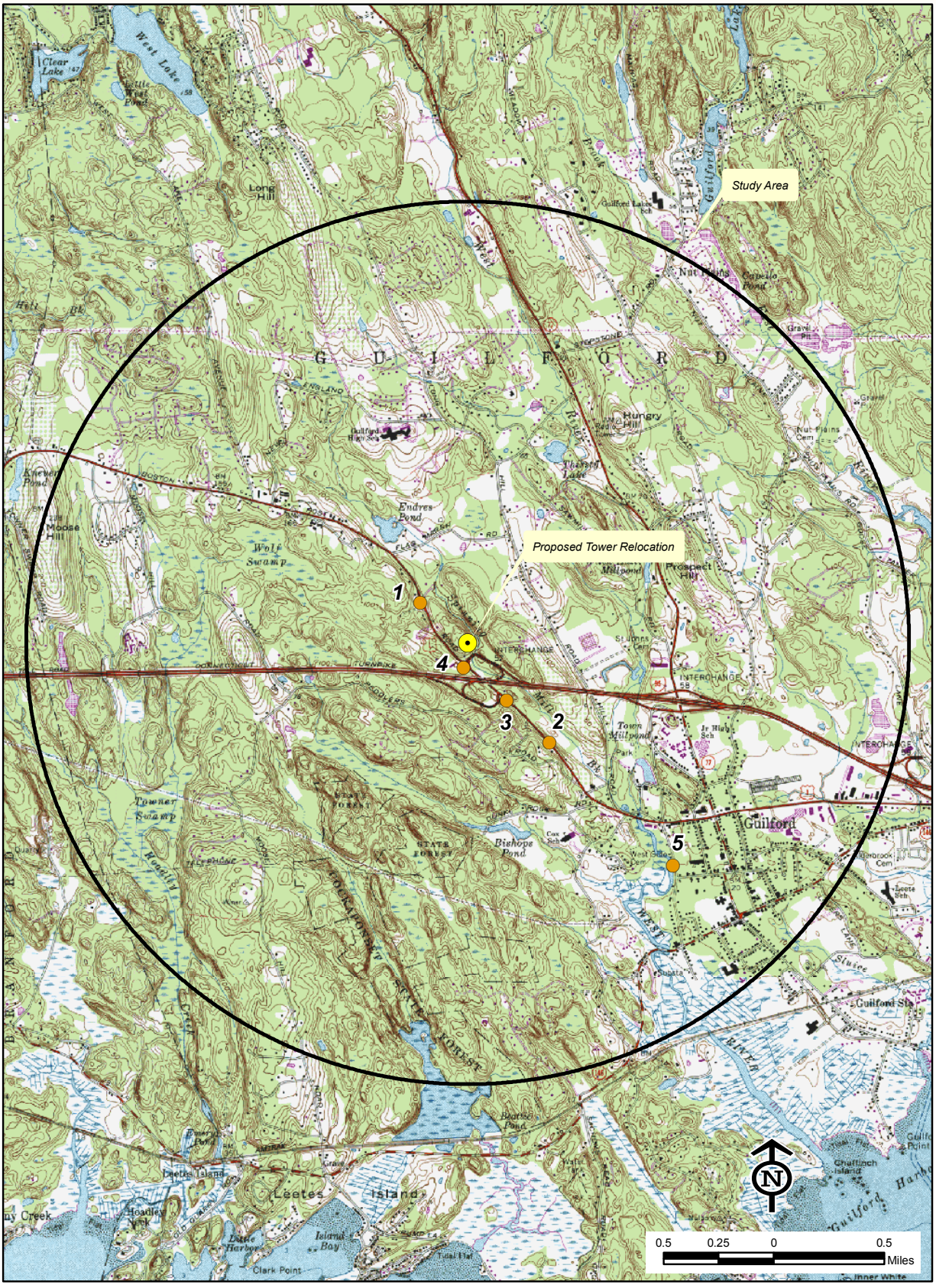
difference in visibility between the existing monopole and the relocated Facility was identified. Generally, the proposed Facility will be visible from those locations that currently feature views of the existing monopole. Given the physical separation between the two locations (approximately 700 feet) and their respective placement on the host property, views of the existing monopole will extend slightly further to the north of the host property while views of the proposed Facility will extend slightly further to the south. VHB estimates that approximately two residences within the Study Area will have year round views of the proposed monopole. These properties are located along US Route 1 adjacent to the proposed Facility within closer proximity to the existing site location. No views are anticipated from Route 77, a state-designated scenic roadway, or from within Cockaponset State Forest. The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views through the trees are anticipated. These areas comprise approximately 45 additional acres and are mainly located to the northeast and southwest of the host property. Based on observations made in the field during the the balloon float, VHB anticipates that approximately 10 residences will have limited seasonal views of the proposed Facility. These properties area located along Peddlers Road, Copper Hill Drive and Dowd Court within approximately ¼ mile of the proposed Facility.

Attachment A

Photolog Documentation Map, Balloon Float Photographs and Photographic Simulations

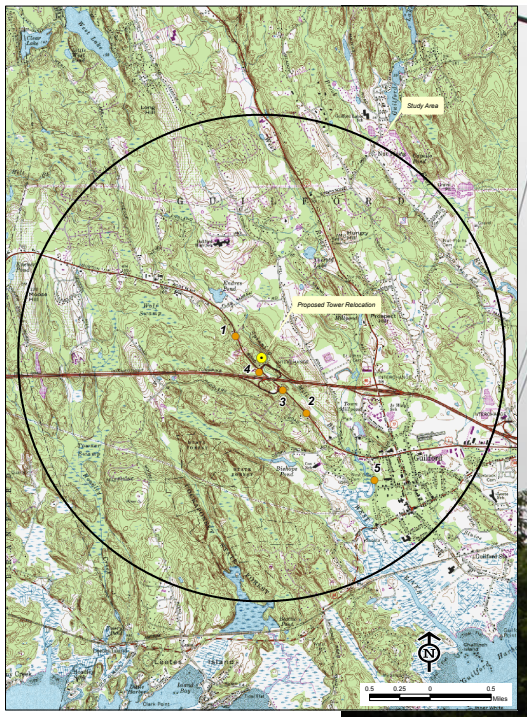
Photolog Documentation

Town of
Guilford
Connecticut



Photographic Documentation and Simulation *View 1*

Town of
Guilford
Connecticut



1919 Boston Post Road
Guildford, CT

Replacement Monopole
with 5 carriers

PHOTO TAKEN FROM BOSTON POST ROAD (US ROUTE 1) AT JOAN DRIVE, LOOKING SOUTHEAST (EXISTING TOWER IS ALSO IN PHOTO)

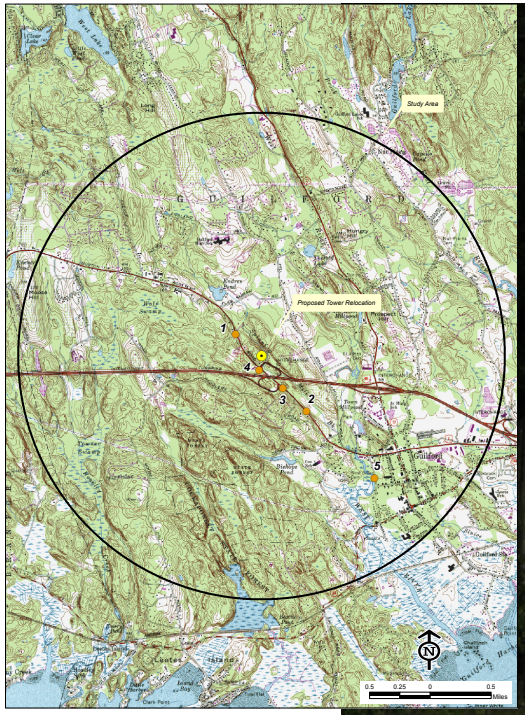
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.29 MILE +/-

global signal
Meeting needs. Exceeding expectations.

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 2*

Town of
Guilford
Connecticut



1919 Boston Post Road
Guildford, CT

Replacement Monopole
with 5 carriers

PHOTO TAKEN FROM BOSTON POST ROAD (ROUTE 1), LOOKING NORTHWEST

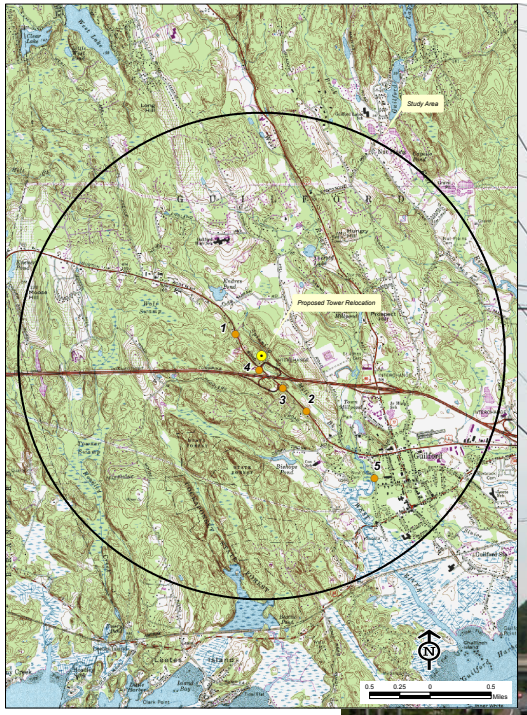
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.58 MILE +/-

global signal
Meeting needs. Exceeding expectations.

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 3*

Town of
Guilford
Connecticut



1919 Boston Post Road
Guildford, CT

Replacement Monopole
with 5 carriers

PHOTO TAKEN FROM BOSTON POST ROAD (US ROUTE 1) SOUTH OF INTERSTATE 95, LOOKING NORTHWEST

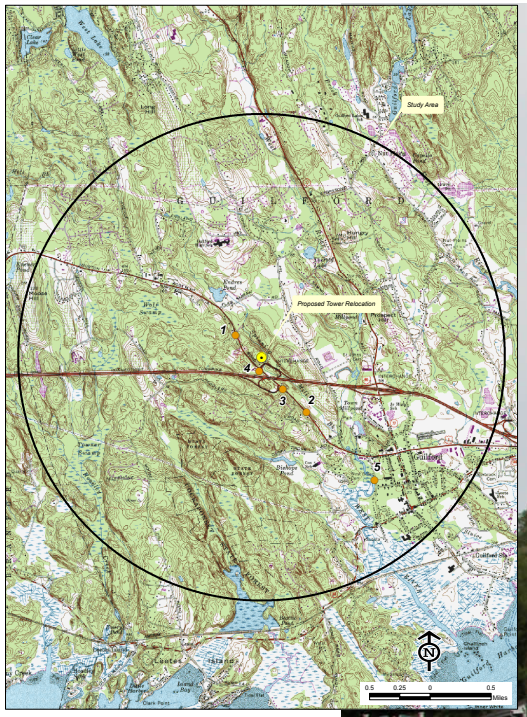
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.31 MILE +/-

global signal
Meeting needs. Exceeding expectations.

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 4*

Town of
Guilford
Connecticut



1919 Boston Post Road
Guildford, CT

Replacement Monopole
with 5 carriers

PHOTO TAKEN FROM BOSTON POST ROAD (US ROUTE 1) NORTH OF INTERSTATE 95, LOOKING NORTHEAST (EXISTING TOWER IS VISIBLE LOOKING FURTHER WEST)

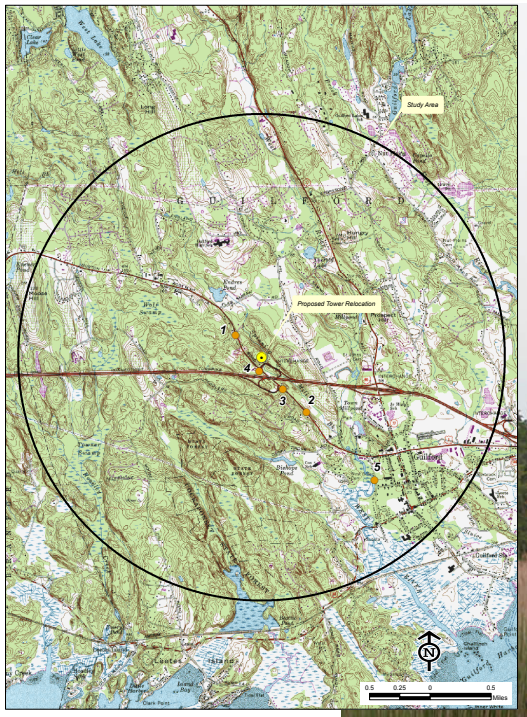
DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 0.11 MILE +/-

global signal
Meeting needs. Exceeding expectations.

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation *View 5*

Town of
Guilford
Connecticut



1919 Boston Post Road
Guildford, CT

Replacement Monopole
with 5 carriers

PHOTO TAKEN FROM RIVER ROAD AT GUILFORD LAND TRUST CAR PULL-OFF AREA, LOOKING NORTHWEST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO THE PROPOSED SITE IS 1.37 MILES +/-

global signal
Meeting needs. Exceeding expectations.

VHB Vanasse Hangen Brustlin, Inc.

Attachment B

Photographic Documentation

Proposed Project Area

Photographic Documentation - Proposed Project Area

Town of
Guilford
Connecticut

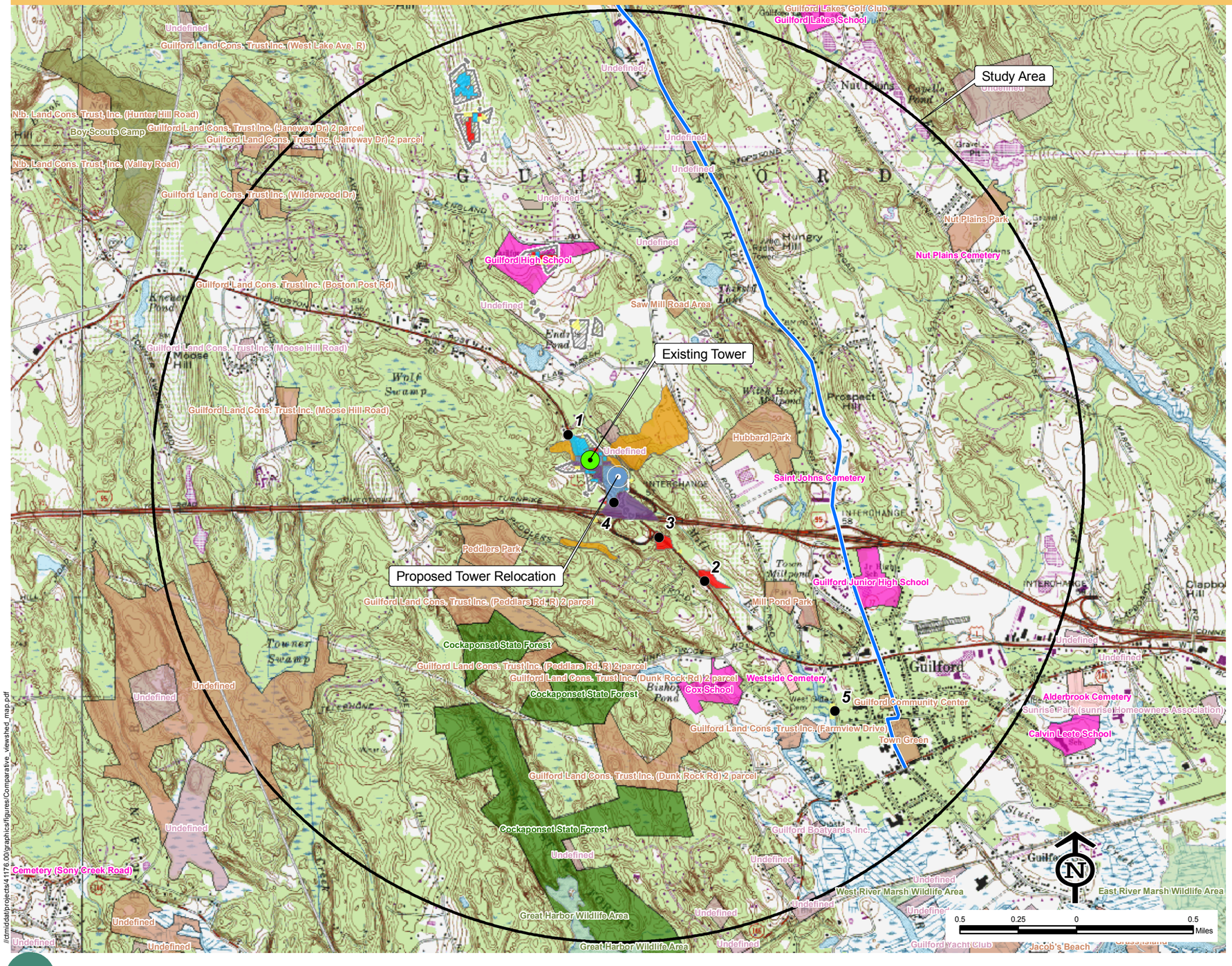
Attachment C

Viewshed Map

Comparative Viewshed Map

Existing Tower Location and Proposed Tower Relocation

Town of Guilford Connecticut



Proposed Tower Relocation
1919 Boston Post Road
Guilford, Connecticut

NOTE:
- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Existing Facility and Proposed Facility height is 150 feet.
- Existing tree canopy height estimated at 65 feet.

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

Map Compiled July, 2006

Legend

- ExistingTower Location (Includes area of visibility approximately 500 feet around facility)
- Proposed Tower Relocation (Includes area of visibility approximately 500 feet around facility)

Photos - June 14, 2006
- Balloon visible above the trees
- Existing Tower Year Round Visibility (Approximately 54 Acres)
- Anticipated Proposed Tower Relocation Seasonal Visibility (Approximately 45 Acres)

Approx. % of Tower Relocation Visible (Year-Round)
- Tree Line View - 5 Acres
- Upper 25% - 10 Acres
- 50% - 10 Acres
- 75% - 16 Acres
- Entire Facility Visible - 10 Acres

Total Proposed Tower Relocation Year-Round Visibility Approximately 51 Acres

- DEP Boat Launches
- Scenic Road (State and Local)
- Town Line
- Protected Properties (Federal)

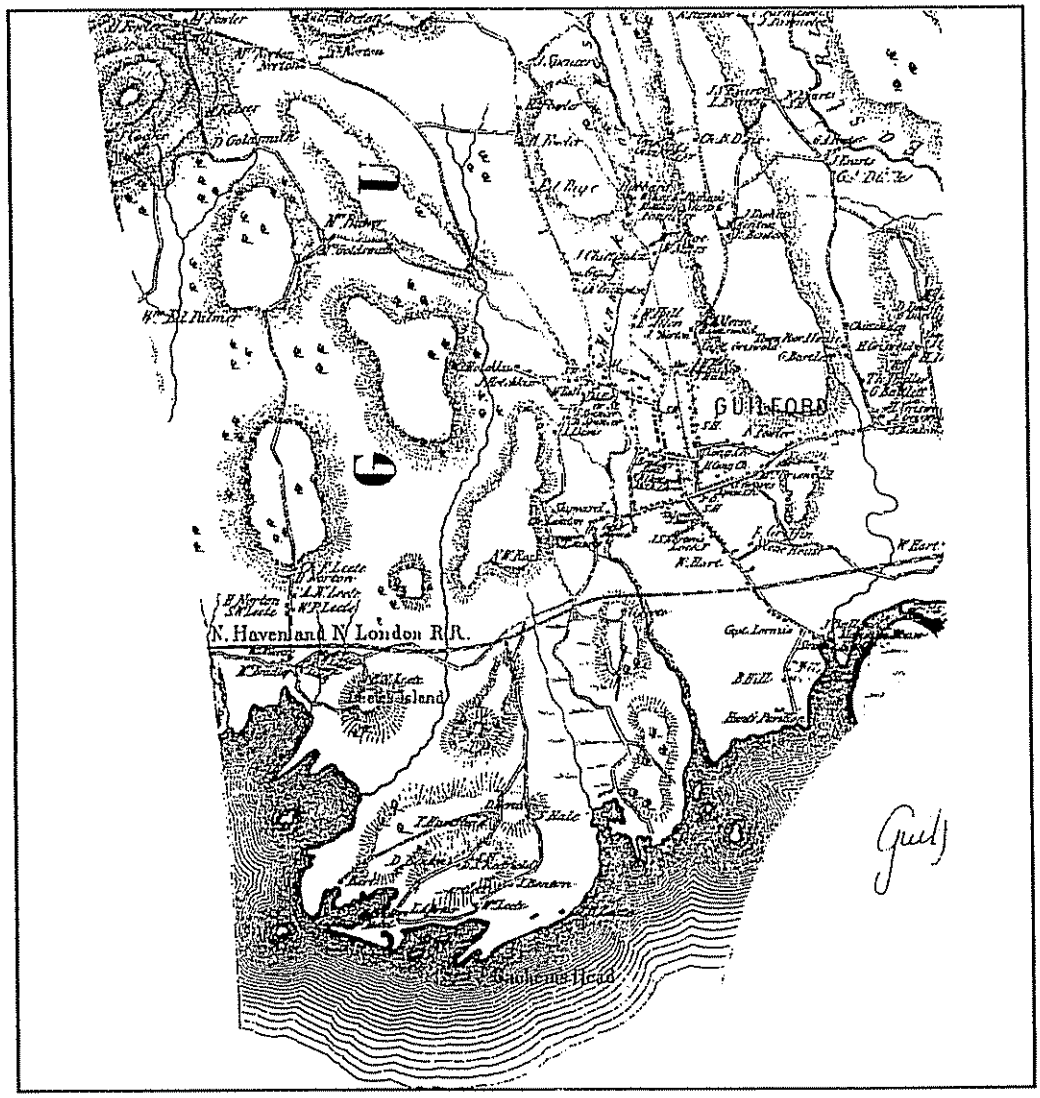
Protected Properties (Municipal)
- Cemetery
- Preservation
- Conservation
- Existing Preserved Open Space
- Recreation
- General Recreation
- School
- Uncategorized

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

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

Phase Ia Archaeological Assessment Survey
of the
Proposed Office Complex: Boston Post Road at I-95, Exit 57
in the
Town of Guilford, Connecticut

January, 2005



ACS

◆ *Archaeological Consulting Services* ◆

Phase Ia Archaeological Assessment Survey of the Proposed Office Complex: Boston Post Road at I-95, Exit 57 in the Town of Guilford, Connecticut

by

Gregory F. Walwer, Ph.D.
and
Dorothy N. Walwer, M.A.

of

ACS
◆ *Archaeological Consulting Services* ◆

for

BL Companies, Inc.
355 Research Parkway
Meriden, CT 06450
(203) 630-1406

January, 2005

ACS
◆ *Archaeological Consulting Services* ◆
10 Stonewall Lane
Guilford, Connecticut 06437-2949
(203) 458-0550
www.acsarchaeology.com
acsinfo@yahoo.com

Abstract

This report contains the results of a Phase Ia archaeological assessment survey conducted by ACS during the month of January, 2005. The project calls for an evaluation of possible cultural resources to be affected by the proposed construction of an office complex on an undeveloped portion of a property in the town of Guilford, Connecticut. The project area lies in western Guilford, just northwest of a small commercial development at the Exit 57 south-bound off-ramp of Interstate 95 and just northeast of the Boston Post Road (U.S. Route 1). The property is also flanked by Joan Drive to the northwest and Spinning Mill Brook to the northeast. The property actually consists of three lots, two measuring on the order of 12 acres, the other just a few acres for a total of about 26 acres for the whole property. The smallest lot lies along the northeast boundary of Route 1 and presently contains a commercial structure in the vicinity of a self-storage center and a cell tower. Site plans for the rest of the project property have yet to be submitted, although a wetlands map of the area was provided by BL Companies, Inc., an engineering firm based in Meriden, Connecticut.

The landscape setting of the property consists of a prominent hill flanked by steep slopes descending towards the surrounding roads and stream. Soil types consist of Hollis and Charlton very rocky fine sandy loams. There is presently a low grass - scrub growth cover on the hill top that appears to have been truncated by heavy machinery. Exposures of the underlying bedrock at the surface reveal a granitic gneiss that is steeply inclined, with the strike of the beds parallel to the length of the hill ridge. The steeper flanks of the hill bear a secondary forest cover, particularly along Spinning Mill Brook. A small, narrow part of the southern end of the property presently contains septic facilities and extends to the southeast of the brook where it is partially dammed to form a marsh in a lower lying wooded area, although this latter section will not be a part of the project development. Recent use of the project area appears to be limited to unauthorized dumping, with modern debris including structural, industrial, and larger household items. A pedestrian surface survey of the property revealed no prehistoric or historic artifacts or features. Structural developments on or adjacent to the project area include the cell tower, self-storage facility, and commercial structure mentioned above, as well as a driveway leading to a paved parking area at the very southern end associated with the commercial development off the property below, and a partially constructed concrete and steel bridge across Spinning Mill Brook to the southeast.

A statistical landscape sensitivity model created and employed by ACS indicates that the project area bears a low potential for prehistoric cultural resources. The low sensitivity of the project area is largely based on steep slopes and rocky soil types. The top of the hill ridge has additionally been stripped of its topsoil and any chance for containing either prehistoric or historic subsurface contexts. The rest of the project area consists of very steep to moderate hill slopes. A review of site files housed at the State Historic Preservation Office further indicated no previously recorded prehistoric sites on or near the project property. Land records and historic maps also indicate prior use of the property was likely limited to pasturing and/or the gathering of cord wood. Finally, local informants confirm that the project area has been highly disturbed in the recent past by landscape clearing activities.

Based on ecological aspects, historic records, informant interviews, and a pedestrian surface survey, it is clear that the project area is not likely to contain potentially significant cultural resources. It is therefore recommended that the project area does not require further archaeological investigations related to the pending project. The assessment survey was conducted in conformance with guidelines issued by the Connecticut State Historic Preservation Office.

Project Summary

Project Name: Proposed Office Complex: Boston Post Road at I-95, Exit 57.

Project Purpose: To evaluate the sensitivity of the project property with respect to the possible presence of prehistoric and/or historic cultural resources in conformance with guidelines issued by the Connecticut State Historic Preservation Office.

Project Management: BL Companies, Inc., Meriden, Connecticut.

Project Location: Western Guilford, northwest of I-95 - Exit 57, northeast of U.S. Route 1, southeast of Joan Drive, southwest of Spinning Mill Brook. Three (3) lots on Guilford Tax Assessor Map #79, consisting of Lot 34 (12 acres), Lot 35 (2.4 acres), and Lot 36A (11.56 acres).

Project Size: Approximately 26 acres.

Investigation Type: Phase Ia archaeological assessment survey.

Investigation Methods: Research, pedestrian surface survey.

Dates of Investigation: January, 2005.

Performed by: ACS (Archaeological Consulting Services), 10 Stonewall Lane, Guilford, Connecticut 06437-2949, (203) 458-0550 (telephone and fax), *www.acsarchaeology.com*, *acsinfo@yahoo.com*.

Principal Investigators: Gregory F. Walwer, Ph.D. and Dorothy N. Walwer, M.A.

Submitted to:
BL Companies, Inc. (William T. Fries), 355 Research Parkway, Meriden, CT 06450, (203) 630-1406.

Reviewing Agency (Anticipated):
Office of State Archaeology (Dr. Nicholas F. Bellantoni, State Archaeologist), University of Connecticut, U-23, Storrs, Connecticut 06269-3023, (860) 486-5248.

Recommendations: Cultural resources identified on the property are limited to modern debris at the surface, representing unauthorized dumping. The property has been further impacted by heavy landscaping and the removal of topsoil from the hilltop. Given various ecological and historic factors, it is unlikely that the project area contains potentially significant prehistoric or historic cultural resources. It is therefore recommended that no further archaeological conservation efforts are warranted.

Acknowledgements

ACS is indebted to the following people whose assistance helped to make the execution of this project more accessible and thorough:

Dr. David Poirier, Staff Archaeologist for the State Historic Preservation Office, Connecticut Historical Commission, in Hartford, Connecticut. ACS thanks Dr. Poirier for his help in procuring prehistoric and historic sources pertaining to the region surrounding the project property.

Dr. Nicholas Bellantoni, State Archaeologist at the Connecticut Office of State Archaeology in Storrs, Connecticut. ACS thanks Dr. Bellantoni for directing ACS towards helpful background research sources relating to the prehistory and history of the region.

Hon. Joel Helander, Town Historian of Guilford, Connecticut. ACS thanks his honor for information regarding the history of the project area and surrounding vicinity.

Mr. Michael McBride, Curator of the Henry Whitfield State Historical Museum in Guilford, Connecticut. ACS thanks Mr. McBride for his provision of research materials regarding former excavations at the Whitfield Museum and early history of Guilford.

Mr. William T. Fries, BL Companies, Inc. of Meriden, Connecticut. ACS thanks Mr. Fries for coordinating the project.

Table of Contents

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CHAPTER 1: INTRODUCTION

Introduction and Project Description

This report provides the results of a Phase Ia archaeological assessment survey performed by ACS for a potential development on a parcel of land in Guilford, Connecticut. The property is located in western Guilford on the northeast side of Route 1, just northwest of the Interstate 95 - Exit 57 south-bound off-ramp. The overall property is about 26 acres, although it is likely that some portion of the parcel will remain undeveloped. The property consists of three lots, including two measuring roughly 12 acres, and the smaller third parcel already containing a commercial structure, self-storage facility, and cell tower. ACS was contacted to review the project by Mr. William T. Fries of BL Companies, Inc., an engineering firm based in Meriden, Connecticut. Finalized site plans for the project have yet to be submitted, although BL sent ACS inland wetland maps showing property boundaries and existing conditions.

Given various ecological factors and what was already known about the property, ACS conducted a Phase Ia archaeological assessment survey consisting of background research and a pedestrian surface survey. The results of the assessment survey indicated no potential for significant archaeological resources being present in the project area, thus no need to conduct subsurface field testing. The project is being performed in compliance with guidelines issued by the Connecticut State Historic Preservation Office.

Background Research

The broad environmental setting of the project property is within the Eastern Coastal (V-B) ecoregion. The underlying bedrock of the region mostly consists of pre-Cambrian gneisses in excess of 600 million years old. The surficial materials above bedrock consist of locally derived till (t) on relatively steep hill slope surfaces. The project area is essentially a long hill running parallel to Route 1, with Hollis-Charlton (HrC) soils on the ridge top, and steeper Hollis soils (HSE) on the flanks of the ridge. The project area is lined to the northeast by Spinning Mill Brook, a small feeder stream to the larger West River drainage basin (#5110) centered about one mile to the east. Existing buildings front Route 1 towards the west-central section and beyond the very southern end of the project area, while the rest of the project area remains undeveloped.

According to a prehistoric landscape sensitivity model created and utilized by ACS, the project property scores no higher than 12.3 of a possible 100, and therefore well below the moderate to high sensitivity range (20-75). The low statistical sensitivity of the project area generally derives from its steep, rocky, hill slope setting at a considerable distance from the nearest major water source. Regarding potential historic sensitivity, historic maps also show that this was a relatively uninhabited part of Guilford and the post road through time. Historic land records for the property confirm a lack of structural developments, with the lots and surrounding territory largely devoted to pasturing, raising crops, and providing cord wood in an agricultural setting. Informants also indicate that the property has been proposed for a number of developments in recent history, and that various landscaping efforts have severely altered the property.

Field Results

A pedestrian surface survey was conducted for the property on January 10, 2005. A paved entrance and driveway extend into the property from the Boston Post Road near the northern end of the property and just south of Joan Drive. The project area is roughly oval-shaped, bound by Spinning Mill Brook on the northeast, Joan Drive to the northwest, Boston Post Road to the southwest, and a commercial property along an exit off-ramp of Interstate 95 (Exit 57) to the southeast. The property includes a small, narrow strip of land that extends further to the southeast along the off-ramp in a lower lying area, although this latter area will not be a part of the project development area. The bulk of the project area subject to development consists of a prominent hill with steep slopes on all sides but the northwest end. The top of the hill appears to have been truncated by heavy machinery, with exposed bedrock and stripped topsoil evident throughout. There is a light grass and scrub growth cover on most of the property, with more developed scrub growth and secondary forest cover on the steep hill slopes. Surface visibility at the time of the pedestrian surface survey was good, with a light patchy snow cover obscuring roughly 20 percent of the surface. The property is currently vacant, although apparently utilized for unauthorized dumping of larger household items, vehicles, and various construction and industrial materials. Structural features adjacent to the project area include the self-storage facility in the central-west section where there is also a cell tower; a parking area up-slope and above the commercial development at the southeast end; an abandoned bridge with concrete stanchions across Spinning Mill Brook to the east; and an alignment of septic fields in the very southeast part of the project property across the brook and outside the proposed project area.

Recommendations

Background research indicates no further archaeological evaluation is warranted for the project area. Based on various ecological factors such as surface slope and soil types, the area contains a very low statistical probability for containing prehistoric sites. Similarly, land records and historic maps do not reveal any substantial developments on the property or immediate surroundings. In addition, informant interviews and the pedestrian surface survey revealed that the property has undergone severe landscape modifications in the past, particularly the stripping of topsoil and exposure of bedrock at the top of the hill that has also been artificially levelled. Given these considerations, it is recommended that no further archaeological conservation efforts are required with respect to the planned development.

CHAPTER 2: BACKGROUND

Environmental Setting

Location

The project property is located in the Town of Guilford, New Haven County, Connecticut (Figure 1). The project setting is in the western part of the Eastern Coastal ecoregion (Figure 2). The project area lies in the western part of Guilford, bordered by the Boston Post Road (U.S. Route 1) on the southwest, the south-bound off-ramp of Interstate 95 - Exit 57 on the southeast, Spinning Mill Brook on the northeast, and Joan Drive on the northwest (Figure 3). The project area is roughly oval in shape, although a narrow triangular piece of land extends to the southeast along the northern edge of the off-ramp. The whole property consists of three (3) lots, all appearing on Map #79 of the Guilford Tax Assessor's Office. Lot 35 is the smallest, at 2.4 acres, and lies along the northeast side of Route 1 (Figure 4). The smaller lot currently contains a commercial store, where a self-storage facility and telecommunications cellular tower are also located. Lot 34 extends southeast from Joan Drive and encompasses the smaller lot on three sides, measuring about 12 acres. Lot 36A lies further to the southeast and measures 11.56 acres, bordered by a thin strip of land to the southeast along the off-ramp where several commercial stores are located. The development project area is to be contained within the high hill that comprises the bulk of the property. To the nearest ten meters, the Universal Transverse Mercator (UTM) coordinates (Zone 18) for the peak of the hill are: 691,900 / 4574,390 (Figure 5).

Climate

The climate of the Eastern Coastal ecoregion of Connecticut is strongly influenced by its proximity to the Long Island Sound and Atlantic Ocean (Kirk 1939; Brumbach 1965; Dowhan and Craig 1976; Reynolds 1979). The project region typically experiences 47 inches (~120 centimeters) of precipitation per year. Average annual snowfall is about 33 inches. Precipitation amounts are rather evenly distributed throughout the year. Principal storm tracks include the Colorado and South Atlantic lows, and the Plateau and Rocky Mountain, Alberta, and Hudson Bay highs. While the predominant winds are from the southwest, northwest winds are frequent during winter. Normal temperatures vary between approximately 31 F in winter (22 F normal minimum) to 71 F (81 F normal maximum) in summer, with an average year-round temperature at about 50 F. Average relative humidity for the area is about 60-75 percent. These conditions result in a relatively humid environment throughout the year with considerable seasonality in terms of temperature. This limits the growing season for most crops between the middle of April and the end of October (about 195 days), the average times for last and first killing frosts for the region. The temperate climate in general provides for an abundance of resources that are rather evenly distributed given the moderate topographic relief of the region, but which also vary cyclically based on a marked seasonality. Seasonality is known to have had a greater bearing than large scale spatial factors on prehistoric and early historic resource procurement strategies in regions with a relatively even distribution of wild resources (Butzer 1982), such as that of Connecticut.

Figure 1: Map of Connecticut

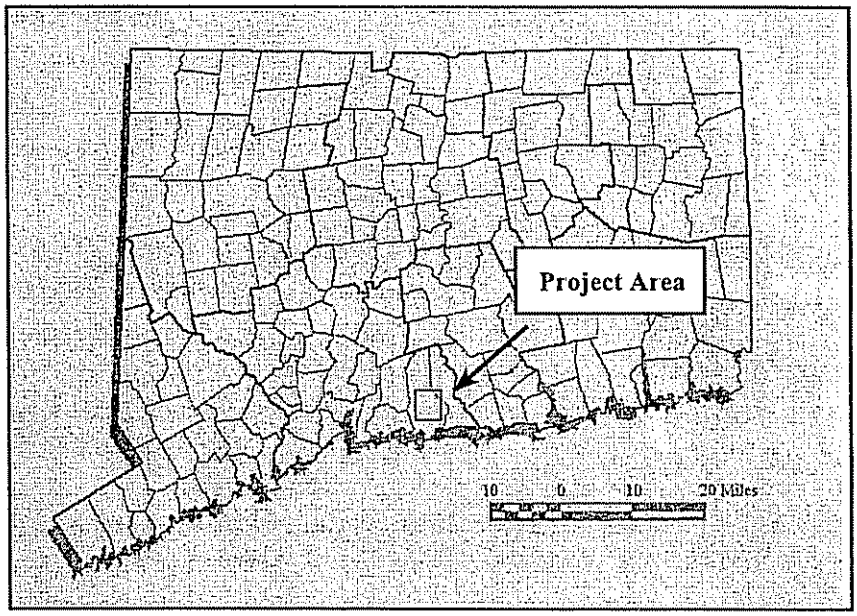

Figure 1: Map of Connecticut showing New Haven County and the project location.

Figure 2: Ecoregions of Connecticut

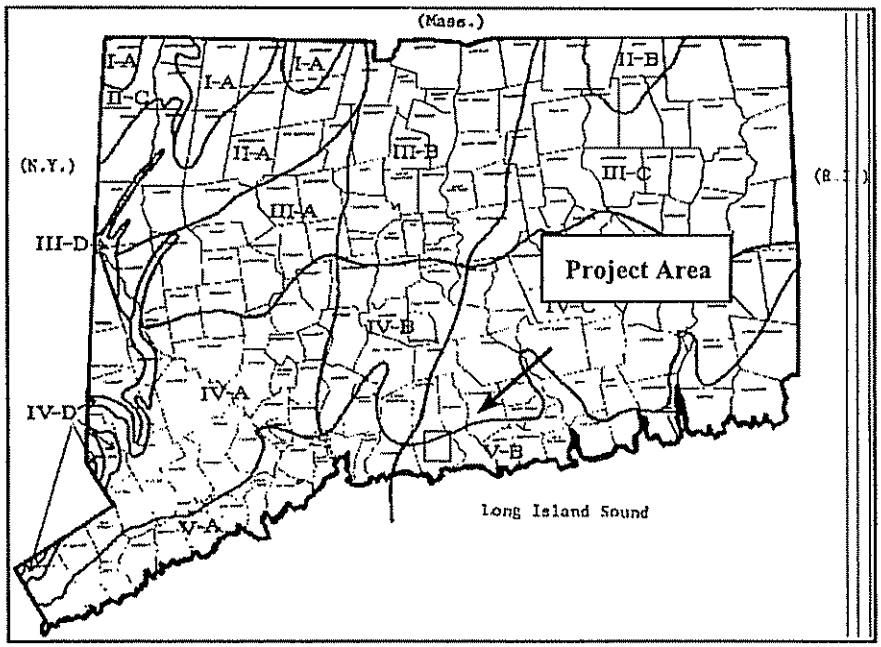

Figure 2: Project area is located in the Eastern Coatal ecoregion ecoregion (V-B) of Connecticut. From Dowhan and Craig 1976:26.

Figure 3: Map of the Guilford Area

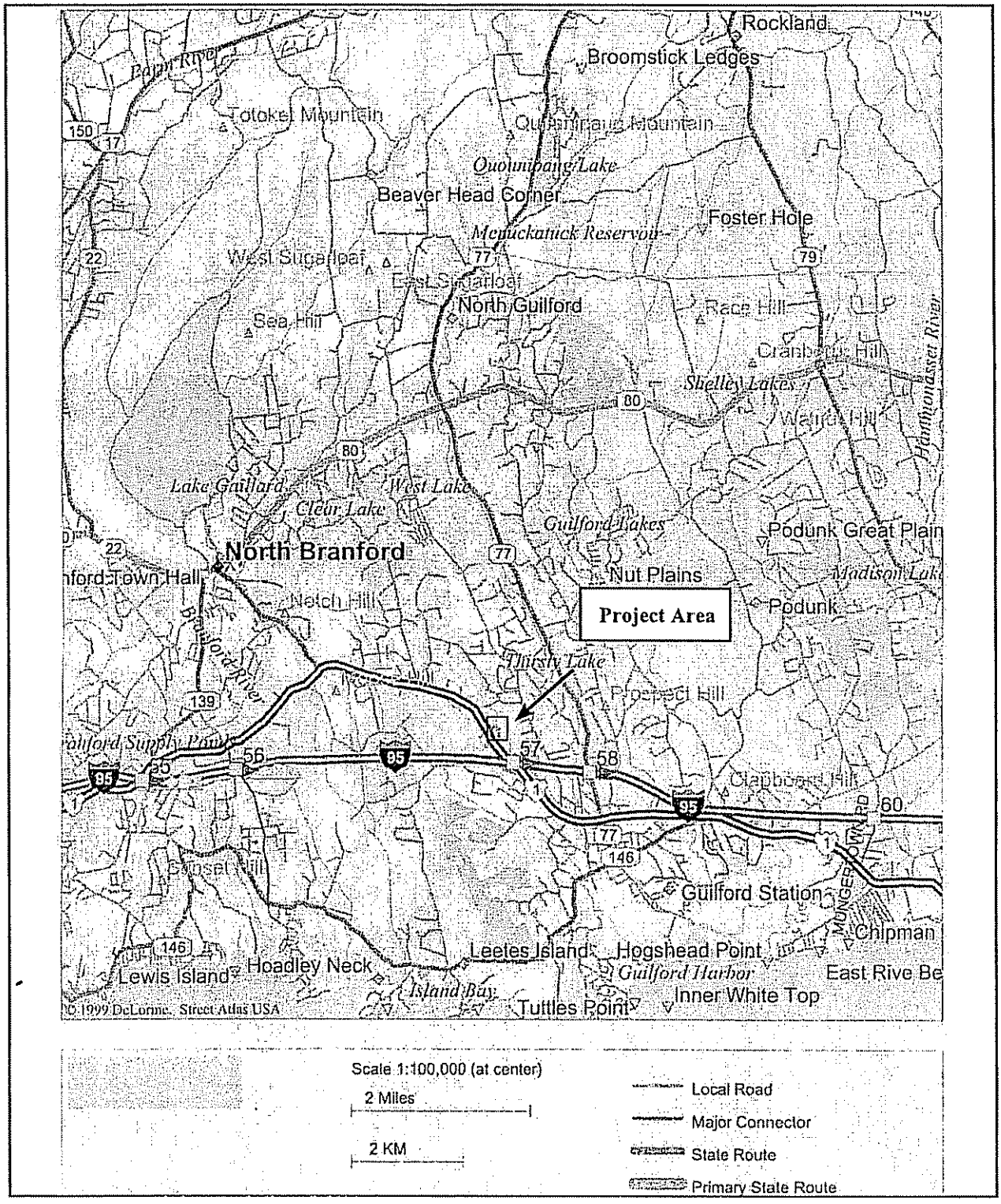

Figure 4: Map of the Project Area

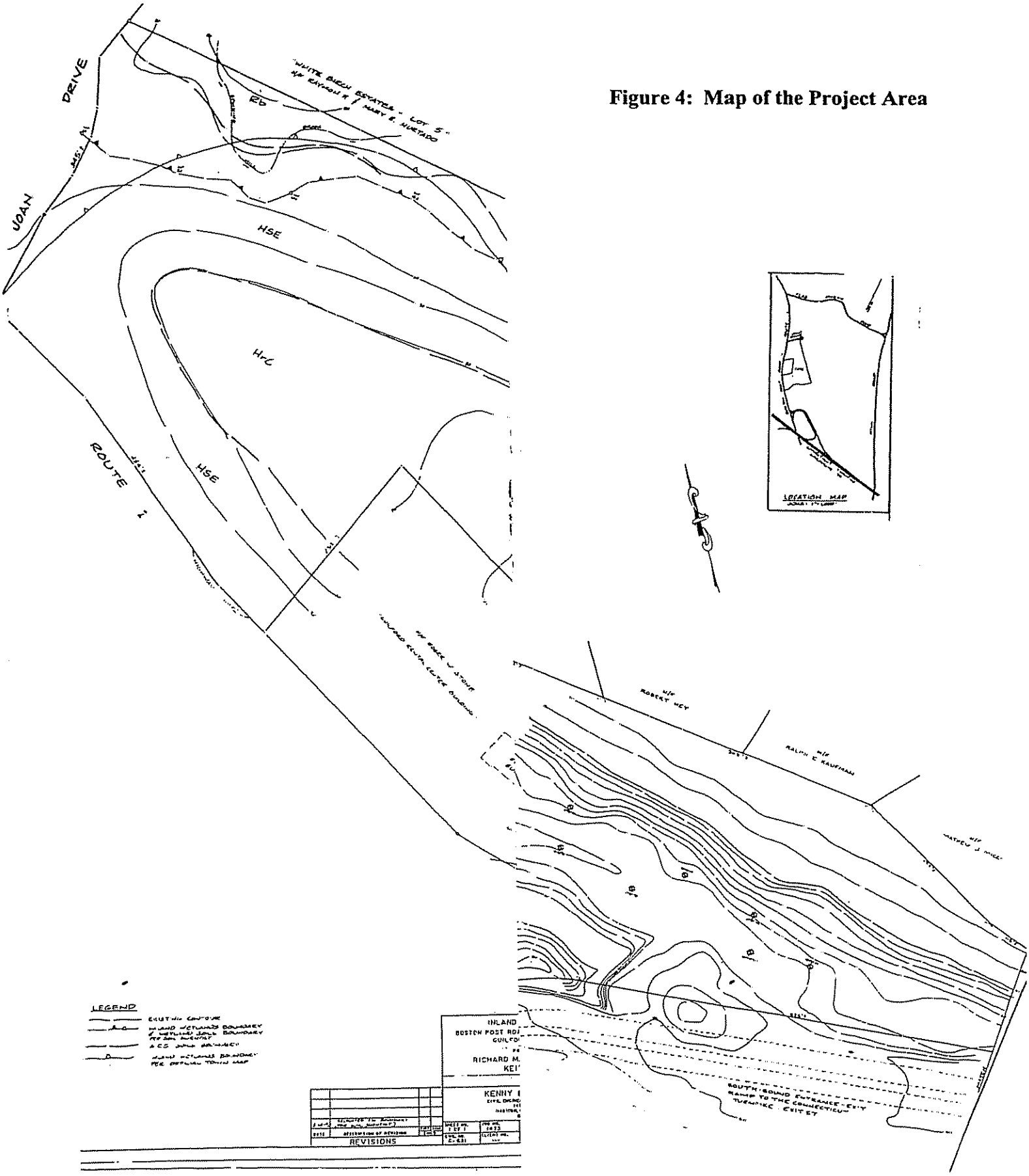

Figure 4: From wetland maps provided by

Figure 5: USGS 7.5' Topographic Map, Guilford Quadrangle

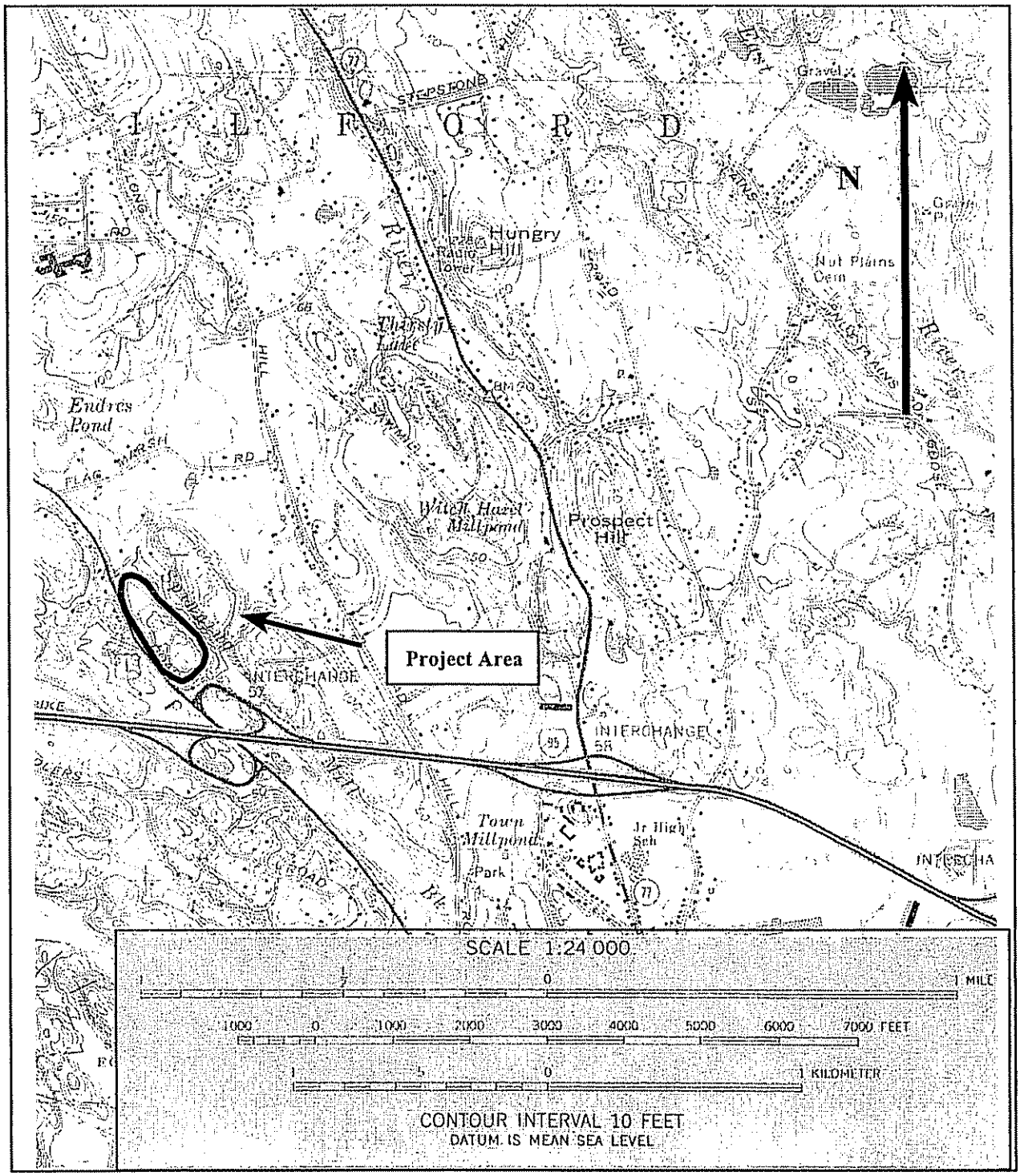

Figure 5: From USGS 1984.

Geology

The project region lies towards the western end of the Avalonian Anticlinorium (Avalonian Terrane), a Precambrian mass which was originally part of the African plate. The Avalonian Terrane is separated from the Connecticut Valley Synclinorium to the west by the Eastern Border Fault of the Hartford Basin about five miles to the west, and lies unconformably to the south of the Bronson Hill Anticlinorium (Rodgers 1985). No major faults exist in the direct vicinity of the project property, although the area exhibits considerable topographic relief, largely attributed to the steeply inclined and highly foliated bedrock formations in the area. Bedrock exposures in the vicinity of the project property indicate a northwest strike for bedding planes with dips on the order of 50 degrees or greater to the northeast (Figure 6). The project area itself is contained within a unit of Monson Gneiss (Zw). The Monson formation is described by Rodgers (1985) as a light to dark gray, variably textured gneiss principally composed of plagioclase, quartz, and biotite, with minor amounts of hornblende, microcline, and amphibolite. The steeply inclined bedding of this relatively resilient formation would be conducive to the occurrence of prehistoric rockshelters or exposures for early historic quarrying efforts.

Geomorphology

Although the shape of the landscape in the region surrounding the project property is largely dictated by the metamorphic folding of bedrock formations, other aspects include glacial features. Various landscapes are created depending upon the distribution and density of rock and the shape and melting nature of the incorporating glacier (Tarbuck and Lutgens 1990), as evident in the surrounding region which contains a wide variety of glacial till, moraines, and meltwater features. Most of the glacial geomorphology of the area surrounding the project property is characterized by thin glacial till deposits on hill slopes and ridges, deriving from the last or late Wisconsinan glaciation (Stone et al. 1992). Other prominent glacial landforms of the region include broad, glacially deposited meltwater features such as those found along the nearby West River drainage just to the east, and large moraines such as the one found further to the east near the Madison border and just west of the East River. Broad, post-Pleistocene alluvial terraces are generally lacking in the area, although minor terraces can be found along the West and East Rivers. Prominent bodies of swamp sediments occur near the mouths of the coastal drainages, including two areas between Leete's Island and Sachem's Head a couple of miles to the south.

The geomorphology of the project property itself can be broadly characterized as hill ridge and slope with locally derived glacial till (Flint 1971) (Figure 7). The project area lies on a relatively isolated, elongated hill that is flanked by Route 1 and Spinning Mill Brook. The northwest end of the hill descends more gently before terminating at Joan Drive, while the southeast end terminates abruptly. Flint (1971) indicates prominent artificial fill components along Route 1 and the interstate in the vicinity of the project property, while the prominence of the hill that constitutes the bulk of the project property could only contain very thin deposits of glacial till. Till deposits on some of the more durable formations of the region tend to be thin or non-existent as most till was derived from the bedrock formations which lay directly beneath them or a short distance north, and since steeper hills derived from more durable formations are more readily subject to surface erosion. Most till of the region is subangular, indicating little transport distance before deposition. Thus unlike areas whose landscape is affected by glacial meltwater and post-glacial deposition, the geomorphology of the project property has consistently

retained its form in recent geological history with the exception of minor traces of glacial till. The hill attains a height of more than 120 feet above mean sea level (amsl), with the slopes descending to roughly 50 feet amsl along the adjacent road and stream.

While the hill slope setting of the project property has been statistically shown to have been occupied less extensively by prehistoric inhabitants of the region, these settings frequently served as hunting and gathering grounds and as locations for short-term, seasonally restricted occupations, particularly during winter in the case of more secluded valleys. Isolated hills such as that supporting the project area were also targeted by prehistoric occupants of the region as raised vantage points for surrounding areas dominated by lower lying glacial outwash plains and perennial streams.

Pedology

The soils of the region can be broadly classified as Gray-Brown Podzolic soils. The project property is contained within an area dominated by the Holyoke-Rock outcrop soil association, characterized by gently sloping to very steep, somewhat excessively drained and well drained loamy soils and rock outcrop (Reynolds 1979). This soil complex is strongly associated with glacial till uplands where the topographic intricacy of the landscape is greatly dictated by the metamorphic folding and foliation of underlying bedrock. There are several main specific soil types within the project property, including those of the Hollis series (HSE, HrC) and Charlton series (CrC) (Figure 8).

The Hollis soil types (HrC, HSE) usually have a very dark brown fine sandy loam surface layer about three inches thick, followed by a subsoil of dark brown fine sandy loam about 11 inches thick before bedrock is reached. The Hollis soils vary principally with respect to slope and/or percentage of rock outcrop, with all Hollis soils occurring in highly rocky settings. The first unit (HrC) principally occurs on the hill ridge, while the second unit (HSE) occurs on the very steep hill flanks. These excessively drained soils also have a high water capacity and relatively fast permeability, and are fairly acidic without treatment.

The Charlton unit (CrC) occurs on the narrow section of land to the southeast of the principal project area. Charlton fine sandy loam is a well drained soil that typically has a dark brown fine sandy loam surface layer about two inches thick, followed by a two-foot thick subsoil consisting of brown to yellowish brown to light olive brown fine sandy loam, and a substratum of grayish brown gravelly fine sandy loam containing thin firm lenses in depths up to five feet. The Charlton unit is separated from the Hollis units by the stream which is supported by a linear, poorly drained wetland unit of Raypol silt loam (Rb).

The soil types of the project property are generally very rocky. Thus any historic agricultural use of the property in the past was likely limited to pasturing livestock or simply left open or uncleared to provide wood for fuel. The steeper slopes of the project area and rockiness of the soils would have been particularly prohibitive for any long-term prehistoric use or intensive agricultural efforts.

Figure 6: CGNHS Bedrock Geological Map of Connecticut

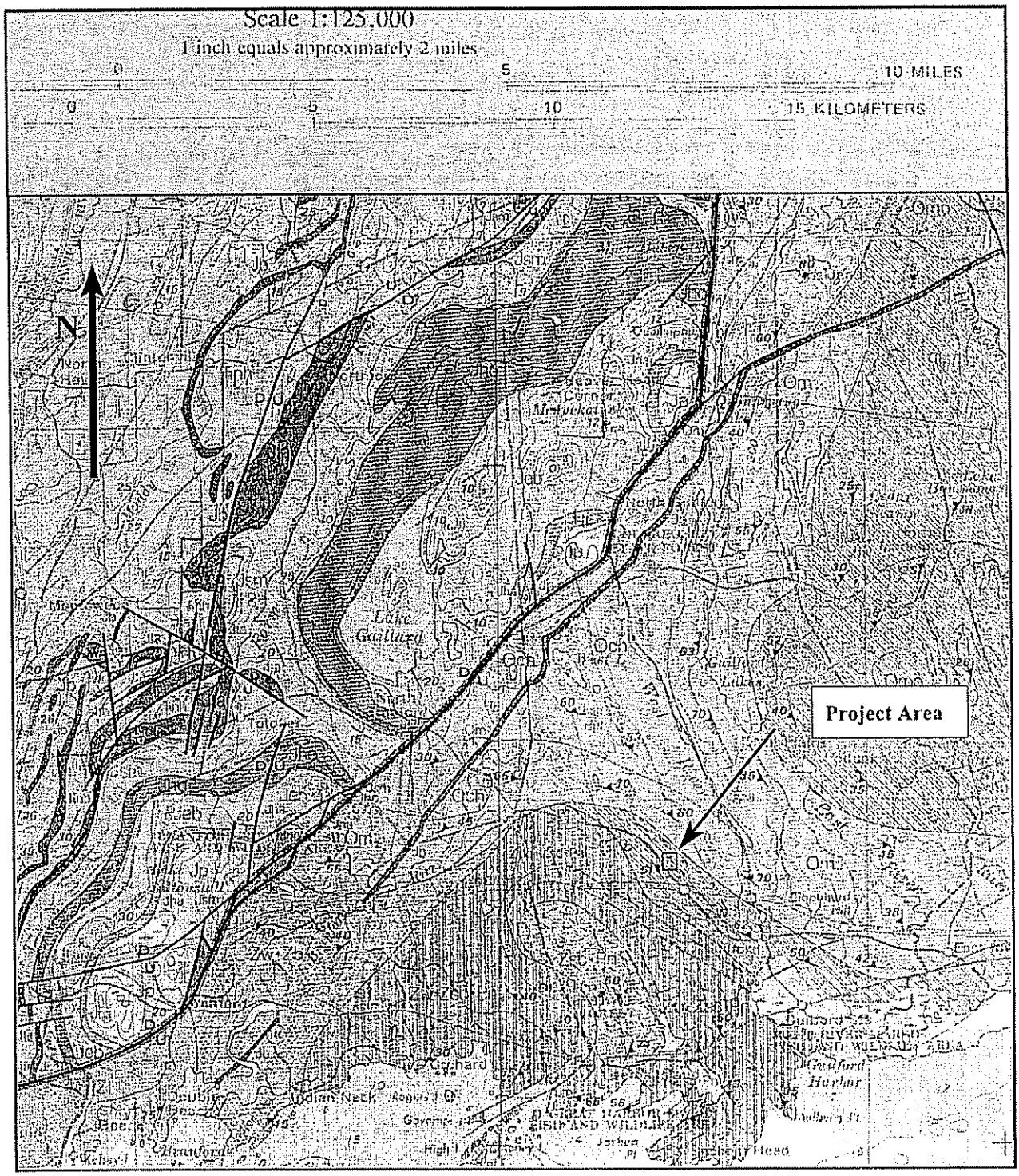

Figure 6: From Rodgers 1985.

Figure 7: USGS 7.5' Surficial Geology Map, Guilford Quadrangle

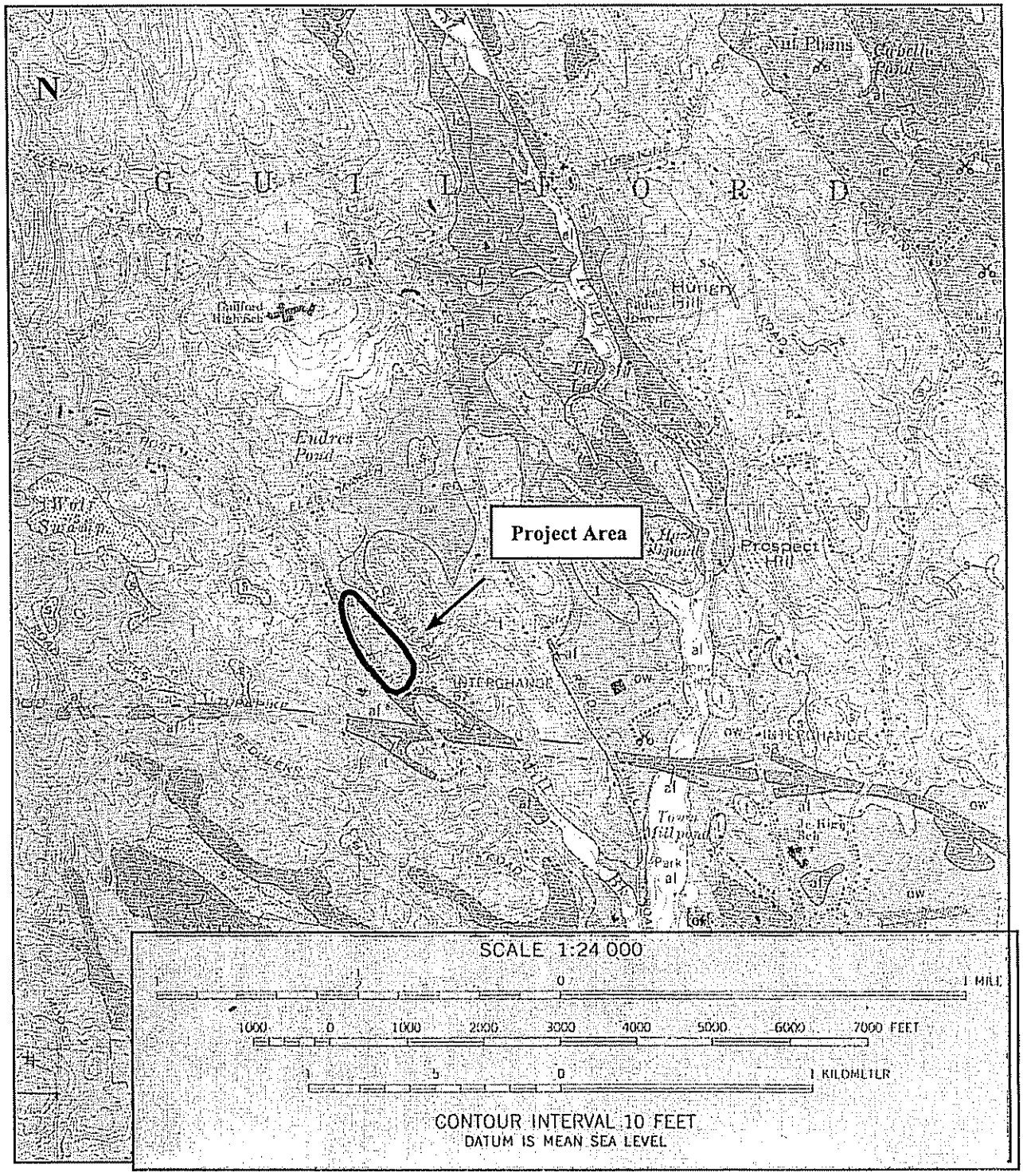

Figure 7: From Flint 1971.

Figure 8: USDA SCS Soil Map, New Haven County, Sheet 62

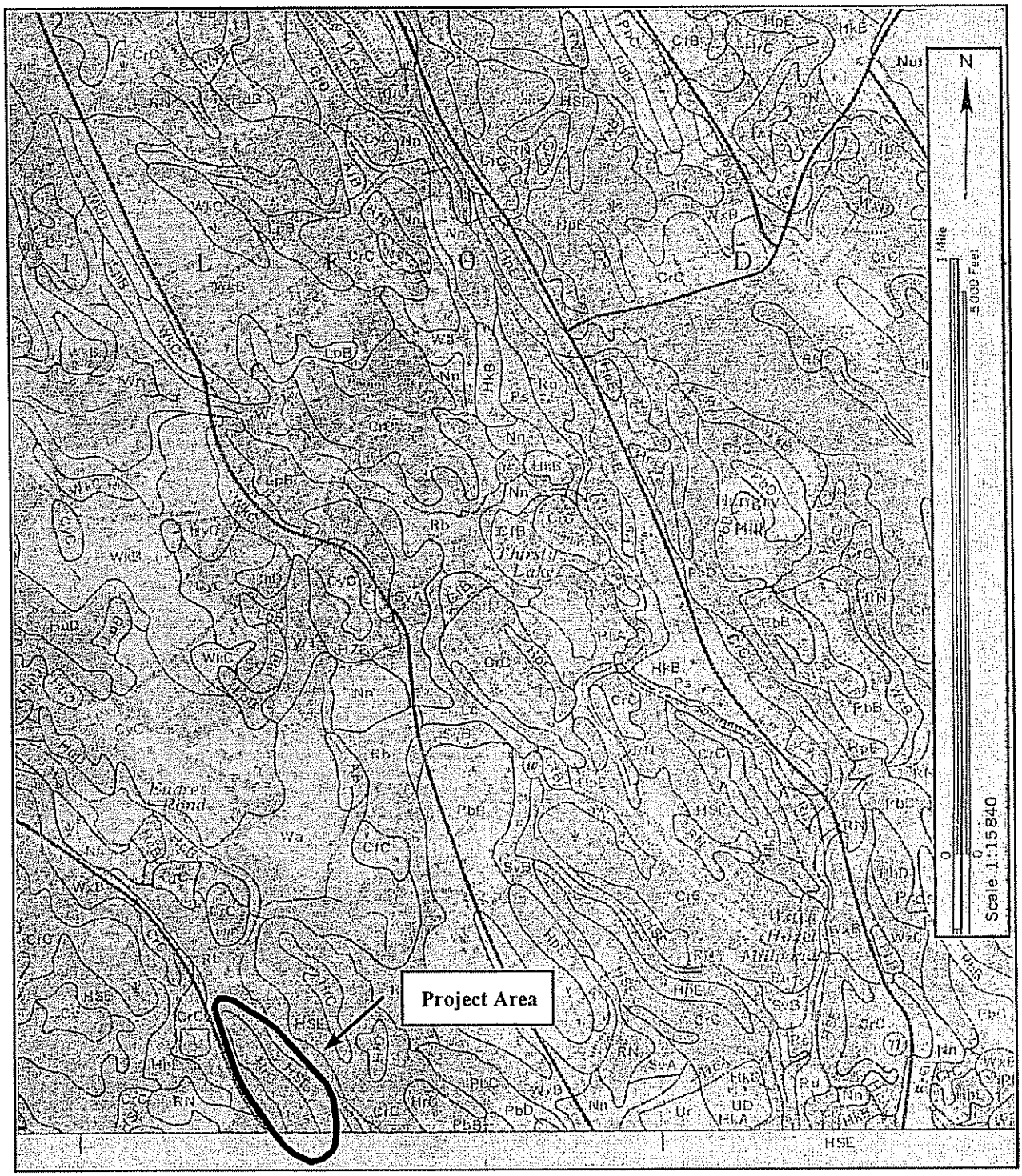

Figure 8: From Reynolds 1979.

Figure 9: CGNHS Drainage Basin Map of Connecticut

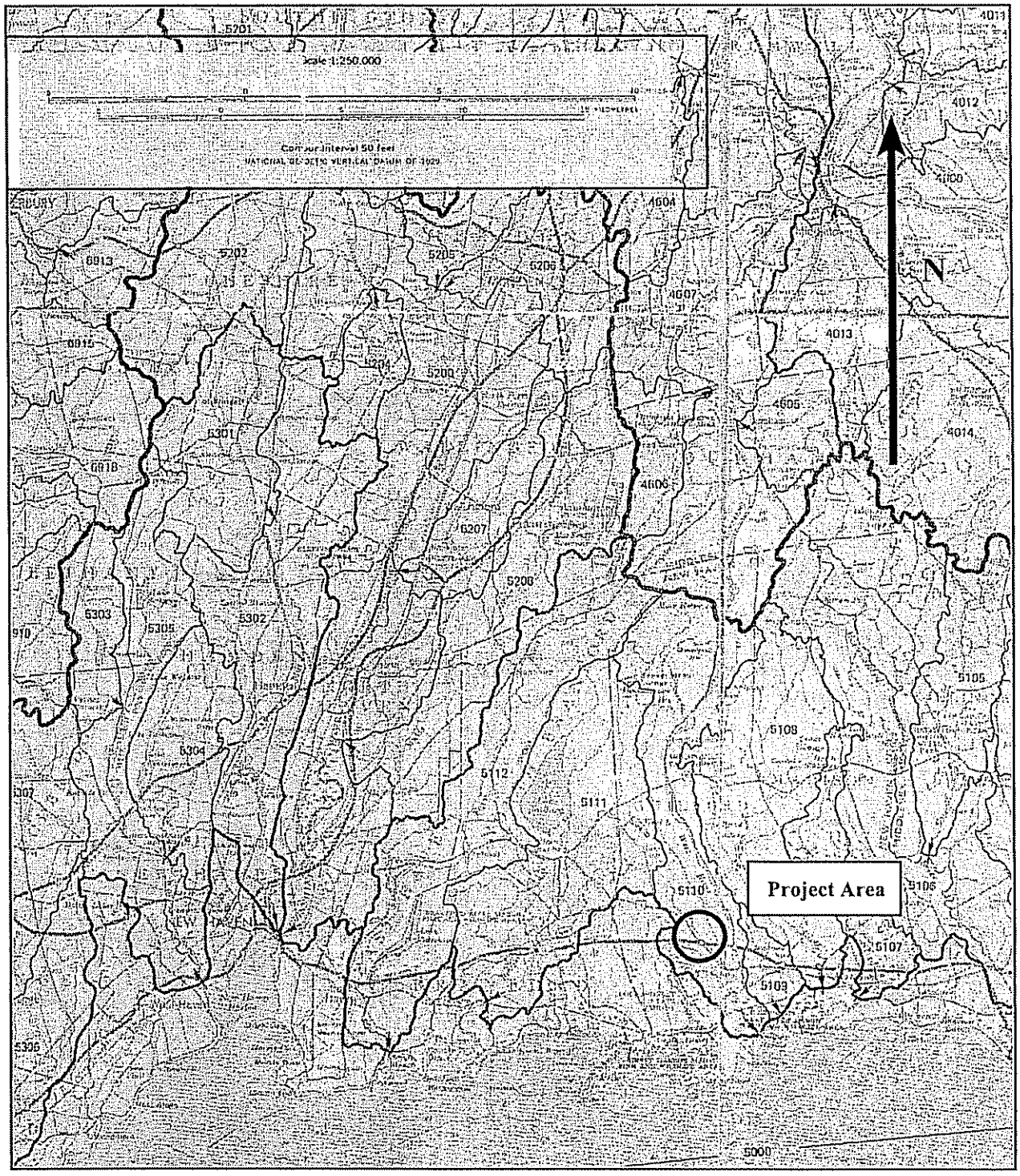

Figure 9: From McElroy 1991.

Hydrology

The drainage patterns of southern Connecticut and the region encompassing the project property were mostly established before the onset of the last glaciation (Flint 1930). In the region surrounding the project area, the usual trend of steams is to the south-southeast, somewhat in line with the strike of many bedrock formations, indicating that the glacial history of the area had only a partial effect on general drainage patterns. Thus they appear to be largely dictated by the strike of the faults and folds of the bedrock formations exposed at the surface, where they are subject to differential weathering and erosion depending on the resilience of the constituent beds. Some streamlining as indicated by glacial scouring and north-northwest to south-southeast orientation of drumlins does indicate glacial influence of topography and drainage patterns, however (Flint 1971:9). On a much smaller scale, the glacial outwash which occupies many of the local drainages has affected the precise course of the streams.

The project area lies within the West River (#5110) drainage basin (McElroy 1991) (Figure 9). The central course of the West River lies about one mile to the east of the project area. The dominant body of water associated with the project property is Spinning Mill Brook, a perennial stream coursing southeast along the northeast border of the hill supporting the project area. The smaller stream forms a confluence with the West River about one mile southeast of the project property. The course of the stream is slightly constricted in the southeast part of the property where a small pond is formed. Partly dammed by earth and stones, the constriction occurs where an unfinished concrete and steel pedestrian bridge crosses the drainage. The flow of the stream is great enough to have provided hydrological power to early historic inhabitants of the area, as its name implies, and certainly would have been an attractive resource to Native American occupants of the region.

Flora

The Eastern Coastal ecoregion is dominated by coastal hardwoods, including various oaks and hickories, tulip poplar, sassafras, and hemlock (Dowhan and Craig 1976:40). Historically, the Guilford area contained large quantities of cedar, white pine, and chestnut as well (Steiner 1897:179). Briers and various shrubs and vines form thickets in open or disturbed areas. Most of the project area is open today with a low grass and scrub growth cover on the hill top, and a secondary wooded cover along the steeper hill slopes. Hydrophytes occupy the Spinning Mill Brook drainage. Most crops of the broader region are grown between the middle of April and the end of October, although the soils on the project property are ill-suited for crops. Past historic agricultural use of the property would have been likely limited to pasturing, or even left wooded for fuel.

Fauna

Typical mammals for the project region include deer, raccoon, rabbit, skunk, opossum, chipmunk, squirrel, fox, and woodchuck (Reynolds 1979), and formerly wildcats and wolves (Steiner 1897:236-237). Birds include songbirds, sparrows, crow, woodcock, thrushes, woodpeckers, ruffed grouse, hawks, and the barn owl, as well as ducks, geese, and other waterfowl (Dowhan and Craig 1976; Reynolds 1979). The soil units represented on the property are all rated poor for supporting woodland wildlife (Reynolds 1979), although the stream would have been attractive to hunted game and early historic domesticates.

Cultural Setting

Regional Prehistory

The prehistory of the project region and New England in general can be broadly divided into periods reflecting changes in environment, Native American subsistence and settlement patterns, and the material culture which is preserved in the archaeological record (Table 1). Although it remains controversial today, the conservative estimates for the first occupations of North America are about 18,000 to 15,000 years ago, just after the maximum extent of the last glaciation and the broadest extent of the Bering land bridge (Kehoe 1981:7; Parker 1987:4; Jennings 1989:52). Southern Connecticut itself remained glaciated until about 14,000 B.P. (Snow 1980:103; Gordon 1983:71; Parker 1987:5; McWeeney 1994:181).

Paleo-Indian

The Paleo-Indian period is documented in Connecticut after 12,000 years ago and extends to roughly 9,500 B.P. (Swigart 1974; Snow 1980:101; Lavin 1984:7; Moeller 1984). This was a period of climatic amelioration from full glacial conditions, and a rise in sea levels which fell short of inundating the continental shelf. It was during this time that tundra vegetation was replaced by patches of boreal forests dominated by spruce trees (Snow 1980:114; Parker 1987:5-6), and eventually white pine and several pioneering deciduous genera (McWeeney 1994:182). Early in the period, the environment was conducive to the existence of large herbivores and a low population density of humans who procured these animals as a major subsistence resource, although warming temperatures and denser forests contributed to their extinction. The projected social and settlement patterns are those of small bands of semi-nomadic or restricted wandering people who hunted mammoth, mastodon, bison, elk, caribou, musk ox, and several smaller mammals (Ritchie 1969:10-11; Snow 1980:117-120). Episodes of sparse vegetation during this period encouraged the use of high lookout points over hollows and larger valleys by people in pursuit of large game. The southern part of New England had an earlier recovery from glacial conditions when compared to areas to the north, however, with a higher density of vegetation that might have precluded Paleo-Indians of Connecticut from focussing heavily on the larger mammals (McWeeney 1994:182).

The cultural material associated with this period includes large to medium-sized, fluted projectile points (cf. Clovis), in addition to knives, drills, pieces esquillees and gravers, scrapers, perforators, awls, abraders, spokeshaves, retouched pieces, utilized flakes, and hammerstones (Wilbur 1978:5; Snow 1980:122-127; Moeller 1980). Although numerous finds from this period have been found in Connecticut, only a few, small *in situ* sites exist throughout the state. Finds tend to be located near very large streams in the lower Connecticut River Valley, and in rockshelters of other regions (e.g. McBride 1981). A survey performed by the Connecticut Office of State Archaeology and the Archaeological Society of Connecticut resulted in the documentation of 53 Paleo-Indian "find spots" in Connecticut (Bellantoni and Jordan 1995).

Table 1: Regional Prehistoric Chronology

Paleo-Indian Period (12,000-9,500 B.P.)

Environment: Dry and very cold, tundra herbaceous plants and sparse spruce forests shifting to pine forests.
Settlement: Semi-nomadic, restricted wandering.
Subsistence: Very large grazing herbivores and smaller mammals.
Material: Large fluted points (cf. Clovis), knives, drills, scrapers, awls, abraders, perforators, spokeshaves, and hammerstones.
Ritual: Unknown.

Early Archaic Period (9,500-7,500 B.P.)

Environment: Cold, dense pine and deciduous forests.
Settlement: Central-based wandering.
Subsistence: Large foraging herbivores and smaller mammals.
Material: Atlatl, stemmed and bifurcated (Stanly, cf. Kanawha and Lecroy) points, choppers, anvil stones, and others from earlier periods.
Ritual: Unknown.

Middle Archaic Period (7,500-6,000 B.P.)

Environment: Cool, deciduous hardwoods and pine.
Settlement: Central-based, seasonally circulating.
Subsistence: Foraging mammals, fish, and shellfish.
Material: Contracting stemmed points (Neville, Stark, and Merrimac), semi-lunar groundstone knives, banner stones, net plummets, gouges, denticulates, grooved axes, percussed celts and adzes, and others from earlier periods.
Ritual: Unknown.

Late Archaic Period (6,000-3,700 B.P.)

Environment: Moderate, deciduous hardwoods.
Settlement: Central-based or semi-sedentary, seasonally circulating and radiating.
Subsistence: Foraging mammals (deer), small mammals, turtles, birds, fish, shellfish, berries, nuts, seeds.
Material: Groundstone manos, mortars, pestles, and bowls, stone pipes, bone tools, perforated weights, decorative gorgets, corner-notched (Vosburg, Brewerton, and Vestal), side-notched (Otter Creek, Brewerton, and Normanskill), narrow-stemmed (Dustin, Lamoka, Squibnocket, and Wading River), and triangular points (Squibnocket, Brewerton, and Beekman), fish weirs and harpoons, and others from previous periods.
Ritual: Cremation burials with utilitarian funerary objects for limited groups, suggesting possible access to restricted resources (e.g. transportation routes).

Terminal Archaic Period (3,700-2,700 B.P.)

Environment: Moderate, deciduous hardwoods.

Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.

Subsistence: Foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, nuts, seeds.

Material: Susquehanna corner-notched points, side-notched and large stemmed points, steatite bowls, canoes, Vinette I pottery, and others from previous periods.

Ritual: Elaborate secondary cremation burials containing high proportions of highly stylized artifacts of non-local material in specialized cemetery sites for limited groups with access to restricted resources (e.g. steatite, transportation routes), suggesting a stratified society and semi-sedentism for some groups.

Early Woodland Period (2,700-2,000 B.P.)

Environment: Cool, deciduous hardwood trees.

Settlement: Central-based, seasonally circulating.

Subsistence: Foraging mammals (deer), small mammals, fish, shellfish, turtles, birds.

Material: Bow and arrow, Early Windsor cord-marked and Linear Dentate ceramics, stemmed (Adena-Rossville) and side-notched (Meadowood and Fulton) points, Steubenville points, some exotic Adena material, and others from previous periods.

Ritual: Combination of cremation burials and primary inhumations, often in habitation settings, suggesting some latent retention of class distinctions during a period of declining ceremonialism and undifferentiated control over critical resources.

Middle Woodland Period (2,000 B.P.-1,000 B.P.)

Environment: Moderate, deciduous hardwood trees.

Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.

Subsistence: Agriculture (squash, beans, corn, sunflower, tobacco), foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, and nuts.

Material: Groundstone hoes, cylindrical pestles, many ceramic styles (Rocker Dentate, Windsor Brushed, Sebonac Stamped, Hollister Stamped, Selden Island, and Windsor Plain), projectile points (Snyders corner-notched, Long Bay and Port Maitland, Rossville stemmed, Greene), and others from previous periods.

Ritual: Unknown (not yet distinguished from the Late Woodland).

Late Woodland Period (1,000-1,600 A.D.)

Environment: Moderate, deciduous hardwood trees.

Settlement: Semi-sedentary, short-term radiating, long-term seasonally circulating.

Subsistence: Agriculture (squash, beans, corn, sunflower, tobacco, Jerusalem artichoke), foraging mammals (deer), small mammals, fish, shellfish, turtles, birds, berries, nuts, and tubers.

Material: Wigwam homes, Jack's Reef, and Madison and Levanna triangular points, Late Windsor and East River ceramics, and others from previous periods.

Ritual: Primary inhumations in habitation sites, suggesting egalitarian society.

Early Archaic

The Early Archaic period lasted from approximately 9,500 B.P. to 7,500 B.P. (Snow 1980:159; Lavin 1984:9; Moeller 1984). Sea levels and temperatures continued to rise during this period as denser stands of forests dominated by pine and various deciduous species replaced the vegetation of the former period (Davis 1969:418-419; Snow 1980:114; Parker 1987:9; McWeeney 1994:184-185). This environmental change was rapid and caused a major shift in the animals it supported, including deer, moose, other small to medium-sized mammals, migratory birds, fish, and shellfish. The material culture changed along with the environmental conditions to include the atlatl and smaller stemmed and bifurcated projectile points (Stanly, cf. Kanawha and Lecroy) for procuring smaller, faster game in more closed settings (Wilbur 1978:6-7). The expanded tool set included choppers and anvil stones. Settlement patterns were probably becoming more territorialized towards a central-based wandering character (Snow 1980:171). The Early Archaic period is poorly represented in Connecticut and the lower coastal river valleys, probably resulting from a combined effect of low population densities in response to rapidly changing environmental conditions, as well as site location and preservation factors (Snow 1980:168; McBride 1981; McBride and Dewar 1981:45; Lavin 1984:9; McWeeney 1986).

Middle Archaic

The Middle Archaic period extended from approximately 7,500 B.P. to 6,000 B.P. (Snow 1980:173; Lavin 1984:9; McBride 1984). It was by the end of this period of increased warming that sea levels and coastal configurations had stabilized and approached their present conditions (Kehoe 1981:211; Gordon 1983:82; Parker 1987:9). The period is marked by the establishment of forests with increasing proportions of deciduous hardwoods in relation to the pine predecessors in Connecticut (Davis 1969; Snow 1980:114). The material culture included square or contracting-stemmed points (Neville, Stark, and Merrimac), semi-lunar groundstone knives, ground and winged banner stones for atlatls, plummets for nets, gouges, denticulates, perforators, percussed celts and adzes and grooved axes for woodworking (Snow 1980:183-184), as well as tools used in previous periods. This more extensive range of material culture indicates a broader subsistence base than in previous periods, including greater fish and shellfish procurement (Wilbur 1978:8; Snow 1980:178-182) which was associated with the stabilization of sea levels towards the end of the period. The increased breadth of subsistence resources had the effect of increasing scheduling efforts and may have caused settlement patterns to take on more of a central-based or seasonally circulating pattern with bands joining and dispersing on a seasonal basis (Snow 1980:183). Sites found in the lower Connecticut River Valley region suggest that a wider range of environments and associated site types were exploited, including both large and special task sites in upland areas (McBride 1981; 1984:56). This regional pattern may confirm the suggested settlement pattern of central-based, seasonally circulating or restricted circulating groups of people supported by logistical procurement sites throughout the state. Middle Archaic sites are fairly rare in Connecticut, again a combined product of rising sea levels and poor site preservation.

Late Archaic

The Late Archaic period ranged from approximately 6,000 B.P. to 3,700 B.P. (Snow 1980:187; Lavin 1984:11; McBride 1984; Pfeiffer 1984). This period is marked by a warm-dry maximum evident from pollen cores in the region (Davis 1969:414; Ogden 1977). Hardwood, oak-dominated forests very similar in character to ones established today covered most of Connecticut by the Late Archaic (Parker 1987:10). The Late Archaic in Connecticut has been divided into two traditions: the Laurentian and the Narrow Point (Lavin 1984:11), with the former perhaps being distributed more in the interior. The Laurentian tradition is defined by wider-bladed, notched and eared triangular points, and ground slate points and ulus, while the Narrow Point tradition includes smaller, thicker, and narrower points. The tool kit and general material culture became even more expanded during this period, with the advent of ground stone manos, nut mortars, pestles, and bowls, as well as stone pipes, bone tools, corner-notched (Vosburg, Brewerton, and Vestal), side-notched (Otter Creek, Brewerton, Normanskill), smaller narrow-stemmed (Dustin, Lamoka, Squibnocket, and Wading River), and triangular points (Squibnocket, Brewerton, and Beekman), grooved and perforated weights, fish weirs and harpoons, and decorative gorgets (Wilbur 1978:15-24; Snow 1980:228-231). The groundstone material has been inferred as being associated with an increased vegetable diet that consisted of berries, nuts, and seeds (Snow 1980:231; Lavin 1984:13), including acorn, butternut, chestnut, walnut, hickory, bayberry, blackberry, goose foot, cranberry, partridge berry, service berry, strawberry, and swamp current (Cruson 1991:29). Deer continued to be the predominant meat source, although animal remains recovered from archaeological sites in the region include black bear, raccoon, woodchuck, rabbit, otter, gray squirrel, red fox, gray fox, wolf, wild turkey, grouse, pigeon, migratory fowl, and anadromous and freshwater fish and shellfish (Cruson 1991:28-29). Various sea mammals and fish were also procured along the coast.

The increasing breadth of the subsistence base and material culture was in turn associated with a central-based settlement pattern in which a restricted range of seasonally scheduled and used areas were exploited in a more semi-sedentary fashion than previously (Lavin 1984:13; Dincauze 1990:25). Sites in the lower Connecticut River Valley suggest that the larger rivers served more as long-term bases within a central-based circulating system than in the Middle Archaic (McBride 1981; McBride and Dewar 1981:48). The interior uplands of Connecticut may have supported a relatively independent set of seasonally circulating groups which used larger wetlands as long-term bases (Wadleigh 1981). Mortuary practices of the time suggest some sedentism for certain groups of people who were buried in specialized secondary cremation cemeteries and who may have had some control over restricted resources (e.g. riparian transportation routes) (Walwer 1996). Although the cremation sites largely include utilitarian funerary objects, some contain non-local materials which suggest trade association with cultures to the west of Connecticut (Walwer 1996).

Terminal Archaic

The Terminal Archaic period extended from approximately 3,700 B.P. to 2,700 B.P., as defined by the Susquehanna and Small-Stemmed traditions (Swigart 1974; Snow 1980:235; Lavin 1984:14; Pfeiffer 1984; Pagoulatos 1988; Cruson 1991). Steatite, or soapstone, was a frequently used material by this time, and could be fashioned into bowls and other objects. The

mass, permanency, and labor intensiveness of creating these heavy items have led to the inference of more sedentary base camps, especially on large rivers where the development of a canoe technology had become fully established and increased the effective catchment area within which groups of people were gathering resources on a continuous basis. The material culture of the period was very similar to the Late Archaic, with a proliferation of stemmed projectile point types including Snook Kill, Bare Island and Poplar Island stemmed points, Orient Fishtail points, Sylvan and Vestal side-notched points, and Susquehanna corner-notched points. The resource base continued to consist of deer and small mammals, nuts, shellfish, turtles, and birds (Snow 1980:249). The first signs of ceramics (Vinette I pottery) tempered with steatite fragments appeared during this period (Lavin 1984:15; Lavin and Kra 1994:37), and archaeological evidence of trade with other regions becomes more substantial for this time (Pfeiffer 1984:84).

The distribution of sites and site types in the lower Connecticut River Valley during this period suggests that there was a change in settlement to one with fewer, yet larger sites in riverine settings, and associated satellite task-specific sites in the uplands (McBride 1981; McBride and Dewar 1981:49). The implications are less foraging-strategy residential movement and more task-oriented collection activities within a radiating settlement pattern, but probably one in which some degree of seasonal circulation of settlement took place. Pagoulatos (1988) has shown that while sites associated with the Small-Stemmed tradition tend to suggest a more mobile settlement pattern in the interior uplands, sites of the Susquehanna tradition indicate a semi-sedentary collector strategy in major riverine and estuarine environments. At least certain groups exhibited semi-sedentism and some control over restricted resources, as indicated by the elaborate burials of the Terminal Archaic (Walwer 1996). Mortuary practices from the period include secondary cremation interments in formalized cemetery areas, with individual pits containing fragmented utilitarian material from communal cremation areas, as well as highly stylized funerary objects from non-local material (Walwer 1996). The lack of other, less formalized burial types evident in the archaeological record may be a matter of poor preservation, in which case it has been proposed that the cremation cemeteries are representative of a stratified society in which a portion of the people (of the Susquehanna "tradition") were able to generate a surplus economy that supported a semi-sedentary settlement pattern. This surplus may have been generated by the procurement and control over the transportation of steatite from various areas in Connecticut and surrounding territory.

Early Woodland

The Early Woodland period in Connecticut extended from about 2,700 B.P. to 2,000 B.P. (Lavin 1984:17; Juli and McBride 1984; Cruson 1991). A cooling trend during the Early Woodland (Parker 1987:10; Davis 1969:414) is thought to have reduced population sizes and regional ethnic distinction as the hickory nut portion of the resource base was significantly decreased, although the apparent decline in populations may possibly be related to other factors such as the inability to confidently distinguish Early Woodland sites from those of other periods (Filios 1989; Concannon 1993). Climatic deterioration and depopulation are in turn thought to have inhibited the progression towards, and association with, more complex social structures and networks that were developing further to the west and south (Kehoe 1981:215). A proliferation of tobacco pipes may indicate the beginnings of agricultural efforts in the northeast. The Early

Woodland of this region, however, exhibits no direct traces of subsistence crop remains, indicating continuity with previous periods in terms of general subsistence practices (Lavin 1984:18).

Materially, the period is marked by a substantial development of a ceramic technology, with the Early Windsor tradition of pottery being dominant in the Early Woodland of Connecticut (Rouse 1980:68; Lavin 1984:17, 1987). Both Early Windsor cord-marked and Linear Dentate ceramic forms were being produced at this time. Diagnostic projectile points can be developmentally traced to indigenous points of previous periods, consisting of many stemmed forms in addition to Meadowood and Fulton side-notched points, Steubenville points, and Adena-Rossville types, but now may have been used in conjunction with the bow and arrow (Lavin 1984:18). Adena-like boatstones are also found in this period. Although rare contact with the Adena culture is evident throughout assemblages of the period, the Early Woodland in southern New England remained a very gradual transitional period (Snow 1980:279,287; Lavin 1984:19).

A heightened use of ceramics has been erroneously promoted as an automatic indication of increased sedentism in many areas. Instead, central-based camps with restricted seasonal encampments appear to be the dominant settlement pattern (Snow 1980:287). Minimal archaeological evidence from the lower Connecticut River Valley appears to suggest a similar settlement pattern to the Terminal Archaic in which large riverine sites served as central bases with upland seasonal dispersal or specific task sites (McBride 1981; McBride and Dewar 1981:49), but with a lesser degree of sedentism. Interior uplands populations also decreased during the Woodland era, perhaps related to the intensification of agricultural resources along major riverine and coastal areas (Wadleigh 1981:83). The trend towards greater mobility may in part be attributed to the decline in the use of steatite that no longer gave certain groups control over critical and restricted resources, as indicated by the declining ceremonialism of burial sites at the time which were more often located in habitation sites and exhibited combinations of secondary cremation features and primary inhumations (Walwer 1996). This transition in the socio-economics of the region was brought about by the decrease in importance of steatite as ceramics obscured its value for producing durable containers. Partially preserved primary inhumations appear for the first time in the region based on preservation considerations.

Middle Woodland

The Middle Woodland period lasted from about 2,000 B.P. to 1,000 B.P. (Lavin 1984:19; Juli and McBride 1984; Cruson 1991). The climate was returning to the conditions basically witnessed today (Davis 1969:420). It is a period which exhibited considerable continuity with previous periods in terms of both subsistence and material culture. Cylindrical pestles and groundstone hoes are tools diagnostic of the period and reflect developing agricultural efforts, including the cultivation of squash and beans on a seasonally tended basis (Snow 1980:279). Direct evidence for agriculture in the form of preserved vegetal remains, however, does not generally appear until the early Late Woodland (Lavin 1984:21) when corn is thought to have been introduced into the Connecticut River Valley from the upper Susquehanna and Delaware River Valleys (Bendremer and Dewar 1993:386). Projectile point forms from the period include Snyders corner-notched, LongBay and Port Maitland side-notched, Rossville stemmed, and Greene lanceolate types.

A proliferation of ceramic styles was witnessed during the Middle Woodland (Rouse 1980; Lavin 1984:19-20, 1987; Lavin and Kra 1984:37), including Rocker Dentate, Windsor Brushed, Sebonac Stamped, Hollister Stamped, Selden Island, and Windsor Plain types that were all also produced in the Late Woodland, with the exception of the Rocker Dentate. Ceramic forms from the Early Woodland were still being produced as well. Minor traces of the Hopewell cultures to the west are also present in the archaeological record of the period. Site types and distributions in the lower Connecticut River Valley imply that a moderate increase of sedentism with aspects of a radiating settlement pattern took place on large rivers, supported by differentiated upland task sites (McBride 1981; McBride and Dewar 1981:49). This trend may have been supported by the expansion of tidal marshes up the larger rivers (McBride 1992:14).

Late Woodland

The Late Woodland period extended from approximately 1,000 B.P. to 1600 A.D., the time of widespread European contact in the broader region (Snow 1980:307; Kehoe 1981:231; Lavin 1984:21; Feder 1984). A warmer climate and increased employment of large scale agriculture for subsistence in New England were associated with increased population densities, more sedentary settlements, and more permanent living structures and facilities in larger villages. Settlements in Connecticut, however, tended to remain smaller with only small scale agricultural efforts, and as part of a seasonal round in which smaller post-harvest settlements were established in fall, and protected settlements occupied in winter (Guillette 1979:CI5-6; McBride and Bellantoni 1982; Lavin 1984:23; Starna 1990:36-37). Instead of maintaining permanent villages near agricultural plots, aboriginal populations engaged in the slashing and burning of new plots and let old plots lie fallow periodically (Salwen 1983:89). In this area, domestic resources included corn, beans, squash, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). Agriculture was largely maintained by women, with the exception of tobacco (Salwen 1983:89; Starna 1990:36). Deer, small mammals, fish and shellfish, migratory birds, nuts and berries, and other wild foods continued to contribute significantly to the diet (Waters 1965:10-11; Russell 1980). Many of the foods produced were dried and/or smoked and stored in baskets and subterranean holes or trenches.

The increasing diversity of wild estuary resources may have served to increase sedentism in the coastal ecoregions of Connecticut (Lavin 1988:110; Bragdon 1996:67), while agriculture and sedentism may have been even more prominent along the larger river bottoms (Bragdon 1996:71). Late Woodland settlement patterns of groups in the uplands interior ecozones of Connecticut may have included the highest degree of mobility, while many upland sites from the central lowlands represent task-specific sites associated with larger settlements along the Connecticut River (McBride 1992:16). House structures consisted of wigwams or dome-shaped wooden pole frameworks lashed and covered with hides or woven mats, and clothing was made from animal hides (Guillette 1979:CI7-8; Starna 1990:37-38). Pottery for the period is defined as the Late Windsor tradition in Connecticut (Rouse 1980:68; Lavin 1984:22, 1987). Most of the ceramic forms of the Middle Woodland were still being produced, in addition to the newer Niantic Stamped and Hackney Pond forms. Ceramics of the East River tradition also appear in the area during the Late Woodland, having originated and been concentrated in the New York area (Rouse 1980; Wiegand 1987; Lavin 1987). The period exhibits some continuity in terms of projectile point forms, although the Jack's Reef, Madison triangular, and Levanna points are

considered diagnostic for the period. As likely with earlier periods, the material culture included various textile products such as baskets and mats, and wooden utensils such as bowls, cups, and spoons (Willoughby 1935; Russell 1980:56).

Unlike groups of the Mississippi valley, the overall cultural pattern for the entire Connecticut Woodland era exhibits considerable continuity. Interregional contact increased during this period, however, with non-local lithic materials increasing from as low as 10% to as high as 90% from the early Middle Woodland to the Late Woodland (McBride and Bellantoni 1982:54; Feder 1984:105), although most trade appears to have been done between neighboring groups rather than initiated through long-distance forays (Salwen 1983:94). The lack of enormous agricultural surpluses for the time is indicated by the low density of mostly small storage features in habitation sites, as well as the ubiquitous primary inhumation of people without a select portion of graves exhibiting special treatment that would require high energy expenditure (Walwer 1996). As confirmed by early ethnohistoric accounts, this suggests a largely egalitarian and relatively mobile society for the Late Woodland despite the fact that this period marks the highest development of food production (i.e. agriculture) during the course of prehistory in the region. Corn was undoubtedly important, however, as a disproportionate amount of the simple, flexed burials were oriented towards the southwest which was the aboriginally acknowledged direction for the origins of corn and the Spirit Land.

Local Sites and Surveys

A Late Archaic occupation (60-013) was discovered on Faulkner Island about five miles off the coast of Guilford during a professional survey (Waller and Mair 1998). Traces of prehistoric activity included a quartz Squibnocket triangular projectile point, quartz and chert debitage, and two refuse features containing a high density of snail shells, bone from small mammals, fish, bird, turtle, and shark teeth, as well as carbonized floral remains including sumac, thistle, hickory nut, and butternut. Most other prehistoric sites of the area have been found along the coast in Guilford, as well as the Pine Orchard and Indian Neck areas of Branford to the west (Figure 10).

A number of burial sites have been recorded in Guilford, mostly dating from the Late Archaic through Early Woodland periods, although more specific chronological designations are not available. A site (60-004) near the mouth of Sluice Creek about two miles southeast of the project area contained two burials in a village setting that also produced adzes and a slate knife or ulu. A site (60-003) on the coast about three miles to the southeast of the project area revealed a cache of large oval-shaped chert preforms in a feature which may represent a cremation burial. Another site (60-005) within several miles to the south-southeast of the project area on the coast contained a burial represented by three fragments of human skeletal remains, polished adzes, gouge, pendant, scraper, slate semi-lunar knife, and red ochre (Russell 1941). A flexed burial of an adult female was recorded at another nearby multi-component site (60-009) on the coast that also produced a high density of ceramics as well as clear quartz crystal, celt, full grooved axe, carbonized corn, Squibnocket projectile point, bone, graphite, and ochre.

Other sites in Guilford span the entire Woodland era. A professional survey of the Guilford Harbor and Marina dredging project (McBride 1991a, 1991b) several miles east-southeast of the project property near the East River revealed several Woodland occupations. Site 60-008 is an Early to Middle Woodland shell midden and camp site having yielded thick-

walled and grit-tempered ceramics, chert and quartz debitage, and oyster shell. Site 60-007 is a similar Late Woodland component with three loci yielding a Levanna projectile point and thin-walled ceramics characteristic of the later Woodland era, as well as two other triangular points, bifaces, chert and quartz debitage, utilized flakes, oyster shell, and bone.

Excavations at the grounds of the Henry Whitfield House about two miles southeast of the project area revealed possible post-molds, a hearth, ceramics, a Levanna projectile point, and a point close in form to Lamoka which may indicate that the prehistoric occupation of the site extended back to the Late Archaic, (Anderson et al. 1977:42; Langley 1982), although it is also suggested that the material may date to the early Contact period when local Indians reportedly helped in the transport of construction materials (i.e. stone) to the site of the main house in 1639 (see 'Local History' section). The prehistoric component of the Whitfield site has since been confirmed by other surveys (e.g. Walwer and Walwer 2000).

A rockshelter site (60-012) recorded about one mile south of the project area near a marsh (Burlew 1993) produced material likely dating to the Late or Final Woodland, including incised and shell-tempered ceramics, as well as quartz debitage, calcined and split bone, and shell (northern quahog, eastern oyster, Atlantic Bay scallop). A fragment of lead recovered from the site may indicate an early Contact period chronological designation.

Some sites in the area can not be adequately dated because of a lack of diagnostic material or poor documentation. A site (60-010) on the East River about two miles northeast of the project area, for instance, yielded projectile points, knives, axes, pendants, and a semi-lunar knife, although the collection remains with a private collector and lacks further documentation in site files. Other more questionable sites include the five rock carvings at Hanna Quarry (60-011) on Lost Lake about two miles south of the project property, and likely represent the activities of late 19th Century workers rather than pre-Contact Native Americans. The latter contention has been supported by some who romanticize more ancient connections between Europe and North America. There was also a reported carved bone or wood object (60-006) found in the late 19th Century a couple of miles to the northwest of the project area in the upper Hoadley Creek drainage, possibly attributed to Native American activity in the area.

Summary

In summary, a moderate density of prehistoric sites has been documented within several miles of the project property. Larger, seasonally occupied sites tend to lie on glacial meltwater landforms near larger rivers and along the coast. The majority of sites have been found along the coast, in part because of the higher diversity of food resources in estuaries (e.g. fish and shellfish), as well as denser Euroamerican settlement and construction activities which exposed sites in these resource-rich areas. Exceptions to this general pattern include rockshelters or task-specific sites in more uplands settings. Sites in the broader area span much of the prehistoric sequence of the region, with most from the Late Archaic through Late Woodland periods. The lack of a higher density of sites compared to other coastal towns in the area may be partly attributed to the lack of larger streams or rivers and associated broad glacial outwash landforms which were highly conducive to prehistoric settlement. Conversely, the lack of previously documented sites in the vicinity of the project area is likely due to its rocky, hilly upland settings at relatively great distances to the nearest major drainage.

Figure 10: Prehistoric Sites of the Region

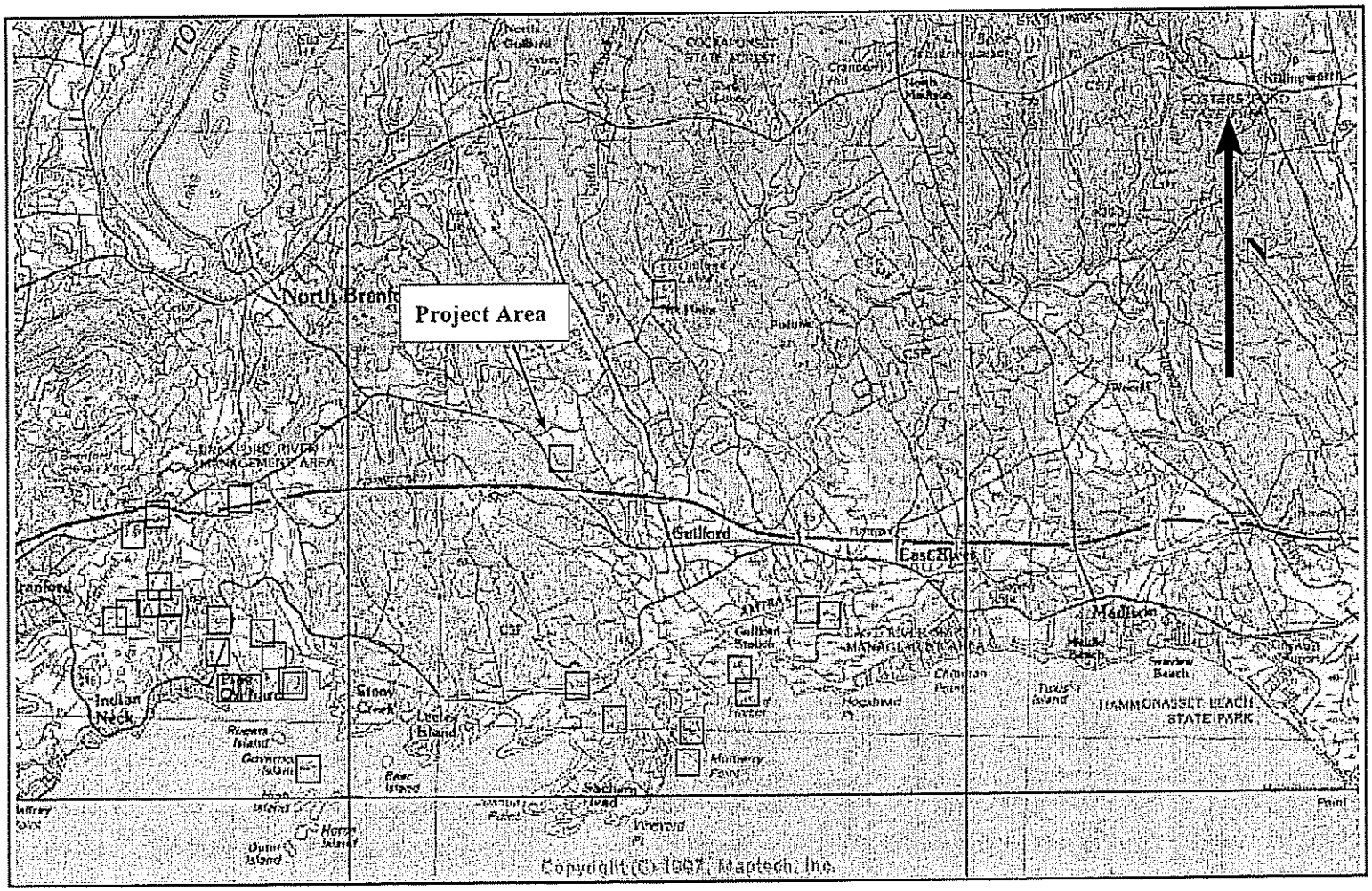

Figure 10: Schematic distribution of sites in the vicinity of the project area (Scale: 1" = 2 miles).

Historic Background

Contact

The Contact period is designated here as the time ranging from the first substantial contact between Europeans and Native American inhabitants of the area, to the time the area was thoroughly occupied by Euroamerican settlers, from roughly 1600 to 1700 (Table 2). The first contact between aboriginal populations of the broader region and European explorers occurred in 1524 when Verrazano reached the coast of New England (Terry 1917:16). Others followed in the first decade of the 1600s (Salwen 1983). In 1614, Dutch explorers reached the Connecticut River (DeForest 1852:70; DeLaet 1909 [1625-1640]:43), and in 1625 they were met by the Quinnipiac in New Haven Harbor (Brusic 1986:9) when they established fur trading relationships with the native inhabitants of the region until the early 1630s (Guillette 1979:WP2-4). Substantial English settlements in the area started in 1635-1636. DeForest (1852:48) estimated about 6,000 to 7,000 Native Americans in Connecticut at this time, while Winthrop estimated somewhere between 12,000 and 15,000 and most others (Trumbull 1818:40; Gookin 1970[1674]; Cook 1976; Snow 1980:35; Bragdon 1996:25) between 16,000 and 20,000.

The composition of the tribes at the time of contact is fairly well known, although boundaries fluctuated significantly, as did the political alliances by which the tribes could be defined (Thomas 1985:138). Three major divisions of Algonkian speaking groups can be delineated, and their territories conform well to ecozone distributions (see Dowhan and Craig 1976:26 and Speck 1928:Plate 20), including the Mohegan-Pequot range in the Southeast Hills and Eastern Coastal ecoregions, the Nipmucks in the Northeast Hills and Northern Uplands ecoregions, and tribes of the Wappinger-Mattabesec Confederacy in the North Central Uplands and most of western Connecticut. The validity of the Wappinger-Mattabesec Confederacy as a cultural entity has been recently challenged (Salwen 1983:108-109), however, with many smaller and somewhat independent tribes occupying much of the western half of the state.

The Menunketucks occupied the territory comprising Guilford and parts of Madison by the Contact period (Spiess 1933:29-30). The Wangunks occupied territory to the north, while the Hammonassets occupied territory east of the East River (Spiess 1933:29-30). On a larger scale, the Menunketucks may have been affiliated with the Mohegan-Pequots to the east, with the name "Menunketuck" thought to be a Mohegan derivation for 'that which fertilizes the land' referring to the large amounts of fish procured by coastal tribes to fertilize corn fields (Trumbull 1974:29). The Menunketucks were closely affiliated with the Quinnipiacs to the west by relation, and when the female sachem Shaumpishuh sold the territory of Guilford to Euroamerican settlers, the remaining members of the tribe subsequently moved west to Branford and East Haven at Momauguin (also the name of Shaumpishuh's sachem brother) (DeForest 1852:167; Spiess 1933:29). This amounted to merely 14 men, six women, and 14 children (DeForest 1852:167; Spiess 1933:29), with no recorded Native American settlement at Momauguin 150 years later and only 23 inhabitants in the original territory of Guilford by the end of the 18th Century (DeForest 1852:361; Steiner 1897:425).

The initial land transaction between English settlers and the Indians took place in 1639, with Euroamerican compensation for the entire territory amounting to merely a dozen of each of the following: coats, fathoms of wampum, looking-glasses, pairs of shoes, pairs of stockings,

Table 2: Local Historic Chronology

Contact (17th Century)

Dutch explorers make contact in the Quinnipiac drainage in 1614, trade relationships until the early 1630s.
Severe disease epidemics in 1616-1619, 1633 reduce Native American populations.
Whitfield and others purchase Guilford from the Menunketucks in 1639, Whitfield House built.
Euroamerican settlement concentrates on the plain between the West and East Rivers.
Whitfield helps establish first Guilford grain mill in 1643.
Early settlers rely on self-subsistence agriculture and bartering economy.
Guilford reaffirms land acquisitions from Nausup in 1686.

18th Century

Madison set off as East Guilford Society in 1703, North Guilford set off as separate society in 1720.
Euroamerican settlement and Native American depopulation make aboriginal adaptations impossible, Euroamerican acculturation increases steadily.
Self-sustained Euroamerican farming and minor cottage industries (milling, smithing, etc.).
Rapid growth in population, diversity of Christian denominations.
Shell fishing, shad fishing, and West Indies trade adds diversity to local economy.
Minor skirmishes during the Revolutionary War.

19th Century

Economy still mostly based on agriculture, poor house built in western Guilford in 1814.
Buildings and cemetery graves moved from the Green.
Madison incorporated in 1826, population grows steadily but slowly.
Irish immigration increases diversity of population.
Railroad line completed through Guilford in 1852, light industry grows including granite quarrying.
Guilford develops as a summer resort town.
Expansion of civic and business enterprises (e.g. libraries, banks, schools, lodges, etc.).

20th Century

Trolley lines established in Guilford, 1910-1938.
Town moves towards suburban layout after World War II.
Guilford's population increases greatly after completion of Interstate I-95 in 1960.
Project property changes hands many times during 20th Century
Commercial store, cell tower, self-storage facility built on small parcel in late 20th Century.
Recent unauthorized dumping occurs on site; pedestrian bridge across stream abandoned before completion.

hatchets, knives, hats, porringers, and spoons; as well as four kettles and two English coats (DeForest 1852:167; Rockey 1892:111-112; Steiner 1897:29). A reaffirmation of Euroamerican "property rights" to the original settlement area and North Guilford was initiated in 1686 by an agreement between the town and Nausup of New Haven (Steiner 1897:157-158,162).

Ethnohistoric sources yield clues to aboriginal Final Woodland and early Contact settlement patterns (McBride and Bellantoni 1982; Starna 1990:36-37). Spring settlements were located to take advantage of anadromous fish runs in larger drainages and along the coast. Late spring attention focussed on tending corn fields. Semi-sedentary settlements near these fields were supported by special-task hunting and gathering sites. Dispersal in the late fall and winter brought smaller groups into protected, upland or interior valleys where hunting and gathering continued, for a longer duration in the Contact period than earlier and by a smaller subsistence unit (e.g. single family). Fortified villages were likely a response to very early Contact period intertribal political strife resulting from increased economic pressures of sedentism and territoriality (Salwen 1983:94; McBride 1990:101; but see Thomas 1985:136). Large villages were found to be associated with a central-based circulating settlement system with family units dispersing from and returning to the major settlement on a seasonal basis in the lower Connecticut River Valley and surrounding region in the early Contact period (McBride 1981). Eventually, however, many Native American populations had been dispersed and afflicted by disease, warfare, and intertribal conflict to the point that small, scattered reservations served as the last community sites for various aboriginal populations in the region.

The early Contact period economic base for Native Americans in Connecticut continued to consist of hunting deer and small mammals, gathering berries, nuts and roots, and procuring shellfish and fish on larger drainages and along the coast (Waters 1965:7; Salwen 1970:5). This basic subsistence strategy was supported by varying intensities of horticulture, including the production of corn as the staple, as well as squash, beans, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). The importance of corn is evident in the description of ritual activities, including the Green Corn Festival and similar ceremonies that extended with various groups into the present day (Speck 1909:194-195; Speck 1928:255; Tantaquidgeon 1972:81; Fawcett 1995:54-57). Elderly women held extensive knowledge of wild plants which provided a host of medicines and treatments (Tantaquidgeon 1972; Russell 1980:35-37). Wigwams continued to serve as the principal form of housing, in some cases well into the 18th Century (Sturtevant 1975). The material culture included a mix of aboriginal forms as well as some European goods such as metal kettles and other metal implements (knives, projectile points), cloth, glass beads, and kaolin pipes (Salwen 1966, 1983:94-96). Wampum served as an important trade item for the Native Americans with European traders, but more significantly had served as symbolic signs of allegiance or reciprocity and sacred markers or tokens of honor in the form of belts (Guillette 1979:CI8; Ceci 1990:58-59; Salisbury 1990:87; Fawcett 1995:59). With European metal drill bits, tribes along the coast were now mass producing wampum for trade with the Dutch and English who in turn used the shell beads to trade with other tribes further inland (Salwen 1983:96; Ceci 1990:58). Late Contact period Euroamerican goods included various metal tools, glass bottles, ceramic vessels, kaolin clay tobacco pipes, and nails (McBride and Grumet 1992). Unlike the Late Woodland, Contact aboriginal lithic products were once again mostly manufactured from local sources (McBride and Bellantoni 1982:54). Dugout

canoes may have continued to provide a major form of transportation in larger drainages (Salwen 1983:91). While colonization brought new material goods to Native Americans in the area in exchange for land and services, the indigenous inhabitants became increasingly subject to legislative and economic restrictions by the colonists (Salisbury 1990:83).

Sachems and councils of leading males formed the basic political unit for groups of villages (Gookin 1970; Simmons 1986:12-13), along with clan mothers whose authoritative roles became diminished as a result of a strong European male-leadership bias (Fawcett pers. comm. 1996). Tributes paid to sachems were generally used as reserves for the tribe at large. Although sachems were generally assigned by hereditary lineage, this was not always the case (Bragdon 1996:140-141). Authority was usually enforced by persuasion of a council. Shamans were "magico-religious" specialists of the tribes who also had a considerable role in leadership and decision-making (Speck 1909:195-196; Simmons 1986:43; Starna 1990:42-43). Rules of obligation and reciprocity operated on all levels of tribal-wide decision-making (Bragdon 1996:131-134), serving to diffuse centralized authority. Other special status roles included warriors and persons who had visions, thus social status was largely based on achievement and recognition. While the assignment of lineality (i.e. matrilineal vs. patrilineal) for the area tribes is still largely debated (Bragdon 1996:157), the well established practice of bride-pricing supports the contention of patrilineal social organization (Speck 1909:193; Salwen 1983:97). Post-marital residence appears to have been ambilocal.

On a larger scale, more powerful tribes demanded tributes from smaller ones, often resulting in loose alliances between the latter. This process resulted in a dynamic political situation that prompted intertribal conflict, especially after contact with Euroamericans (Guillette 1979; Bragdon 1996). The European settlers of the Contact period would eventually use this embedded rivalry system to their advantage. In the period between 1616 and 1619, and more severely around 1633, disease epidemics would initiate a trend of drastic reductions in the native population that aided in Euroamerican settlements of the area (Snow and Lanphear 1988; Snow and Starna 1989; Starna 1990:45-46). Diseases introduced into the Americas included chicken pox, cholera, diphtheria, malaria, measles, oncercerosis, poliomyelitis, scarlet fever, smallpox, tapeworms, trachoma, trichinosis, typhoid fever, whooping cough, and yellow fever (Newman 1976:671).

Guilford was first settled by Euroamericans in 1639. The Reverend Henry Whitfield, one of the first to settle here at that time, was a classic example of a Non-Conformist who came to the "New World" in order to escape the stifling pattern of religious persecution in England (Barber 1836:214; Steiner 1897:16). Whitfield was one of more than two dozen heads of families to sign a covenant regarding a proposed settlement near Quinnipiac (Rockey 1892:112-113; Steiner 1897:24-25). The original settlement in Guilford consisted of home lots and out lots for each settler, as well as a commonly held "plantation" represented by six primary "planters" who effectively formed a corporation relatively independent of the New Haven Colony (Rockey 1892:119; Steiner 1897:29-31). Built in 1639-1640 after nearby temporary shelters had been constructed, Whitfield's stone house served as the primary meeting place for the first several years of settlement until a stone meetinghouse was built at the north end of the town green (Rockey 1892:138; Steiner 1897:34). It was also perceived as a fortified structure in the event of an attack from Native Americans of the region (THWM 1970:3; Anderson 1991), although local

Indians were reportedly used to help bring stones for the construction of the house from rock ledges at the Sawpit Quarry some distance to the east of the house (Kelly 1939:xii; THWM 1970:9). Whitfield apparently established the first grain mill of Guilford in 1643, although it would be finally constructed and operated by Robert Kitchell (Steiner 1897). Typical home lots of Guilford were between three and ten acres each, surrounding the then larger green (Steiner 1897:49-55).

Early town government was founded upon a mix of common law from native England and "the higher law of Divine Revelation" (Steiner 1897:38-39), the latter of which played a more prominent role after 1643 when the New Haven colony assumed supreme executive civil and military power with respect to surrounding towns (Rockey 1892:119; Steiner 1897:56-59,99). The town and larger colony together would come under the jurisdiction of the Connecticut colony two decades later (Rockey 1892:121; Steiner 1897:101,141). The town suffered from the loss of many of its prominent founders to death or a return to native England or other parts of New England (Rockey 1892:116; Steiner 1897:60), although the list of settlers by 1650 included nearly 50 heads of families (Steiner 1897:124-125). The population of Guilford was 255 by 1670 (Steiner 1897:266).

The majority of early settlers of Guilford engaged in self-subsistence agriculture (Steiner 1897:249) within a bartering economy, while many also doubled as early town officials including ministers, town officers, surveyors, deputies, product overseers and assessors, mill committees pound-keepers, and others to follow (Steiner 1897:140-146). A school was established in Guilford as early as 1646, with a schoolhouse built as early as 1671 (Steiner 1897:394-396). The first town mill was constructed by 1644 as a tide mill near the mouth of Sluice Creek (Rockey 1892:126; Steiner 1897:227), several years before the first bridges across the East and West Rivers (Rockey 1892:125). Specific rules were initiated for the division of lands depending upon their intended use, as well as setting off town lands to remain in common (Steiner 1897:172-173). Pounds were established in order to retain livestock venturing off owners' lands (Steiner 1897:238) despite rather strict fencing ordinances (Rockey 1892:132; Steiner 1897:246-248).

18th Century

In 1702, Guilford had been designated by the state as one of eight principal ports (Rockey 1892:109; Steiner 1897:144), a year before Guilford received its official charter through a patent issued by the Connecticut government (Steiner 1897:159-161). Madison, as the East Guilford Society, was set off the same year (Rockey 1892:139; Steiner 1897:279). Official boundaries of the town fluctuated since its initial settlement for over 200 years to follow (Steiner 1897:162-166). The early concern for the layout of the town, and even aesthetic landscaping considerations, are amply evident in town decrees including those protecting trees along public roads (Rockey 1892:131-132; Steiner 1897:181). The early part of the 18th Century witnessed the expansion of the population of the town into North Guilford which became a separate society in 1720 (Rockey 1892:118,143; Steiner 1897:199-200,293). The population of Guilford (including the present bounds of Madison) was over 1500 by 1730 and more than doubled to over 3500 by the end of the century (Steiner 1897:267). This included a moderate African American population at less than 100 people. Some religious diversification was realized during the 18th Century of Guilford in the form of Episcopal and Methodist churches, with Baptist and Catholic churches established in the first half of the next century (Steiner 1897:371-390).

Self-subsistence farming continued as the major economic base of Guilford throughout the 18th Century. Hilly, upland settings, particularly in the vicinity of the project area and surrounding territory which remained very lightly developed during the 18th and 19th centuries, were limited mostly to pasturing or even left uncleared for the provision of wood for fuel. Shell, seaweed, and fish were procured from the coast for use as fertilizer in fields which were used to grow corn, flax, potatoes, turnips, onions, tomatoes, rye, oats, and various other grains, particularly in less rocky areas along the coast, major streams, and major estuaries east of the West River (Steiner 1897:177-178). Other agricultural efforts included the production of cider and raising cattle, hogs, horses, and sheep (Steiner 1897:238-245). Shellfishing was undoubtedly an important additional economic component in early historic subsistence practices as reflected in various town acts regarding the conservation of oyster beds and clams (Steiner 1897:186), and fish such as shad were being procured in considerable quantities during spring runs (Steiner 1897:209).

Moderate economic diversification occurred in the 18th Century of Guilford, limited to the establishment of fulling mills, small ship builders, and various tradesmen including a tailor, weavers, carpenters, shoemakers, wheelwrights, glasers, coopers, blacksmiths, a hatter, a saddler, a sailmaker, a rope maker, and a clothier as representatives of cottage industries typical for southern New England at the time (Rockey 1892:126-127; Steiner 1897:250). Sachem's Head Harbor on the coast serviced ships engaged in the West Indies trade during the 18th Century, with Guilford supplying some livestock and timber (Rockey 1892:109). Various wharves were built during the 18th Century on the larger drainages to accommodate this effort (Steiner 1897:218). The first post office in Guilford was established in 1789 (Rockey 1892:133; Steiner 1897:265-266), four years before the construction of the first town hall (Rockey 1892:123). Only minor skirmishes occurred in Guilford along the coast during the Revolutionary War (Rockey 1892:162-164). By the end of the century, the Boston Post Road and well established stage line through Guilford served as the official mail route from Georgia to Maine (Steiner 1897:213).

19th Century

East Guilford, or Madison, was set off from Guilford as a separate town in 1826 (Rockey 1892:108; Steiner 1897:191). Guilford's population (excluding Madison) remained relatively stable during the 19th Century, ranging from nearly 2200 in 1800 to less than 2800 by 1890 (Steiner 1897:267). Most activity and settlement was limited to the borough of Guilford, incorporated in 1815, between the West and East Rivers (Rockey 1892:130; Steiner 1897:257). Buildings and even cemetery graves were removed from the green in the early 19th Century (Rockey 1892:132; Steiner 1897:258-259,391), and a poor house was constructed in the western part of Guilford in 1814 (Rockey 1892:124). Immigration to Guilford during the first half of the 19th Century included 40 families from Ireland, with an abundance of Scandinavian and Italian families coming towards the latter part of the century to work the quarries at Leetes Island and Sachem's Head (Steiner 1897:139).

Self-subsistence farming continued into the 19th Century as the major economic base of Guilford, although economic diversification at this time included the procurement of timber for shipment to major market centers including New York City (Steiner 1897:179). Shipping itself continued to provide the town with another source of income during the 19th Century. Other

cottage industries were evolving into light industry during the 19th Century, including a manufacturer of light machinery, an iron foundry, manufacturer of steam engines and other heavier machinery, tanneries, carriage maker, brick manufacturer, brass foundries, paper factory, manufacturer of ivory and wood items, manufacturer of school furniture, creamery, hub and wheel company, canning company, silk company, and fish oil works (Rockey 1892:127-130; Steiner 1897:252-254). Guilford also contains good quality granite as a natural resource, actively quarried at several locations in the 19th Century for the production of building materials, including the base of the Statue of Liberty (Rockey 1892:129; Steiner 1897:255-256).

Table 3: Principal Transfers of Property Title

Guilford Tax Assessor's Map #79
Boston Post Road, Guilford, CT

Lot 34 (12 acres)

1989	Vol. 375, pg. 128	Paul W. Staschke to Richard Russo et al.
1965	Vol. 153, pg. 688	Laurel Crest Company to Paul W. Staschke (~10 acres)
1946	Vol. 98, pg. 169	Walter F. and Helen Niemi to Laurel Crest Company
1946	Vol. 98, pg. 86	Florence S. Travis to Helen and Walter F. Niemi (~10 acres)
1945	Vol. 96, pg. 511	Joseph G. Downing to Florence S. Travis (1/2 interest) (see also 93/405 from Claudia G. Downing)
1930	Vol. 78, pg. 244	Paul Yungelson to Joseph G. and Claudia G. Downing (~10 acres)
1928	Vol. 74, pg. 401	Myra E. Joyce to Paul Yungelson (~10 acres)
1925	Vol. 72, pg. 570	William F. Cordts to Myra E. Joyce (~10 acres)
1901	Vol. 53, pg. 504	Walter G. Bishop to William F. Cordts (40 acres with buildings) (with reference to use-right of barn with hay, crops, cord wood)
1889	Vol. 47, pg. 279	Andrew J. Benton to Walter G. Bishop (40 acres) (Benton accumulates many parcels in late 19th Century)

Lot 35 (2.4 acres - 1919 Boston Post Road)

1976	Vol. 222, pg. 556	Paul W. Stanchke to Roger W. Stone (see parcel above: 153/688)

Lot 36A (11.56 acres)

1986	Vol. 309, pg. 940	Valley Shore Builders, Inc. to Richard Russo (13.1 acres)
1986	Vol. 309, pg. 938	Edward M. and Helene M. Mattei to Valley Shore Builders, Inc.
1964	Vol. 152, pg. 186	Lilly Menne to Edward M. and Helene M. Mattei
1952	Vol. 114, pg. 535	Carl Menne to Lilly Menne (27 acres)
1944	Vol. 95, pg. 573	Richard and Frank Creter to Carl Menne
1940	Vol. 91, pg. 39	Martha Abbes to Richard and Frank Creter
1927	Vol. 74, pg. 305	Frank J. Creter to Martha Abbes (27 acres)
1927	Vol. 75, pg. 453	Simeon B. Chittenden et al. to Frank J. Creter (Chittenden accumulates many parcels since mid-19th Century)

Economic diversification was also recognized during the 19th Century in the development of a small resort industry as initiated by the construction of Sachem's Head House, the largest summer hotel between New York and Newport when it was built in 1832 (Rockey 1892:134; Steiner 1897:209-210). Major turnpikes were now being established in various parts of town, increasing the efficiency with which travel and the transport of goods could take place (Rockey 1892:125-126; Steiner 1897:214-215). The construction of the New Haven and New London railroad line through Guilford was completed in 1852 (Rockey 1892:126; Steiner 1897:218). Coal was now being imported as a major fuel source (Steiner 1897:179), replacing wood to some degree. Other civic and related developments in Guilford during the 19th Century included the growth in number of lodges, schools, libraries, banking, newspapers, and organizations such as the Guilford Agricultural Society (and annual fair and cattle show), and the United Workers volunteer organization (Rockey 1892:132-137; Steiner 1897).

Land records (Table 3) and historic maps (Figure 11) of the area continue to show a very light density of settlement in the vicinity of the project area and immediate surroundings (Whiteford 1852; Irvine 1852; Smith and Smith 1856; Beers 1868). Land records also show limited historic use of the project area through time. Both principal lots of the property were part of larger farm lots during the 19th Century and early 20th Century, and it is only during this time when there is any reference to land-use. In particular, the 1901 deed for the northern parcel, then 40 acres, makes reference to the right for use of a barn with hay, crops, and cord wood. A quick review of historic land-use in southern New England would suggest that the project area was most likely utilized for the latter purpose, given the obvious difficulty of historically building structures or growing crops on the Hollis soils of the project property.

20th Century

Trolley lines were in operation in Guilford between 1910 and 1938, following the incorporation of telephone, electric, and water services which brought the town into the new century. Agriculture retained a prominent role in the local economy until World War II. At the start of the 20th Century, the project property was part of two lots owned by Simeon B. Chittenden and Walter G. Bishop. The project property changed hands many times during the early part of the 20th Century, a time when parcels of land were still commonly held and exchanged like currency when compared to today's land-ownership practices. Land records from the 20th Century indicate no structures or particular uses of the property.

Strong suburban influence and population growth after the war caused a change in the overall character of the town which still retains a largely rural atmosphere in many areas. Guilford currently contains an area of 47.6 square miles occupied by a population of more than 21,000 people which has doubled over the last several decades. The town now contains at least seven schools and churches each. While some minor agricultural and light industrial pursuits continue, the town still remains largely residential with many commuting to larger work centers including New York City. The town is well known for its many recreational activities including those provided by many of the local parks, antique shops, established wooded trails, beaches, marinas, art and music festivals, and of course, historic structures and districts. The project property appears to have remained essentially idle during the late 20th Century with the exception of the 2.4-acre lot set off in 1977. This part of the overall property currently contains a commercial store, cell tower, and self-storage facility reflecting the growth and expansion of the population along the Route 1 corridor of Guilford during the late 20th Century.

Figure 11: Historic Sites of the Region, 1852

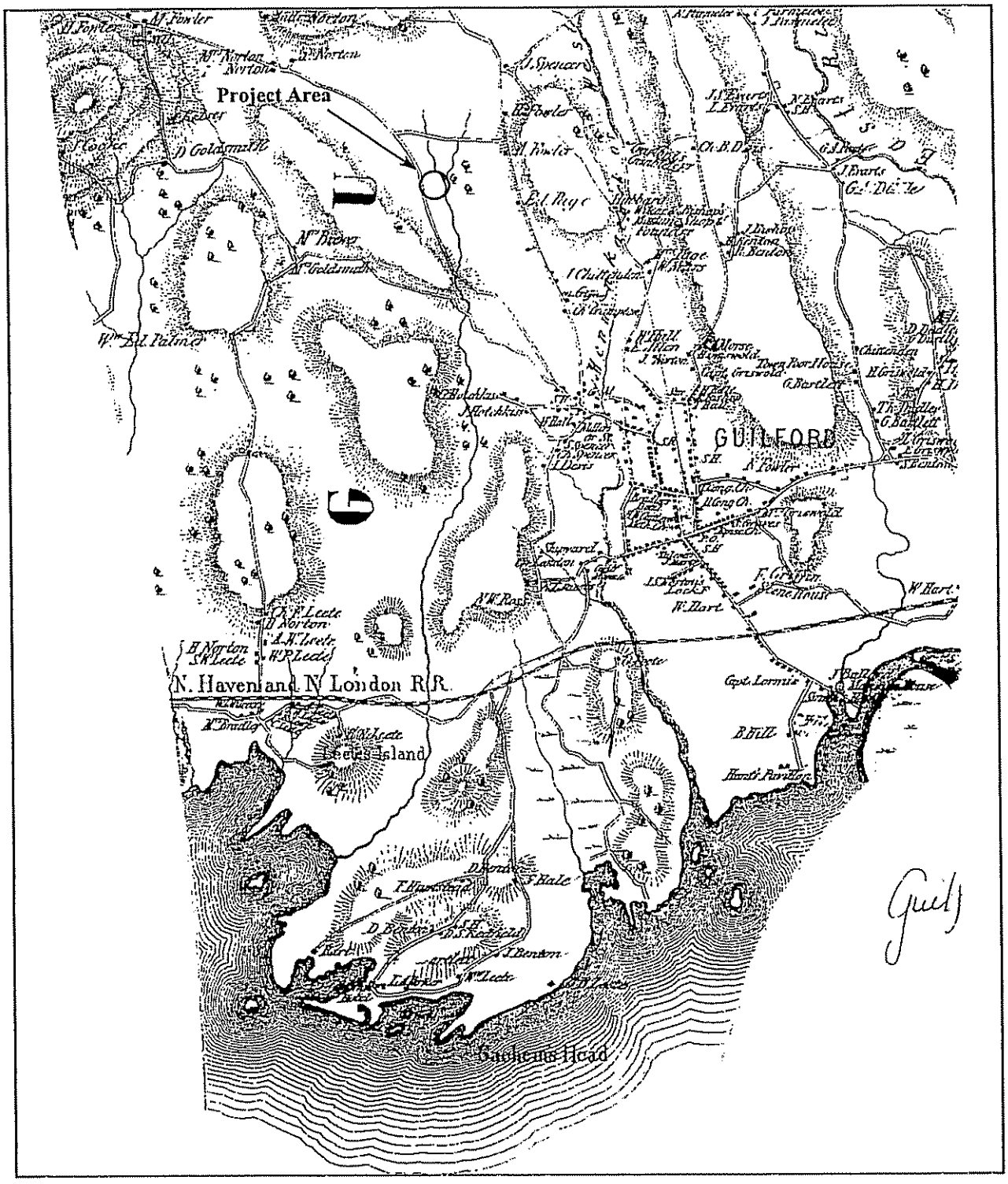

Figure 11: 1852 map of Guilford (Whiteford 1852).

Local Sites and Surveys

There are only two recorded Native American sites in Guilford which can be confidently attributed to the Contact period. One site (60-001) revealing four burials was recorded near the mouth of the West River about several miles to the southeast of the project area (Glynn 1952; Russell 1952). Another Contact period site (60-002) on a tidal marsh a couple of miles to the southwest of the project area revealed shell-tempered ceramics, quartz projectile point fragment, charcoal, and early historic ceramics.

Professional archaeological testing on Faulkner Island (69-016) revealed 19th and early 20th Century refuse related to the lightkeeper's house, oil house, and fog signal house (Waller and Mair 1998). The island was sold to the federal government in 1801 for the construction of a lighthouse to be maintained by keepers and their families until the responsibility was assumed by the United States Coast Guard in 1939. Other professional surveys in the area have failed to reveal significant results (CAS 1992; ARS 1995; Walwer and Walwer 1999; Binzen 2000; Reeve and Walwer 2001; Keegan et al. 2002; Morphew 2003a, 2003b).

The town green and immediate surrounding area is a nationally registered historic district about one mile to the southeast of the project area, containing a mix of Gothic, Colonial, Federal, Classic Revival, Greek Revival, and Victorian buildings including both homes and churches (Raiche 1975). Several more independently registered structures lie on Boston and Union Streets just east of the green. The Hyland House was built in 1660 and contains one of the earliest uses of decorative chamfered girts (Brockmeyer 1975a). The Griswold House is another early 18th Century colonial structure representing a founding family (Brockmeyer 1975b). The 1670 Acadian house has a unique T-shaped design and was rumored to have housed 11 Acadian refugees in the 1750s (Brockmeyer 1975c). The 1696 Sabbathday house on Union Street remains as a unique example of the structures which were built by parishioners near town greens so that they could have shelter in between morning and afternoon services on Sundays (Brockmeyer 1975d).

Lying to the south on Whitfield Street, the 1639 Whitfield house is the oldest standing stone structure in southern New England, and as described above, belonged to one of the founding leaders of Guilford. The rugged stone block house with steep gabled roof, original moveable stairs, portholes, and iron shutters was built to serve as a fortification as well as a residence (Kelly 1939:xi; Anderson 1991; McBride pers. comm. 1999), although the original steep pitch of the roof was also likely made because it was originally thatched and required drainage during rain (THWM 1970:12). The post-medieval domestic structure and its grounds are listed as a National Historic Landmark (Cunningham 1995) and recorded with the National Register of Historic Places (Babbitt 1972). It was originally fashioned after the houses in the north of England despite Whitfield's Kent origins, possibly attributed to the renowned leadership of William Leete from northern England who accompanied Whitfield on his exodus from England (THWM 1970:10-11). The original floor-plan of the structure includes the great hall in the first floor of the west wing, a kitchen in the ell to the east, and three chamber rooms on the second floor. Remodeling and restorations of the building occurred in 1868, 1902, and in the 1930s, with an emphasis on Colonial-Revival improvements. The house now serves as a museum and research center.

The earliest documentation of archaeological investigations at the Whitfield House is from the 1930s when limited excavations were done in association with the last reconstruction of the house. Among other things, roofing slate was reportedly found in the soil around the house at this time (McBride pers. comm. 1999). Since then, other archaeological excavations have taken place on the grounds (McBride pers. comm. 1999), revealing mostly 19th Century refuse and traces of outbuildings including what has been debatably interpreted as a Late Woodland structure. In the 1960s, museum curator John Kopper performed many tests and units at various locations throughout the property (Kopper notes, n.d.). In the 1970s, Dr. Langley of Eastern Connecticut State College performed further excavations along with museum staff member Beverly Anderson (Langley 1982; Anderson et al. 1977). An extensive study was performed by Dr. Harold Juli of Connecticut College in the garden area to the south of the main house in the 1996-1997 field seasons (Juli 1999). Finally, more recent excavations by Yale University field schools have occurred at the site (Walwer and Walwer 2000; Tartaron and Lau 2001; Tartaron and Ghezzi 2001; Ghezzi and Tartaron 2003).

A lot across the street from the Whitfield House was surveyed in 2003 (TAMS 2004), revealing a high density of early to late 20th Century debris and structural features, and a lesser density of 19th Century artifacts related to the Rollwood Farm which featured silos, cow barns, poultry structures, and a residence. This lot has recently been proposed for utilization as extra parking for the Guilford Railroad Station located nearby to the southeast. Another documentary survey of the latter property (Clouette 2001) previously revealed a suite of historic structural areas including two freight stations, a switching tower, express office, section house or hand-car facility, carpenter shop, signal shop, passenger station, water tower, and engine house. The 1875 brick water tower and engine house were still standing at the time of the survey, although the ca. 1860 passenger station has recently been demolished.

Summary

Guilford has a well documented history, evident in both the local literature as well as the preservation of some of the earliest standing structures in New England. Early decimation of the Native American population is evident from historic descriptions which refer to the exodus of the remnants of the Menunketuck tribe as consisting of less than a few dozen people. Early Euroamerican settlement was concentrated between the West and East Rivers, and witnessed a progression from self-subsistence agriculture of the late 17th and early 18th Centuries to a town with an increasing diversity of cottage industries and a West Indies trade during the late 18th Century. Light manufacturing industries increased after the construction of the railroad in the mid-19th Century. Agriculture declined during the late 19th Century, although Guilford has continually maintained a somewhat rural character despite the suburbanization of the coastal towns during the late 20th Century. Based on historic literature, maps, and land records, the project property appears to have been located in a very lightly settled part of Guilford until the 20th Century. Its location on the Post Road, however, ensures that it at least witnessed several hundred years of active travel along this route.

CHAPTER 3: CONCLUSION

Cultural Resource Summary

There were no prehistoric cultural resources identified during the Phase Ia assessment survey of the project property. The project area proposed for development, limited to the hill ridge overlooking Spinning Mill Brook to the east, was determined to hold a low potential for prehistoric sites. The intricate topography of the area, as dictated by the folding and faulting of gneissic bedrock, is ideal for the potential of prehistoric rockshelter sites to exist, although none of the outcrops in the vicinity of the project area are substantial enough to have provided shelter. With respect to the potential presence of open prehistoric camp sites, the project area scores relatively low according to a statistical landscape sensitivity model developed and utilized by ACS. The project area scores only as high as 12.3 out of a possible 100, mostly due to its location on a hill ridge context with rocky soils and a considerable distance from the nearest major body of water. The project area is located adjacent to Spinning Mill Brook which would have served as an attractive resource to local wildlife, but the small size of the drainage would have only supported short-term resource procurement activities by local prehistoric inhabitants, while more substantial sites tended to be located on glacial meltwater landforms or alluvial terraces in close proximity to larger rivers and estuaries (e.g. West and East Rivers of Guilford). Site files housed with the Connecticut Office of State Archaeology and Connecticut State Historic Preservation Office confirm this general settlement pattern for the region, and reveal no previously recorded prehistoric sites in this part of Guilford. In addition, much of the project area itself has been disturbed to the point that any prehistoric site contexts would most likely have been destroyed by modern earthwork and landscaping activities. The pedestrian surface survey of the project area confirmed the substantial nature of prior disturbance, and revealed no prehistoric artifacts at the surface.

The pedestrian surface survey of the project area also failed to yield any historic artifacts. There is a relatively high abundance of modern debris on the property, however, particularly along the perimeter where unauthorized dumping appears to have taken place. Examples of abandoned materials noted on the project area include a dump truck, mattresses, rolled carpets, outdoor plastic toy sets, concrete jerseys, PVC piping, a dog house and gate, windsurfing board, wooden pallets, and large concrete and metal drainage pipes. The lack of earlier materials recorded during the survey is not surprising, as land records and historic maps revealed no substantial developments on the property for a span of nearly 200 years, with a relatively light density of settlement throughout the historic era in this part of Guilford. Land records suggest use of the property was limited to pasturing, or even left open to provide cord wood as fuel. The location of the post road adjacent to the property appears to be the singular historic development and source of cultural resource sensitivity for the property, although this historic route has also been radically altered through time. Modern developments on the project property include a commercial store, self-storage facility, and telecommunications cell tower on a smaller lot adjacent to the road, an abandoned, partially constructed concrete and steel bridge constructed over Spinning Mill Brook, and septic facilities on the other side of the brook outside the proposed development area.

Figure 12: Self-Storage Facility and Cell Tower

Figure 12: Northwest view of the cell tower and self-storage facility in the west-central lot of the project property. The commercial store lies on the Boston Post Road immediately downslope of these facilities and out of view. Note the leveled hill ridge in the foreground that also features a paved driveway into the project area.

Figure 13: Abandoned Bridge

Figure 13: Northwest view of the abandoned bridge that was partially constructed over Spinning Mill Brook. The brook is constricted by earth and stone below the bridge, forming a pond immediately upstream.

Recommendations

The Phase Ia assessment survey did not reveal the presence of any prehistoric or historic cultural resources on the project property. The property lies along the historic route of the Boston Post Road which served as a major source of transportation and as a major link in the network of civic and commercial centers throughout the Northeast United States for several hundred years, although this part of the route was relatively undeveloped for most of that history. Land records and historic maps confirm the lack of substantial development in this area, and the property additionally carries a low sensitivity ranking for potential prehistoric cultural resources based on several environmental factors. Much of the project property has additionally been severely disturbed, including the stripping of topsoil and levelling of the hill ridge that supports the project area, as well as the utilization of the southeast section of the property for septic facilities. Based on the results of background research and the pedestrian surface survey, it is determined that the project property is not likely to contain potentially significant prehistoric or historic cultural resources, and it is therefore recommended that no further archaeological conservation efforts are warranted.

REFERENCES

Anderson, B.

1991 *Foundations: Contributions to the Design Origins of the Henry Whitfield House.* Published by the author.

Anderson, B., S. Langley, and A. Morasky-Smith

1977 Archeological investigations at the grounds of the Henry Whitfield State Historical Museum in Guilford, Connecticut. *Dublin Seminar for New England Folklife: Annual Proceedings*, June 25 and 26, 1977.

Archaeological Research Specialists (ARS)

1995 *Phase I Archaeological Assessment and Reconnaissance Survey, Guilford Mutual Housing Association, Guilford, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Babbitt, S.

1972 *National Register of Historic Places Inventory -- Nomination Form: Henry Whitfield House.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Barber, J.W.

1836 *Connecticut Historical Collections.* New Haven: Durrie & Peck.

Beers, F.W.

1868 *Atlas of New Haven County, Connecticut.* New York: F.W. Beers, A.D. Ellis & G.G. Soule.

Bellantoni, N.F. and D. Jordan

1995 *Distribution of Paleo-Indian Cultural Material in Connecticut.* Paper presented to the Archaeological Society of Connecticut, fall 1995 meeting, Essex, Connecticut.

Bendremer, J. and R.E. Dewar

1993 The advent of prehistoric maize in New England. In *Corn and Culture in the Prehistoric New World*, edited by S. Johannessen and C.A. Hastorf, pp. 369-393. Boulder: Westview Press.

Binzen, T.L.

2000 *Archaeological Reconnaissance Surveys for Proposed Voicestream PCS Wireless Communications Facilities: Facility CT11-225C, Guilford, Connecticut; Facility CT11-113F, Weston, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Bragdon, K.J.

1996 *Native People of Southern New England, 1500-1650.* Norman: University of Oklahoma Press.

Brockmeyer, C.B.

1975a *National Register of Historic Places Inventory -- Nomination Form: Hyland-Wildman House.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1975b *National Register of Historic Places Inventory -- Nomination Form: Griswold House.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1975c *National Register of Historic Places Inventory -- Nomination Form: Acadian House.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1975d *National Register of Historic Places Inventory -- Nomination Form: Sabbathday House.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Brumbach, J.J.

1965 *The Climate of Connecticut.* State Geological and Natural History Survey of Connecticut, Bulletin Number 99. Hartford: State Geological and Natural History Survey of Connecticut.

Brusic, L.M.

1986 *Amidst Cultivated and Pleasant Fields: A Bicentennial History of North Haven, Connecticut.* Canaan: Phoenix Publishing.

Burlew, J.S. (editor)

1993 *Connecticut Walk Book, 17th edition.*

Butzer, K.W.
1982 *Archaeology as Human Ecology: Method and Theory for a Contextual Approach*. Cambridge: Cambridge University Press.

Ceci, L.
1990 Native wampum as a peripheral resource in the Seventeenth-Century world-system. In *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*, edited by L.M. Hauptman and J.D. Wherry, pp. 48-63. Norman: University of Oklahoma Press.

Clouette, B.
2001 *Phase I Archaeological Reconnaissance Survey: Guilford Railroad Station, Guilford, Connecticut*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Concannon, M.T.
1993 Early Woodland depopulation: A review of the literature. *Bulletin of the Massachusetts Archaeological Society* 54(2):71-79.

Connecticut Archaeological Survey (CAS)
1992 *An Archaeological Survey of the Replacement of Bridge #00343 on the Boston Post Road in Guilford, Connecticut*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Connecticut State Historic Preservation Office (SHPO)
2005 *Site Files*. Manuscripts filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Cook, S.F.
1976 *The Indian Population of New England in the Seventeenth Century*. University of California Publications in Anthropology, Volume 12. Berkeley: University of California Press.

Cruson, D.
1991 *The Prehistory of Fairfield County*. Newtown: Newtown Historical Society.

Cunningham, J.
1995 *National Historic Landmark Nomination - Henry Whitfield House*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Davis, M.B.
1969 Climatic changes in southern Connecticut recorded by pollen deposition at Rogers Lake. *Ecology* 50:409-422.

DeForest, J.W.
1852 *History of the Indians of Connecticut: From the Earliest Known Period to 1850*. Hartford: Hamersley.

DeLaet, J.
1909 From the 'New World' [1625-1640]. In *Narratives of New Netherland, 1609-1664*, edited by J.F. Jameson, pp. 36-60. New York: Charles Scribner's Sons.

Dincauze, D.F.
1990 A capsule prehistory of southern New England. In *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*, edited by L. Hauptman and J. Wherry, pp. 19-32. Norman: University of Oklahoma Press.

Dowhan, J.J. and R.J. Craig
1976 *Rare and Endangered Species of Connecticut and Their Habitats*. Report of Investigations Number 6. Hartford: State Geological and Natural History Survey of Connecticut.

Fawcett, M.J.
1995 *The Lasting of the Mohegans*. Uncasville: Mohegan Tribe.

Feder, K.L.
1984 Pots, plants, and people: The Late Woodland period in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 47:99-111.

Filios, E.L.
1989 The end of the beginning or the beginning of the end: The third millennium B.P. in southern New England. *Man in the Northeast* 38:79-93.

Flint, R.F.
1930 *The Glacial Geology of Connecticut.* Hartford: Connecticut State Geological and Natural History Survey.
1971 *The Surficial Geology of the Guilford and Clinton Quadrangles.* Hartford: Geological and Natural History Survey of Connecticut.

Ghezzi, I. and T. Tartaron
2003 *The Henry Whitfield Museum / Yale University Excavations: 2002-2003 Field Season Report.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Glynn, F.
1952 Indian burial grounds from the air. *Newsletter of the Archaeological Society of Connecticut* 61:2.

Gookin, D.
1970 *Historical Account of the Indians in New England [1674].* Towtaid: Fiske.

Gordon, R.B.
1983 History of sea level changes along the Connecticut shore. In *Connecticut Archaeology: Past, Present and Future*, edited by R. Dewar, pp. 67-84. Storrs: Department of Anthropology, University of Connecticut.

Guillette, M.E.
1979 *American Indians in Connecticut: Past to Present.* Hartford: Connecticut Indian Affairs Council.

Irvine, H.
1852 *Map of the Town of Guilford, New Haven County, Connecticut.* Philadelphia: Clark.

Jennings, J.D.
1989 *Prehistory of North America.* Mountain View: Mayfield Publishing.

Juli, H.D.
1999 *Archaeological Testing at the Henry Whitfield State Museum, Guilford, Connecticut, 1996, 1997.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Juli, H.D. and K.A. McBride
1984 The Early and Middle Woodland periods of Connecticut prehistory: Focus on the lower Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 47: 89-98.

Keegan, K.N., R.S. Cless, and W.F. Keegan
2002 *Archaeological Reconnaissance Survey: Sprint PCS Cell Tower Site #CT33XC087-2, Guilford, CT.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Kehoe, A.B.
1981 *North American Indians: A Comprehensive Account.* Englewood Cliffs: Prentice-Hall.

Kelly, J.F.
1939 *The Henry Whitfield House, 1639 - The Journal of the Restoration of the Old Stone House, Guilford.* Hartford: Prospect Press.

Kirk, J.M.
1939 *The Weather and Climate of Connecticut.* Connecticut State Geological and Natural History Survey, Bulletin Number 61. Hartford: Connecticut State Geological and Natural History Survey.

Kopper, J.
n.d. *Notes regarding excavations at the grounds of the Henry Whitfield State Historical Museum, Guilford, Connecticut.* Manuscript filed with the Henry Whitfield State Historical Museum, Guilford, Connecticut.

Langley, S.
1982 Archaeological work on the grounds of the Henry Whitfield House museum. *Connecticut History* 23:56-60.

Lavin, L.
1984 Connecticut prehistory: A synthesis of current archaeological investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.

Lavin, L.

1987 The Windsor ceramic tradition in southern New England. *North American Archaeologist* 8(1):23-40.

1988 Coastal adaptations in southern New England and southern New York. *Archaeology of Eastern North America* 16:101-120.

Lavin, L. and R. Kra

1994 Prehistoric pottery assemblages from southern Connecticut: A fresh look at ceramic classification in southern New England. *Bulletin of the Archaeological Society of Connecticut* 57:35-51.

McBride, K.A.

1981 *Lower Connecticut River Valley Project: Report on the 1981 Field Season.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1984 Middle and Late Archaic periods in the Connecticut River Valley: A re-examination. *Bulletin of the Archaeological Society of Connecticut* 47:55-72.

1990 The historical archaeology of the Mashantucket Pequot, 1637-1900: A preliminary analysis. In *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*, edited by L. Hauptman and J. Wherry, pp. 96-116. Norman: University of Oklahoma Press.

1991a *Report: Phase I Archaeological Reconnaissance Survey, Upland Containment Area, Guilford Harbor and Marina Dredging, Guilford, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1991b *Report: Phase II Intensive Archaeological Investigations, Site 60-7, Loci A, B, C, and Site 60-8, Guilford Marina Dredging Project, Guilford, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

1992 Prehistoric and historic patterns of wetland use in eastern Connecticut. *Man in the Northeast* 43:10-24.

McBride, K.A. and N.F. Bellantoni

1982 The utility of ethnohistoric models for understanding Late Woodland-Contact change in southern New England. *Bulletin of the Archaeological Society of Connecticut* 45:51-64.

McBride, K.A. and R.E. Dewar

1981 Prehistoric settlement in the lower Connecticut River Valley. *Man in the Northeast* 22:37-65.

McBride, K.A. and R.S. Grumet

1992 *National Historic Landmark Nomination - Mashantucket Pequot Indian Reservation Archaeological District.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

McElroy, M.

1991 *Natural Drainage Basins in Connecticut, revised edition* (map). Hartford: Connecticut Department of Environmental Protection.

McWeeney, L.

1986 Sea level rise and the submergence of archaeological sites in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:53-60.

1994 *Archaeological Settlement Patterns and Vegetation Dynamics in Southern New England in the Late Quaternary.* Unpublished PhD dissertation, filed with Yale University, New Haven, Connecticut.

Moeller, R.W.

1980 *6LF21: A Paleo-Indian Site in Western Connecticut.* American Indian Archaeological Institute, Occasional Paper Number 2. Washington: American Indian Archaeological Institute.

1984 Paleo-Indian and Early Archaic occupations in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 47:41-54.

Morphew, N.

2003a *Phase I Cultural Resource Survey for the Proposed AT&T Cell Tower Site, CT-200, Guilford, New Haven County, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Morphew, N.
2003b *Phase I Cultural Resource Survey for the Proposed AT&T Cell Tower Site, CT-200 B, Guilford, New Haven County, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Newman, M.T.
1976 Aboriginal New World epidemiology and medical care, and the impact of Old World disease imports. *American Journal of Physical Anthropology* 45(3):667-672.

Ogden, J.G.
1977 The late Quaternary paleoenvironmental record of northeastern North America. In Amerinds and Their Paleoenvironments in Northeastern North America. *Annals of the New York Academy of Sciences* 288:16-34.

Pagoulatos, P.
1988 Terminal Archaic settlement and subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.

Parker, J.
1987 Changing paleoecological relationships during the late Pleistocene and Holocene in New England. *Bulletin of the Archaeological Society of Connecticut* 50:1-16.

Pfeiffer, J.E.
1984 The Late and Terminal Archaic periods of Connecticut prehistory. *Bulletin of the Archaeological Society of Connecticut* 47:73-88.

Poirier, D.A.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources.* Hartford: Connecticut State Historic Preservation Office.

Raiche, S.J.
1975 *National Register of Historic Places Inventory -- Nomination Form: Guilford Historic Town Center.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Reeve, S.A. and G.F. Walwer
2001 *Phase I Archaeological Reconnaissance Survey Report of the Crown Atlantic Telecommunications Facility in the Town of Guilford, Connecticut.* Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Reynolds, C.B.
1979 *Soil Survey of New Haven County, Connecticut.* USDA Soil Conservation Service.

Ritchie, W.A.
1969 *The Archaeology of New York State, revised edition.* Garden City: Natural History Press.

Rockey, J.L. (editor)
1892 *History of New Haven County, Connecticut, Volume II.* New York: W.W. Preston & Company.

Rodgers, J.
1985 *Bedrock Geological Map of Connecticut* (map). Hartford: Connecticut Geological and Natural History Survey.

Rouse, I.
1980 Ceramic traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:57-75.

Russell, H.S.
1980 *Indian New England Before the Mayflower.* Hanover: University Press of New England.

Russell, L.W.
1941 A red paint grave in Guilford. *Bulletin of the Archaeological Society of Connecticut* 12:11-18.
1952 Indian burials in Guilford, Conn. *Newsletter of the Archaeological Society of Connecticut* 61:3-4.

Salisbury, N.
1990 Indians and colonists in southern New England after the Pequot War. In *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*, edited by L.M. Hauptman and J.D. Wherry, pp. 81-95. Norman: University of Oklahoma Press.

Salwen, B.
1966 European trade goods and the chronology of the Fort Shantok site. *Bulletin of the Archaeological Society of Connecticut* 34:5-39.
1970 Cultural inferences from faunal remains: Examples from three northeast coastal sites. *Pennsylvania Archaeologist* 40(1-2):1-8.
1983 Indians of southern New England and Long Island. In *Connecticut Archaeology: Past, Present and Future*, edited by R.E. Dewar, p. 85-121. Storrs: Department of Anthropology, University of Connecticut.

Simmons, W.S.
1986 *Spirit of the New England Tribes: Indian History and Folklore, 1620-1984*. Hanover: University Press of New England.

Smith, H. and C.W. Smith
1856 *Map of New Haven County, Connecticut*. Philadelphia: H. Smith and C.W. Smith.

Snow, D.R.
1980 *The Archaeology of New England*. New York: Academic Press.

Snow, D.R. and K.M. Lanphear
1988 European contact and Indian depopulation in the Northeast: The timing of the first epidemics. *Ethnohistory* 35(1):15-33.

Snow, D.R. and W.A. Starna
1989 Sixteenth-Century depopulation: A view from the Mohawk Valley. *American Anthropologist* 91:142-149.

Speck, F.G.
1909 Notes of the Mohegan and Niantic Indians. *Anthropological Papers of the American Museum of Natural History* 3:183-210.
1928 Native tribes and dialects of Connecticut. *Annual Report of the Bureau of American Ethnology* 43:199-287.

Spiess, M.
1933 *The Indians of Connecticut*. Tercentenary Commission of the State of Connecticut Committee on Historical Publications. New Haven: Yale University Press.

Starna, W.A.
1990 The Pequots in the early Seventeenth Century. In *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*, edited by L. Hauptman and J. Wherry, pp. 33-47. Norman: University of Oklahoma Press.

Steiner, B.C.
1897 *History of Guilford and Madison, Connecticut* [1975 reissue]. Guilford: Guilford Free Library.

Stone, J.R., J.P. Schafer, E.H. London, and W.B. Thompson
1992 *Surficial Materials Map of Connecticut* (map). Washington D.C.: United States Geological Survey.

Sturtevant, W.G.
1975 Two 1761 wigwams at Niantic, Connecticut. *American Antiquity* 40 (4): 437-444.

Swigart, E.K.
1974 *The Prehistory of the Indians of Western Connecticut: Part I, 9000-1000 B.C.* Washington: American Indian Archaeological Institute.

TAMS
2004 *Archaeological Assessment and Reconnaissance Survey: Improvements to the Shore Line East Railroad Station, Guilford, Connecticut*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Tantaquidgeon, G.
1972 *Folk Medicine of the Delaware and Related Algonkian Indians*. Harrisburg: Pennsylvania Historical and Museum Commission.

Tarbuck, E.J. and F.K. Lutgens
1990 *The Earth: An Introduction to Physical Geology, 3rd edition*. Columbus: Merrill Publishing.

Tartaron, T. and G. Lau
2001 *The Henry Whitfield Museum / Yale University Excavations: 2000-2001 Field Season Report*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Tartaron, T. and I. Ghezzi
2002 *The Henry Whitfield Museum / Yale University Excavations: 2001-2002 Field Season Report*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Terry, R.
1917 The first European visitors to Narragansett Bay. *Bulletin of the Newport Historical Society* 22:1-30.

Thomas, P.A.
1985 Cultural change on the southern New England frontier. In *Cultures in Contact: The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000-1800*, edited by W. Fitzhugh, pp. 131-162. Washington D.C.: Smithsonian Institution Press.

Trumbull, B.
1818 *A Complete History of Connecticut, Volume I*. New Haven: Maltby, Goldsmith and Company.

Trustees of the Henry Whitfield Museum (THWM)
1970 *The Henry Whitfield House*. Guilford: Henry Whitfield State Historical Museum, Guilford, Connecticut.

United States Geological Survey (USGS)
1984 *Guilford Quadrangle, Connecticut, 7.5 Minute Series (Topographic)*. Washington D.C.: United States Geological Survey.

Wadleigh, W.M.
1981 Settlement and subsistence patterns in the Northeastern Highlands of Connecticut. *Man in the Northeast* 22:67-85.

Waller, J.N. and A.P. Mair
1998 *Final Proposed Shoreline Protection Study of Faulkner Island Reconnaissance and Intensive Archaeological Survey*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Walwer, G.F.
1996 *Survey of Native American Burials and Cemeteries East of the Connecticut River*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Walwer, G.F. and D.N. Walwer
1999 *Phase I Archaeological Reconnaissance Survey Report of the Proposed Wildrose Avenue 4-Unit Housing Development in the Town of Guilford, Connecticut*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.
2000 *Phase I Archaeological Reconnaissance Survey Report of the Henry Whitfield State Historical Museum Drainage Improvement Areas in the Town of Guilford, Connecticut*. Manuscript filed with the Connecticut State Historic Preservation Office, Hartford, Connecticut.

Waters, J.H.
1965 Animal remains from some New England Woodland sites. *Bulletin of the Archaeological Society of Connecticut* 33:4-11.

Whiteford, R.
1852 *Map of the County of New Haven, Connecticut* (map). New Haven: A. Budington and R. Whiteford.

Wiegand, E.A.
1987 The prehistoric ceramics of southwestern Connecticut: An overview and reevaluation. *Bulletin of the Archaeological Society of Connecticut* 50:23-42.
Wilbur, C.K.
1978 *The New England Indians*. Chester: Globe Pequot Press.
Willoughby, C.C.
1935 *Antiquities of the New England Indians*. Cambridge: Peabody Museum of American Archaeology and Ethnology, Harvard University.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

June 13, 2006

RECEIVED
JUN 16 2006
VANASSE HANGEN BRUSTLIN, INC.

Ms. Nicole Dentamaro
Transportation Land Development
Environmental Services
54 Tuttle Place
Middletown, CT 06457-1847

Re: Proposed Wireless Facility
Replacement, 1919 Boston Post Road,
Guilford

Dear Ms. Dentamaro:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed wireless telecommunications facility replacement on Boston Post Road in Guilford, Connecticut. According to our information there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur at the site in question.

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 Natural Resources Center's Geological and 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 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

DMM/blm

Connecticut Commission on Culture & Tourism

Historic Preservation
& Museum Division

59 South Prospect Street
Hartford, Connecticut
06106

(v) 860.566.3005
(f) 860.566.5078

June 7, 2006

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

Subject: Telecommunications Facilities
1919 Boston Post Road
Guilford, CT

Dear Ms. Dentamaro:

The State Historic Preservation Office has reviewed 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.

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

Sincerely,

J. Paul Loether
Division Director and Deputy
State Historic Preservation Officer

Edwards AND Kelcey

Engineering
Consulting
Construction
Value Engineering
Real Estate Services

George Burylo
Director
Engineering Services

January 29, 2003

Mr. Scott T. Penner
Hurwittz & Sagarin LLC
147 North Broad Street
Milford, CT 06460

Subject: **RF Exposure Compliance Analysis – Guilford, CT (CT03XC172)**

Dear Mr. Penner:

At your request, Edwards and Kelcey, Inc. has performed a RF exposure compliance analysis of Sprint Sites USA's existing wireless communications facility at 1919 Boston Post Road, Guilford, CT. The updated report of site compliance is attached.

The calculations presented in the attached report demonstrate that the worst-case, maximum potential exposure level in publicly accessible ground level areas around the monopole from all antennas is only 36.43% of the FCC limit for continuous exposure of the general population.

Based on the RF analysis performed, the Sprint Sites USA wireless facility will be in full compliance with the FCC regulations concerning RF exposure control, and poses no RF health hazard to the surrounding community.

If you have any questions or require any additional information, please call me at 973-267-8830, extension 1250.

Regards,

George Burylo
Director – Engineering Services

Attachments

cc: R. Santhouse, SSUSA

299 Madison Avenue. PO Box 1936
Morristown, New Jersey 07962-1936

Tel 973 267 8830 x1250
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RF Emissions Experts
AN EDWARDS AND KELCEY SERVICE

Analysis and Report of RF Exposure Levels and Compliance with FCC Regulations

Guilford Site
1919 Boston Post Road
Guilford, CT
CT03XC172

Prepared for

Sprint Sites USA

January 29, 2003

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RF Emissions Experts
AN EDWARDS AND KELCEY SERVICE

FCC RF COMPLIANCE ANALYSIS FOR

Sprint Sites USA

Guilford, CT Monopole

This site compliance report is organized as follows:

- Site Technical Data (supplied by client)
- Analysis Method and Assumptions
- The FCC RF Radiation Exposure Regulations
- Applicable Formulas
- Analysis Results
- Conclusion

SITE TECHNICAL DATA (For AT&T Wireless antenna type and mounting height change only. All other emission levels previously calculated and summarized.)

Facility type	150 ft. Monopole
Frequency band (transmit)	1900 MHz
Antenna types	Allgon 7250
Antenna major dimension (length)	5.1 ft
Maximum antenna gain	18.5 dBi
Antenna mounting height (above ground level)	102.6 ft.
Total number of antennas	6 (2 per sector)
Other transmitting facilities on monopole	Sprint PCS, Verizon, Nextel, Cingular and T-Mobile

ANALYSIS METHOD AND ASSUMPTIONS

Type of analysis	Maximum / ground at base
Area analyzed	0' to 500' from monopole
Classification of area	Uncontrolled (gen. pop.)
FCC Maximum Permissible Exposure (MPE) limit	See Report
Mathematical model	Point source, far field
Assumed ground reflection factor	100%
Assumed human height	6'0"
Vertical antenna discrimination	**(not used in CT)**

THE FCC RF RADIATION EXPOSURE REGULATIONS

This RF exposure analysis is based on the current FCC guidelines for human exposure to RF fields, which represent the consensus of federal agencies responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Health and Safety Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.1301 *et seq* of its Rules and Regulations. Those guidelines specify maximum permissible exposure (MPE) levels for both occupational and general population exposure on a continuous basis, as well as averaging times for each of those categories when and if exposure exceeds the specified continuous exposure limits. (The concept of averaging time will be ignored in this analysis, as the results show the potential exposure levels are far below those permitted even for continuous exposure.)

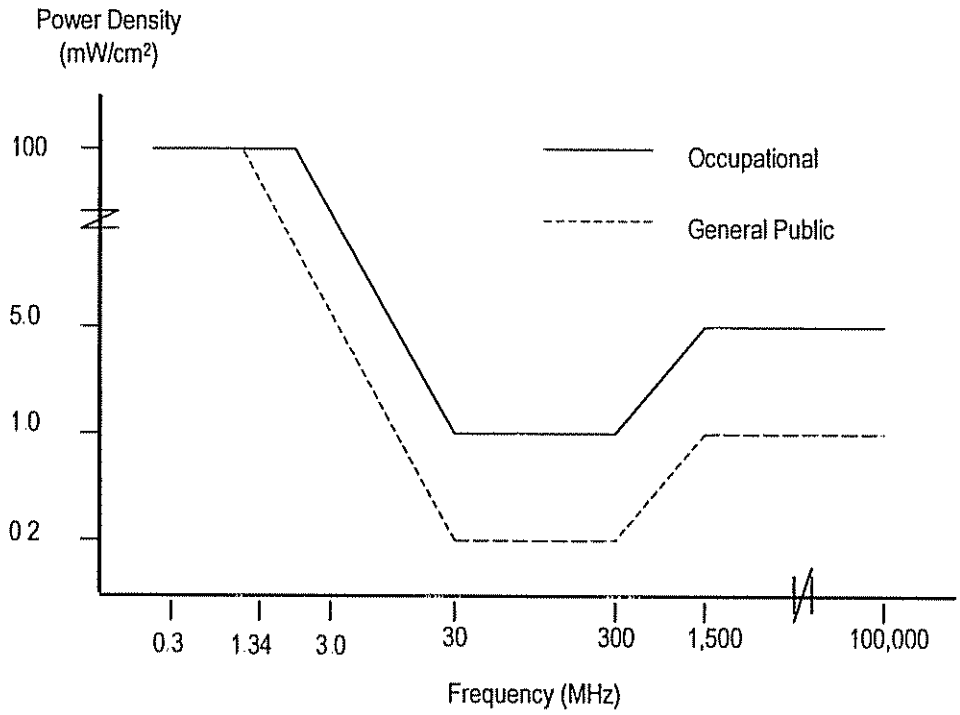
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus the general population MPE limit has a built-in safety factor of more than 50. Continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects on humans.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The more popularly used reference unit is power density, as it is more easily understood. One milliwatt per square centimeter is approximately the energy impinging on an area roughly one-fourth the size of a dime from a light bulb emitting ten thousand times less than the energy of a common 100-watt bulb. The table below lists the FCC limits for both occupational and general population exposure to different radio frequencies.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The figure below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



FCC MPE limits – graphical representation

The FCC makes it clear that the MPE limits apply only in accessible areas. Fundamentally, in areas that are considered normally inaccessible, the exposure issue is moot.

APPLICABLE FORMULAS

According to FCC Bulletin OET65, different mathematical models apply to different distances around an antenna. At the height of the antenna, the breakpoint is the "far-field distance", calculated as the ratio of the square of the major dimension of the antenna divided by the signal wavelength . Beyond the far-field distance at the height of the antenna, as well as at ground-level underneath the antenna, a "far-field point source" model applies; within that distance, a "near-field" cylindrical model applies. The subsections below provide background on the two applicable models in the 1900 MHz band.

Far-Field Point Source Model

(1) $S\ [mW/cm^2] = (4 * EIRP_{max} * VertAntDisc(\phi)) / (4 * \pi * R^2_{cm})$

(2) FCC MPE limit = 1.000 mW/cm^2

(3) MPE% = 100 * (S / 1.000)

where:

S	=	Calculated power density
4 (in numerator)	=	100% field ground reflection effect (has $[1 + 1]^2 = 4$ effect on power density)
$EIRP_{max}$	=	Maximum effective isotropically radiated power (Note: EIRP is 64% higher than ERP, which is referenced to a half-wave dipole)
VertAntDisc(ϕ)	=	Numeric factor for antenna discrimination (EIRP reduction) in the vertical plane, applicable at downward angle ϕ to a 6' human standing on ground, calculated at distances from 0' to 500' away from the antenna ***(not used in Connecticut sites – as requested by the Connecticut Siting Council)***
R	=	Straight-line distance from antenna to 6' human
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

Near-Field Cylindrical Model

(1) $S\ [mW/cm^2] = (P_i * ACF / (2 \pi R\ h)$

(2) FCC MPE limit = 1.000 mW/cm^2

(3) MPE% = 100 * (S / 1.000)

where:

S	=	Calculated power density
P_I	=	Total power input to the antenna, in mW
ACF	=	Antenna correction factor (adjustment to near-field power density calculation to compensate for the antenna mounting height above ground level and resulting partial-body exposure; see Richard Tell article listed in the References)
R	=	Straight-line distance from antenna to 6' human
h	=	Subtended height of the antenna, in cm
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

ANALYSIS RESULTS – GROUND-LEVEL

The table on the following page summarizes the ground level results of the calculations using the site data, method and models described above. The information on the vertical antenna discrimination has been taken from the antenna manufacturer's specification sheets. Please note that while the tabular distances are listed in feet, the calculations translate these units into centimeters, to match the FCC specification of MPE units. Also note that the G dist value represents the distance in feet from the monopole at ground level.

1900 MHz Antenna Array (Ground Level – AT&T Wireless)					
G dist	R dist	V angle	V disc	mW/cm^2	GPMPE%
0	91.0	90.0	1.000	0.0485	4.850
20	93.2	77.6	1.000	0.0463	4.626
40	99.4	66.3	1.000	0.0406	4.064
60	109.0	56.6	1.000	0.0338	3.380
80	121.2	48.7	1.000	0.0274	2.735
100	135.2	42.3	1.000	0.0220	2.197
120	150.6	37.2	1.000	0.0177	1.771
140	167.0	33.0	1.000	0.0144	1.440
160	184.1	29.6	1.000	0.0119	1.185
180	201.7	26.8	1.000	0.0099	0.987
200	219.7	24.5	1.000	0.0083	0.832
220	238.1	22.5	1.000	0.0071	0.709
240	256.7	20.8	1.000	0.0061	0.610
260	275.5	19.3	1.000	0.0053	0.529
280	294.4	18.0	1.000	0.0046	0.463
300	313.5	16.9	1.000	0.0041	0.409
320	332.7	15.9	1.000	0.0036	0.363
340	352.0	15.0	1.000	0.0032	0.324
360	371.3	14.2	1.000	0.0029	0.291
380	390.7	13.5	1.000	0.0026	0.263
400	410.2	12.8	1.000	0.0024	0.239
420	429.7	12.2	1.000	0.0022	0.217
440	449.3	11.7	1.000	0.0020	0.199
460	468.9	11.2	1.000	0.0018	0.183
480	488.5	10.7	1.000	0.0017	0.168
500	508.2	10.3	1.000	0.0016	0.155

Table 1. 1900 MHz Ground level RF power density and percent-of-MPE calculations.

The **ground level** areas around the monopole were rated using the Far-Field Point Source Model described above. In these areas, the worst case calculations are 0.0485 mW/cm^2, or 4.850% of the maximum recommended exposure for the general population.

CONCLUSION

The calculations demonstrate that the maximum potential exposure to radio frequency emissions is well below the FCC recommended levels for safety. The total ground level around the monopole from all antennas is 36.43% of the maximum permissible exposure (MPE) level, and is safe for continuous exposure of the general population based on FCC requirements.

The results are summarized as follows:

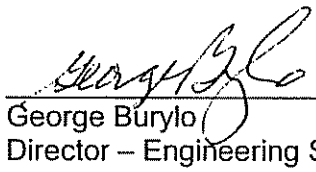
Carrier	Height above ground (feet)	Power Density (mW/cm^2)	FCC Maximum (mW/cm^2)	MPE% of Standard
T-Mobile *	150.3	0.0405	1.000	4.05
Nextel **	140.3	0.0185	0.567	2.91
Sprint PCS +	130.3	0.0285	1.000	2.85
Verizon +	122.2	0.0474	0.583	8.13
Cingular ++	112.4	0.0651	0.587	11.10
Cingular ++	112.4	0.0254	1.000	2.54
AT&T Wireless	102.6	0.0485	1.000	4.85
Total	-	-	-	**36.43**

* calculations submitted by T-Mobile RF Engineer
** calculations submitted by Nextel RF Engineer
+ calculations submitted to Siting Council on 8/31/98 (no changes)
++ calculations submitted by Cingular RF Engineer

Therefore, the upgrades at this Sprint Sites USA facility should not create a significant risk of exposure to cumulative RF emissions to the general population. And, according to the calculations, the Sprint Sites USA wireless facility is in compliance with the FCC regulations concerning the control of potential RF exposure.

CERTIFICATION

This report was prepared by George Burylo, Director – Engineering Services. The undersigned certifies that the analysis provided herein is consistent with the applicable FCC Rules and Regulations and accepted industry practice.



January 29, 2003

George Burylo
Director – Engineering Services
Edwards and Kelcey, Inc.

REFERENCES

47 CFR, FCC Rules and Regulations, Section 1.1301 *et seq.*

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

FCC Office of Engineering and Technology (OET) Bulletin 56, "Questions and Answers About Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields", Fourth Edition, August 1999.

Richard Tell, "CTIA's EME Design and Operation Considerations for Wireless Antenna Sites", November 15, 1996.

Site Data

Sprint

Tower Loading Form

Site Reference Information:

Cascade #: CT03XC172

☐ % of Structural Capacity

Site Address: 1919 Boston Post Rd., Gulford, CT.

Lease Area 2500

Structure Height: 130

Compound Size: 50x50

Tower Manufacturer: Fred Nudd

Structure Type: Monopole

Tower Contact #: 315.524.2531

File #: 00.8094.01

Original Design Load for Structure: ☐ 1 Carrier ☐ 2 Carrier ☐ 3 Carrier ☒ 4 Carrier ☐ ___Carrier

Prepared By: Russ Van Oudenaren

Date: 12-20-02

Sprint Antenna Information:

ACL	# of Ant.	Frequency	Model #	Type	Orientation	Mounting Type	# of Cables	Cable Size
130' 4"	9	* 1990	DB980H90	Panel	30,150,270	Stand-off arm	9	1-5/8"
	*	*		*		*	*	*
	*	*		*		*	*	*

Co-location Information:

Id Exis	Carrier	ACL	# of Ant	Frequency	TX Output	Model #	Antenna Type	Orientation	Mounting Type	# of Cables	Cable Size	Cable Loc	
1	Pagenet		1	*	*	withdrawn	*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
2	Nextel (Relocated)	140' 4"	12	* 860	16 Watts	DB844H90	Panel	0,130, 270	Platform	12	1-5/8"	Ins	☐
3	**Verizon**	122' 3"	12	* 896	8 Watts	ALLGON 7129	Panel	0,130, 270	Gate Mnt.	12	1-5/8"	Ins	☒
4	***SNET***	112' 5"	9	* 896	8 Watts	CSS DU04-8670	Panel	0,210, 320	Gate Mnt.	9	1-5/8"	Ins	☒
5	Voicestream	150' 4"	3	* 1900	12 Watts	RR90-1702 DP	Panel		Stand-off arm	6	1-5/8"	Ins	☐
6	ATT	102' 7"	6	* 1900	16 Watts	ALLGON 7250	Panel	0,120, 240	Gate Mnt.	12	1-1/4"	Ins	☐
*	*		*	*	*		*		*	*	*	*	☐
4	SNET	112' 5"	6	*	*	ADC MHA's	*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐

Contact Information:

Co Id	Contact Person	Phone Number	E-Mail Address
1			
2	Chuck Regulbuto	860-648-0895	chuckr@NorthstarSite com
3	Wayne Lukachek	860-294-7424	wayne.lukachek@verizon.com
4	Steve Levine	860-513-7636	chuck.levine@cingular.com
5	Mark Finley	203-435-1111	Mark.Finley@voicestream.com
6	Michael Austin	203 630 9099	maustin@bechtel com

July 10, 2006

Ref: 41176.00

Julie D. Kohler, Esq.
Cohen and Wolf, PPC.
1115 Broad Street
Bridgeport, CT 06604

Re: NEPA Compliance Documentation
Global Signal Proposed Wireless Telecommunications Facility Replacement
1919 Boston Post Road
Guilford, CT

Dear Ms Kohler,

Vanasse Hangen Brustlin, Inc. (VHB) has been retained by Cohen and Wolf, PPC. (Cohen and Wolf), on behalf of Global Signal, Inc. (Global Signal), to review environmental resource information outlined in 47 CFR Ch.1 § 1.1307 sections (a) and (b) for environmental consequences pursuant to the Federal Communications Commission ("FCC or Commission") requirements. Global Signal is proposing to install a new wireless telecommunications facility, consisting of a ±150-foot tall monopole, antenna, and associated ground equipment, within the eastern corner of commercial property located at 1919 Boston Post Road, Guilford, Connecticut. The proposed facility is located approximately ±500-feet east of an existing wireless telecommunications facility consisting of a ±150-foot tall monopole, antenna, and ground equipment. VHB understands that the subject property will be redeveloped with three new structures and associated parking areas. To accommodate proposed development plans, the existing facility will be removed from its current location and relocated to the eastern corner of the property. Specifically, VHB reviewed source information outlined below to determine if the proposed facility will be located in an environmentally sensitive area.

National Environmental Policy Act (NEPA) Requirements

As a licensing agency, the FCC complies with NEPA by requiring its licensees to review their proposed actions for environmental consequences. Rules implementing NEPA are found at Title 47 of the Code of Federal Regulations, Part 1, Subpart I, rule sections 1.1301 to 1.1319.

Section 1.1305 of these rules, state that the Commission "has found no common pattern which would enable it to specify" any particular Commission action as a "major action" under NEPA. Thus, section 1.1306 of the Rules "categorically excluded from environmental processing" all Commission actions except for those specifically identified in section 1.1307. If a licensee's proposed action falls within one of the categories of 1.1307, section 1.1308(a) requires the licensee to consider the potential environmental effects from its construction of antenna facilities or structures, and disclose those effects in an environmental assessment (EA) which is filed with the Commission for review.

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

VHB has reviewed the following source information for identification, location, and impacts to environmentally sensitive areas:

1. **Officially designated wilderness areas** - State of Connecticut, Department of Environmental Protection (CTDEP) Geographic Information System (GIS) data layers, CTDEP Natural Resources Center and Natural Diversity Data Base (NDDB). See attached NEPA screen map prepared by VHB, Inc and letter from CTDEP.

2. **Officially designated wildlife preserve** – CTDEP GIS data layers, CTDEP Natural Resources Center and NDDB. See attached NEPA screen map and letter from CTDEP.

3. **Threatened or Endangered Species or designated critical habitats** – CTDEP GIS data, CTDEP's Natural Resources Center and NDDB, and United States Department of Interior – Fish and Wildlife Service, (USFWS) New England Field Office. See attached NEPA screen map and letters from CTDEP and USFWS.

4. **National Register of Historic Places** – State of Connecticut Commission on Cultural & Tourism, Historic Preservation & Museum Division, State Historic Preservation Officer (SHPO); National Register and Reported Archeological Sites Connecticut Geographic Information System data layer provided by Heritage Consultants, LLC; and public notice. See attached NEPA screen map prepared by VHB, Inc., SHPO letter, and a copy of the public notice published in the Guilford Courier on June 8, 2006.

5. **Indian Religious Sites** - State of Connecticut, Connecticut Commission on Cultural & Tourism, Historic Preservation & Museum Division SHPO, public notice, National Register and Reported Archeological Sites Connecticut Geographic Information System data layer provided by Heritage Consultants, LLC, and all interested Native American Tribes (NAT) and/or Native Hawaiian Organizations (NHO) identified on FCC's online Tower Construction Notification System (TCNS). As identified via TCNS, VHB has notified the Mashantucket Pequot Tribe and the Narragansett Indian Tribe and invited their review and comment regarding the proposed replacement facility. See attached SHPO letter, a copy of the public notice legal ad posted in the Guilford Courier on June 8, 2006, and appropriate correspondence from NATs. Please note that in the unlikely event that tribal artifacts or human remains are encountered during construction activities, excavation is required to be halted immediately and the appropriate NATs and SHPO are to be contacted as pursuant to Title 47 CFR Sec. 1.1312 of the Commission's rules.

6. **Flood Plain** – Flood Insurance Rate Maps (FIRM) by Federal Emergency Management Agency (FEMA) Federal Insurance Administration, Office of Risk Assessment 50 C Street, SW Washington, DC 20472; CTDEP GIS data layer. See attached NEPA screen map prepared by VHB, Inc.

7. **Significant change in surface features** –Cohen and Wolf provided VHB with a wetland delineation and reconnaissance survey report dated February 7, 2005 performed at the Site, and the surrounding subject property, by Environmental Planning Services. Based on Environmental Planning Services findings and current Site construction plans, proposed project activities do not appear to involve a significant change in surface features or disturbance of existing wetlands that exist on the surrounding subject property. See attached report prepared by Environmental Planning Services dated February 7, 2005.

8. **High Intensity white lights located in residential neighborhoods** – No lighting information was provided to VHB. However, we understand that no lighting is required on this facility.

Based on the information currently available, VHB has found **that the proposed facility does not fall under any of the listed categories of Section 1.1307 under the NPA**. The NEPA checklist and NEPA screen map, which outlines the location of the Site and the location of environmental resources, agency correspondence, and current Site Plans are attached to this letter.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Nicole Dentamaro
Environmental Scientist

Attachments

Contact Name: Julie D. Kohler, Esq.	Site type (*choose one*): ☒ Raw land ☐ Tower colo* ☐ Other colo*	Global Signal Site ID #: N/A	Site Name & Address: 1919 Boston Post Road Guilford, CT

NEPA Land Use Screening Checklist

FCC NEPA Category	Consulting Agency to Contact	SSEO Document Reference	*Check appropriate box(es) below*			
			No Adverse Impact	Potential Adverse Impact	Exempt from Review*	CNPA Applies**
1. Designated Wilderness Areas	National Park Service, US Forest Service, Bureau of Land Management (BLM), CTDEP GIS data layers and Natural Diversity Data Base (NDDB)	Section 3.4.1	☒	☐	☐	☐
2. Designated Wildlife Preserves	National Park Service, US Forest Service, BLM, CTDEP GIS data layers and NDDB	Section 3.4.1	☒	☐	☐	☐
3. Threatened or Endangered Species & Critical Habitats	CTDEP NDDB, US Fish & Wildlife Service - Field Office (USF&WS)	Section 3.4.2	☒	☐	☐	☐
4. Historic Places	State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO); Public Notice	Section 3.4.3	☒	☐	☐	☐
5. Indian Religious Sites	SHPO, Tower Construction Notification System (TCNS) website – Native American Tribes (NATs), and/or Native Hawaiian Organizations (NHOs), Bureau of Indian Affairs (BIA)	Section 3.4.4	☒	☐	☐	☐
6. Floodplain	Federal Emergency Management Agency (FEMA)	Section 3.4.5	☒	☐	☐	☐
7. Wetlands & Surface Waterways	US Army Corps of Engineers (ACOE)	Section 3.4.6	☒	☐	☐	☐
8. High Intensity White Lights in Residential Neighborhoods	Lighting information, if applicable, to be provided by client via FAA form or other relevant lighting documentation – N/A	Section 3.4.7	☒	☐	☐	☐

**For collocation projects that are not subject to exemption under the CNPA, NEPA Land Use Screening Categories 4 and 5 are only required. The remaining categories are categorically excluded.*

***Based on the CNPA the collocation project is exempt from Section 106 review.*

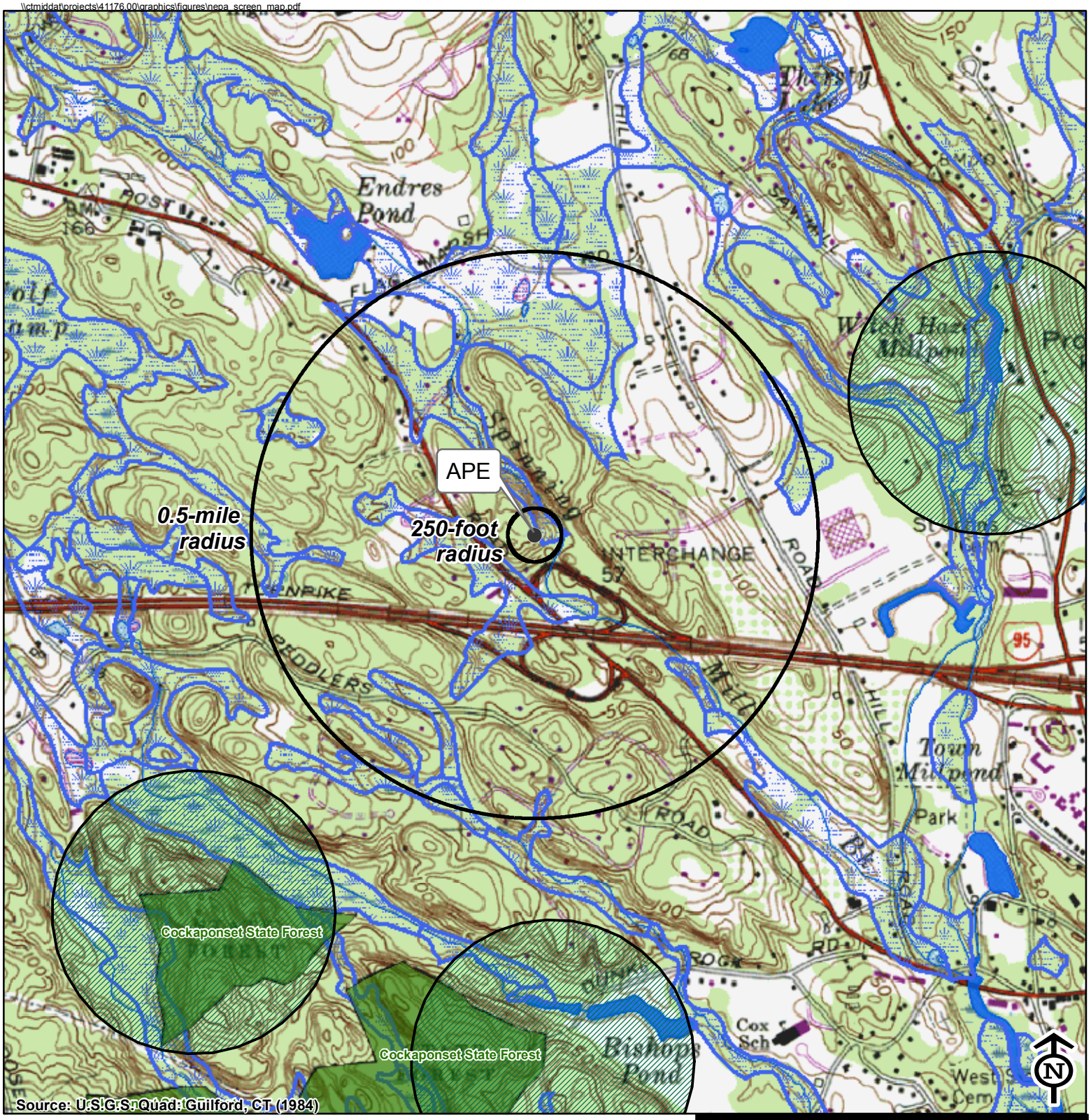
Prepared By: Nicole Dentamaro
(print name): Nicole Dentamaro

Company: Vanasse Hangen Brustlin, Inc.
Date: July 10, 2006

The undersigned has reviewed and approved this Checklist prior to commencement of site construction.

By: _____ Date: _____
Site Development Manager or Director

\\ctmiddat\projects\41176.00\graphics\figures\nepa_screen_map.pdf



- Area of Potential Effect (APE)
- Natural Diversity Database Threatened and Endangered Species (updated June 2005, buffered)
- National Register Historic Sites*
- National Register Historic Districts*
- Reported Archaeological Sites (buffered)*
- Open Water
- Wetlands

Floodplains
- 100 Year Floodplain
- 500 Year Floodplain
- Floodway

Protected Properties (CT DEP; 2002)
- 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; 2002)

990 495 0 990 Feet

Vanasse Hangen Brustlin, Inc.

NEPA Screen Map
Proposed Wireless Telecommunications Facility
Lat: 41 17 57.48 Long: 72 42 19.16
1919 Boston Post Road (US Route 1)
Guilford, Connecticut

May 30, 2006

*no historic resources or previously identified archaeological resources within 1/2 mile of APE

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

June 13, 2006

RECEIVED
JUN 16 2006
VANASSE HANGEN BRUSTLIN, INC.

Ms. Nicole Dentamaro
Transportation Land Development
Environmental Services
54 Tuttle Place
Middletown, CT 06457-1847

Re: Proposed Wireless Facility
Replacement, 1919 Boston Post Road,
Guilford

Dear Ms. Dentamaro:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed wireless telecommunications facility replacement on Boston Post Road in Guilford, Connecticut. According to our information there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur at the site in question.

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 Natural Resources Center's Geological and 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 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

DMM/blm

United States Department of the Interior

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

July 6, 2006

Reference:

Project
Tower replacement
Tower

Location
Guilford, CT, Ref: 41176.00
Waterbury, CT, Ref: 40999.08

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

Dear Ms. Dentamaro:

This responds to your recent correspondence requesting information on the presence of federally-listed and/or proposed endangered or threatened species in relation to the proposed activity(ies) referenced above.

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes our 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 letter, 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,

Michael J. Amaral

Michael J. Amaral
Endangered Species Specialist
New England Field Office

Connecticut Commission on Culture & Tourism

Historic Preservation
& Museum Division

59 South Prospect Street
Hartford, Connecticut
06106

(v) 860.566.3005
(f) 860.566.5078

June 7, 2006

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

Subject: Telecommunications Facilities
1919 Boston Post Road
Guilford, CT

Dear Ms. Dentamaro:

The State Historic Preservation Office has reviewed 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.

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

Sincerely,

J. Paul Loether
Division Director and Deputy
State Historic Preservation Officer

Patr
1 (AKA 2,
Guilford, Ct

Legal Notice

Global Signal is proposing to install a new wireless telecommunications facility, consisting of a ±150-foot tall monopole, antenna, and associated ground equipment, located at 1919 Boston Post Road, Guilford, Connecticut. The existing ±150-foot tall monopole facility will be removed.

Parties interested in submitting comments regarding any potential effects of the proposed facility on historic properties may do so by sending comments to Vanasse Hangen Brustlin, Inc., 54 Tuttle Place, Middletown, CT, 06457, to the attention of Nicole Dentamaro. Questions about this proposed project may be submitted via regular mail, email to ndentamaro@vhb.com, or by calling (860) 632-1500 ext. 2317.

VHB will be accepting comments and/or questions within 30 days of the date of this publication. Therefore, all comments or questions regarding this matter should be postmarked/submitted by no later than July 8, 2006.

Town Calendar

7:30 p.m.

THE OLD STONE HOUSE

TOWN OF GUILFORD

HISTORIC DISTRICT COMMISSION

50 BOSTON STREET
GUILFORD, CONNECTICUT 06437

SETTLED IN 1639

TELEPHONE (203) 453-8029
FAX (203) 453-8034

July 7, 2006

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

Re: New Wireless Telecommunications Facility at
1919 Boston Post Road, Guilford, CT

Dear Ms. Dentamaro:

Thank you for notifying the Guilford Historic District Commission (GHDC) regarding Global Signal's proposed installation of a new wireless telecommunications facility in the above mentioned location in Guilford. Per my request to you on Wednesday, July 5, 2006, I received (by electronic mail) a location map, site plan and elevation of the proposed facility, replacing the existing one currently in place. In review of this information, members of the GHDC have the following comments regarding the proposal.

Since this proposal is not in a historic district, nor do we believe this facility will be seen from any of Guilford's Historic Districts, we do not object to the proposal or have any further recommendations. In addition, the tower does not appear to be "atypical" in form and is standard in its profile and height.

However, we do want to note that the 150-foot tall monopole tower will be moving closer to the Interstate 95 entrance/exit ramps and may be at a higher elevation than the current tower location. This location and raised elevation, therefore, will most likely make the tower element more visible to traffic on I-95 and Boston Post Road, especially heading westbound. This may be met with some resistance by town residents and should be considered in the proposal.

Please feel free to contact me if you have any questions at (203) 377-1300, ext. 250.

Sincerely,

F. Michael Ayles, AIA
Chairman, Guilford Historic District Commission

Cc: Carl Balestracci, Guilford First Selectman

6-14-06

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

Re: Phase Ia Archaeological Assessment Survey Of The Proposed Office Complex: Boston Post Road at I-95, Exit 57 In The Town of Guilford, Connecticut

Dear Ms Dentamaro,

I have reviewed the Phase I Archaeological Reconnaissance Report entitled "Phase Ia Archaeological Assessment Survey Of The Proposed Office Complex: Boston Post Road At I-95, Exit 57 In The Town Of Guilford, Connecticut" submitted by ACS Archaeological Consulting Services. The research design and testing strategy meets acceptable professional standards, and agree with the recommendations and conclusions. Please keep me informed of any further developments with respect to this project.

Sincerely,

Kathleen Knowles

Kathleen Knowles,
Tribal Historic Preservation Officer
Mashantucket Pequot Tribe

MASHANTUCKET PEQUOT MUSEUM
& RESEARCH CENTER
110 Pequot Trail, PO Box 3180
Mashantucket, CT 06338
Phone: 860 396 6800
Fax: 860 396 6850
www.pequotmuseum.org

ENVIRONMENTAL PLANNING SERVICES

WETLAND DELINEATION AND RECONNAISSANCE SURVEY

PREPARED FOR:

BL COMPANIES

February 7, 2005

89 BELKNAP ROAD WEST HARTFORD, CONNECTICUT 06117
PHONE (860) 236-1578 FAX

INTRODUCTION

This report documents the results of investigations conducted by Environmental Planning Services (EPS) at a site located on the north side of Boston Post Road (RT 1) and the west side of Joan Drive in Guilford, CT. EPS was retained to flag the limits of inland wetlands at the site and conduct preliminary wildlife and wetland functional assessments. Field visits were conducted on January 17 and 31, 2005.

The site's wildlife value in relation to the surrounding area was also assessed using GIS (Geographic Information System) data obtained from the CT Department of Environmental Protection. Because wildlife species do not recognize man-made boundaries, a landscape scale analysis is important to better understand the site's overall biological value.

WETLANDS

At the Federal level, four agencies are principally involved with wetland identification and delineation: Army Corp of Engineers (ACOE), Environmental Protection Agency (US EPA), Fish and Wildlife Service (F&WS), and Natural Resources (formerly Soil) Conservation Service (NRCS). Each of these agencies has developed techniques for identifying the limits of wetlands for various purposes. The ACOE and USEPA are responsible for making jurisdictional determinations of wetlands regulated under Section 404 of the Clean Water Act (formerly known as the Federal Water Pollution Control Act, 33 U.S.C.1344). The regulatory definition of wetlands used by the USEPA and ACOE for administering the Section 404 program is: those areas that are inundated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (EPA, 40 CFR 230.3 and 33 CFR 328.3).

The working definition is based on the fact that wetlands possess three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology, which is the driving force creating all wetlands. These three parameters are also referred to an mandatory technical criteria, and if three are met for an area, it must be identified as a wetland. Such wetlands are often referred to as jurisdictional wetlands. The requirements of 33 CFR Part 328.3 apply once the limits of the jurisdictional wetland (or watercourses) are defined, if the proposed site activity results in the deposition of dredged or fill material into a wetland or water of the U.S. Deposition of fill is defined liberally, to include material deposited ahead of the machine, as a result of bulldozing or scraping soil out of an area.

However, the primary wetland jurisdiction in the state of Connecticut is at the municipal level under state enabling legislation (Connecticut Inland Wetlands and Watercourses Act). The ACOE has overlapping jurisdiction, but for permitting purposes, local project approvals (Site Plan Approval) typically start at the local level.

The requirements of 33 CFR Part 328.3 do not apply with respect to determining the limits of regulated wetlands or watercourses under the Connecticut Inland Wetlands and Watercourses Act. Connecticut wetlands are defined as areas of poorly drained, very poorly drained, floodplain, and alluvial soils. Watercourses are defined as bogs, swamps, or marches, as well as lakes, ponds, rivers, streams, etc., whether man-made, permanent or intermittent. The limits of jurisdiction are typically similar to federal wetlands, but there are important exceptions, especially in floodplains. In addition, under the Connecticut Wetlands and Watercourses Act, the municipal wetland agency has the ability to establish an upland review area, typically 50- to 100-feet from the limit of the wetland/watercourse. The municipal agency may restrict certain activities within the upland review area, however the ACOE typically does not.

Therefore, our determination of the presence of regulated wetlands or watercourse on the site or adjacent to the site has been made by a soil scientist, based on criteria established in the Connecticut Inland Wetlands and Watercourses Act, i.e., areas of poorly drained, very poorly drained, floodplain, and alluvial soils. The wetlands were delineated by walking across the parcel in question on January 17, 2005, and examining the upper 20" of the soil profile with a spade and auger. Those areas meeting the requirements noted above were marked with pink plastic flagging tape numbered with the following sequences: WL 1-1 through 64 (includes flags 1-1 through 1-21) and WL 65-110.

Wetland soils on the site consist of Raypol soils. The Raypol series consists of very deep, poorly drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to gently sloping soils in shallow drainageways and low-lying positions on terraces and plains. The soils have a water table at or near the surface much of the year.

The non-wetland soils were not examined in detail, exceptas was necessary to delineate the wetland boundary. They consist of Hollis-rock outcrop complex and Udorthent soils. The Hollis series consists of shallow, well drained and somewhat excessively drained soils formed in a thin mantle of glacial till derived mainly from gneiss, schist, and granite. They are nearly level to very steep upland soils on bedrock controlled hills and ridges. Depth to hard bedrock ranges from 10 to 20 inches. Bedrock outcrops vary from few to many.
Udorthents is a miscellaneous land type used to denote moderately well to excessively drained earthen material which has been so disturbed by cutting, filling, or grading that the original soil profile can no longer be discerned.

Under Connecticut law, local municipal Wetland Agencies enforce the State of Connecticut enabling legislation. They also have the authority under the statute to regulate activity in an upland review area adjacent to wetlands. The depth or width of this upland review area is determined by each municipality, but is typically 50-100 feet from the wetland boundary. The New England District ACOE does not enforce a buffer zone or upland review area. The ACOE believes that their jurisdiction ends at the limit of the jurisdictional wetlands.

It is important to note that the Nationwide permits promulgated by the ACOE under Section 404 of the Clean Water Act do not apply in Connecticut. Instead, ACOE has issued General Permits that cover activity that meets certain area restrictions and other criteria, and which has been granted a local Inland Wetland Permit and all necessary state wetland and environmental permits. Under the CT Programmatic General Permit (as it applies to filling of non-tidal wetlands), total wetland impacts (direct plus indirect) totaling less than 5000 sq. ft. are permitted without further processing by the ACOE, provided that the CT and local permits are in place, and provided further that the impacts have been minimized to the maximum extent practical. The ACOE retains the right to require an individual permit in their sole discretion, and they meet monthly with the CTDEP, US Region 1 EPA, US Fish and Wildlife Service, and US National Marine Fisheries Service to review all applications that meet the area requirements of the General Permit. If any of these agencies object, the ACOE will require an individual permit. The New England ACOE typically does not "validate" wetland determinations in the absence of a pending permit application, but if requested, they have done so in the past.

WETLAND FUNCTIONS AND VALUES

The following information provides a brief description of the characteristics of the site's wetlands as well as their principal functions. This summary is based on field observations made during wetland delineation work as well as a brief review of natural resource GIS data pertaining to the site.

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. wooded swamp) flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The flanking forested wetlands consist of fairly typically wooded wetland habitat. The non-wetland areas of the site have undergone some significant clearing, filling and regrading in the past and consist mainly of old field habitat. The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat. The site provides moderate to moderately high quality values for these functions

WILDLIFE HABITAT

The site contains both wetland and non-wetland habitat types. Their locations are shown on the attached "Wildlife Habitat Map". Their characteristics are described below.

Wetland Habitats

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. "wooded swamp") flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The brook ranges from level and meandering to rocky and high-gradient. A small pond, likely man-made is located within the brook at the site's southeastern end.

The flanking forested wetlands consist of fairly typically wooded swamp habitat. The tree canopy consists mainly of Red Maple (*Acer rubrum*) and Black Birch (*Betula lenta*) with scattered Hemlock (*Tsuga canadensis*). The shrub layer consists of Pepperbush (*Clethra spp.*) and Spicebush (*Lindera benzoin*) with scattered Mountain Laurel (*Kalmia latifolia*) and Greenbriar (*Smilax spp.*).

The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat.

Upland Habitats

The majority of the non-wetland areas of the site have undergone some significant clearing, filling and re-grading in the past and consist mostly of "old field" habitat. The vegetation consists mainly of a variety of herbaceous vegetation (grasses, forbs) and Autumn Olive* (*Elaeagnus umbellata*) with scattered Multiflora Rose* (*Rosa multiflora*) Red Cedar (*Juniperus virginiana*) and Sumac (*Rhus spp.*). Old field "edges" consist mainly of young black birch and Cottonwood (*Populus deltoides*). A small portion of the southeastern area of the site is mixed hardwood forest consisting mainly of black birch, Red Oak (*Quercus rubrum*), Black Oak (*Quercus velutina*), and American Beech (*Fagus grandifolia*).

OVERALL WILDLIFE VALUE

The site is suitable habitat for a variety of songbird and mammalian species associated with riparian and early-succesional (open, unforested) habitats. The past disturbance (cutting, filling, re-grading) which has occurred on the site has likely had a negative impact on the overall wildlife value of the site. Small scale clearing of vegetation typically has little or no negative impacts to wildlife and can often be a benefit to many species. However it is the filling and re-grading of the land associated with that clearing that tends to have a deleterious affect on wildlife. The site is not likely to support a diversity of amphibian species.

NATURAL DIVERSITY DATABASE REVIEW

The Connecticut Department of Environmental Protection's Natural Diversity Database program represents current documented data showing the known locations of any endangered, threatened or special concern species and significant natural communities. Submission to the database for information regarding a given site is done if the subject site:

1. Occurs within a designated NDDB area
2. Overlaps a water body that has been designated a NDDB area
3. Is upstream or downstream (by less than ½ a mile) from a NDDB area

---

* Invasive, non-native species

The most recent maps dated June 2004 were reviewed. The subject site does not fit any of the above criteria. Therefore, no information request was made to the DEP's Natural Diversity Database Program regarding review of the proposed activities. A topographic map showing the natural diversity database areas relative to the subject site has been attached in this report.

STATE-LISTED SPECIES

State-listed species represent species listed as endangered, threatened or special concern by the Connecticut Endangered Species Act. Suitable habitat was found on the site for one species of special concern[1], the Wood Turtle (*Clemmys insculpta*). The wood turtle inhabits riparian habitats bordered by floodplain, woodlands or meadows. Terrestrial habitats used during the summer include pastures, old fields, woodlands, powerline cuts, and railroad beds, bordering on or adjacent to streams and rivers[2]. Because the site contains a perennial stream bordered by old field habitat, and wood turtle are known to occur in the town of Guilford, the use of this site by wood turtle cannot be ruled out on the basis of habitat conditions. Spring-summer surveys would be required to confirm the presence of wood turtle on this site.

FLOODZONES AND AQUIFERS

The area surrounding Spinning Mill Brook is located within the FEMA's floodzone A. The site is not located within any aquifer protection areas but is located in close proximity to the Guilford Well field, a preliminary aquifer protection area operated by the Connecticut Water Company.

Respectfully submitted,

Michael S. Klein, Principal
Registered Soil Scientist
Certified Professional Wetland Scientist

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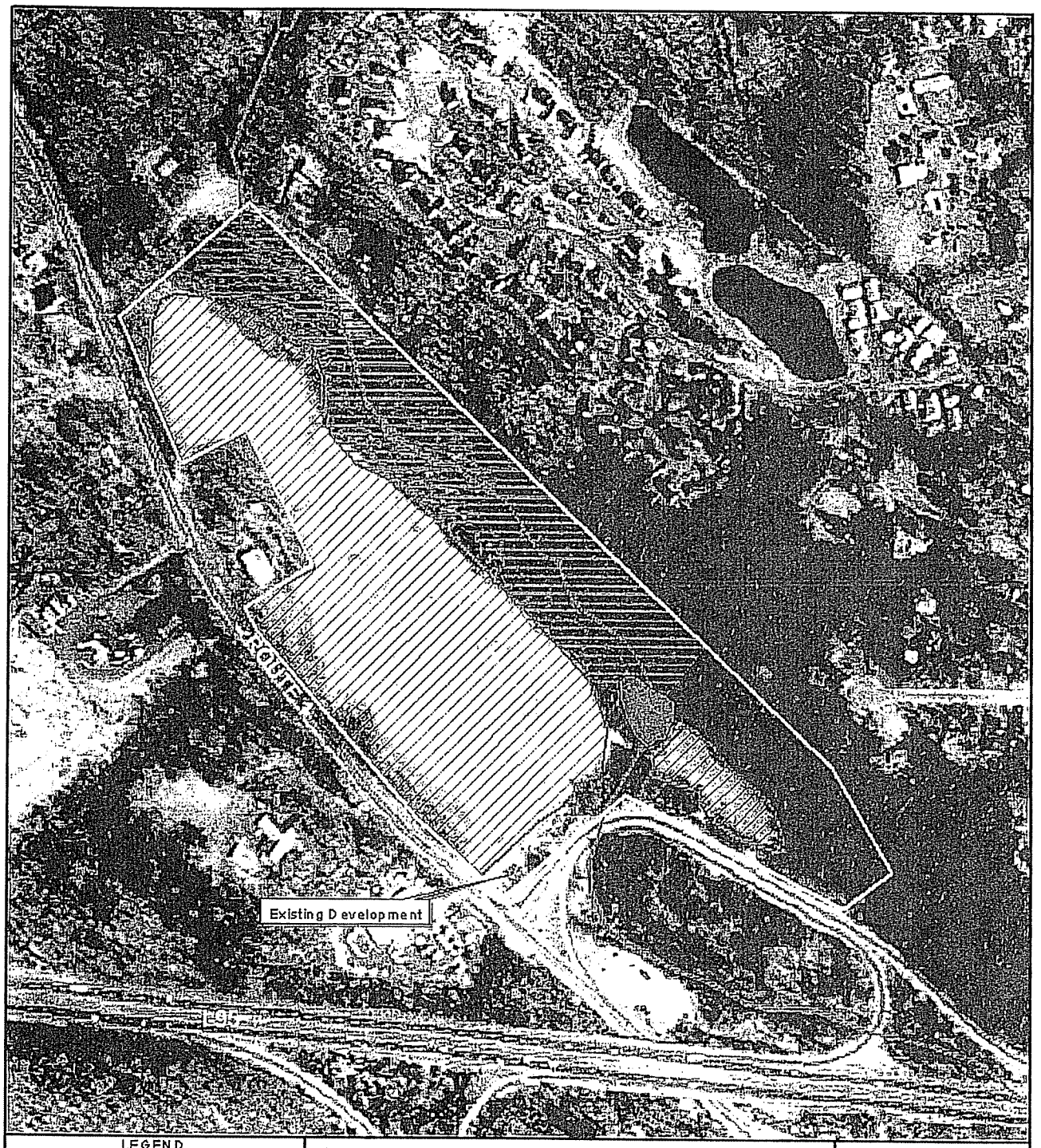
[1] "Species of Special Concern" means any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state (CT Endangered Species Act).

[2] Klemens, M. W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. CT DEP Bulletin 112



LEGEND

- Wooded Swamp-Riparian Forest Floodplain Complex
- Pond
- Property Boundary
- Old Field
- Spinning Mill Brook
- Mixed Hardwood Forest (unmarked areas)

WILDLIFE HABITAT MAP
Route 1 and Jones Drive, Guilford

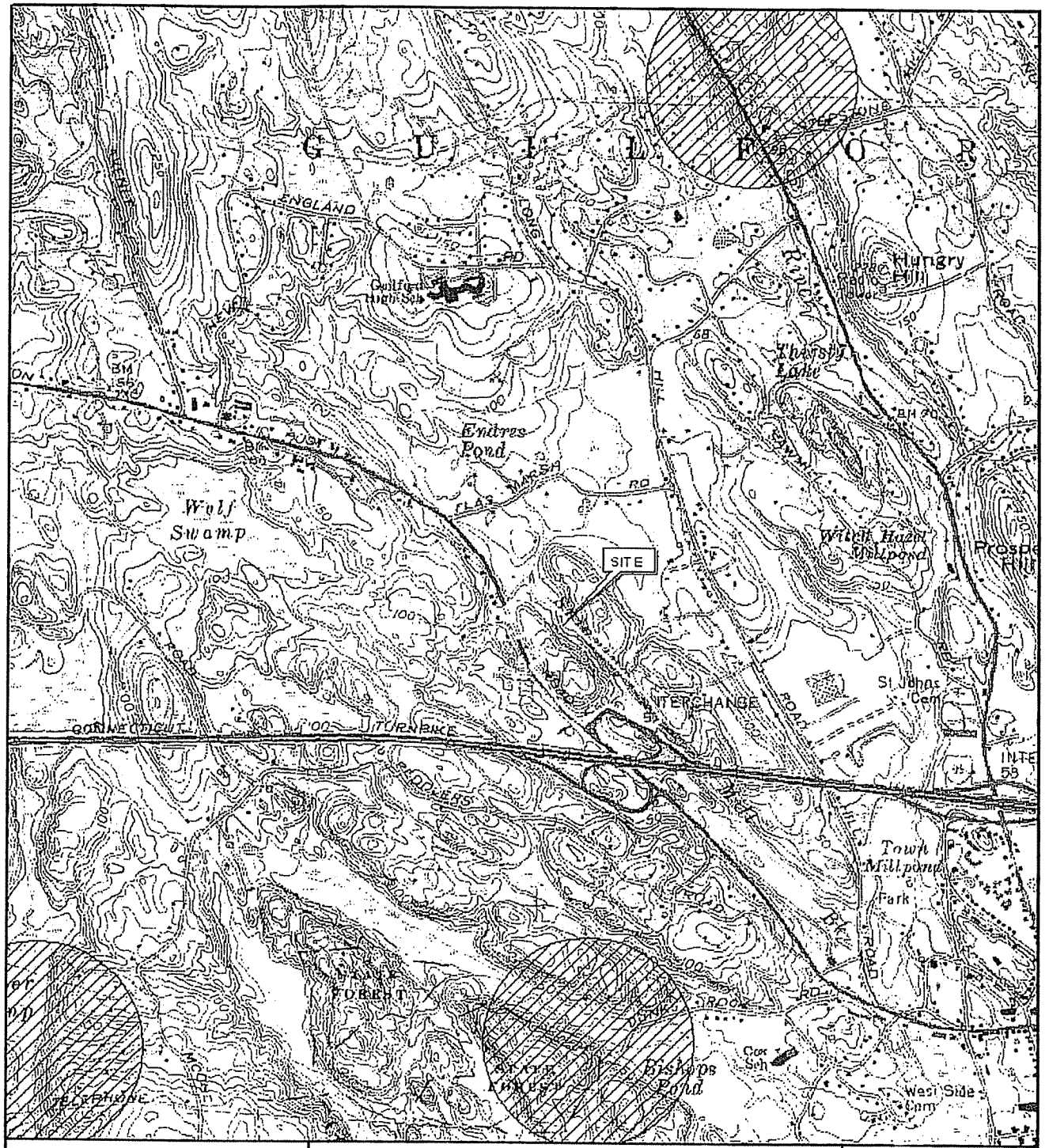
Map showing wildlife habitats based on CT DEP aerial photograph (1995). This map is intended for general planning purposes only.

Environmental Planning Services, West Hartford, CT (860) 236-1578

N

SCALE

80 0 80 Feet



KEY

Site Boundary

NDDB Areas

NATURAL DIVERSITY DATABASE MAP

USGS topographic map showing the CT DEP's natural diversity database areas (maps dated June 2004). This map is intended for general planning purposes only.

N

SCALE

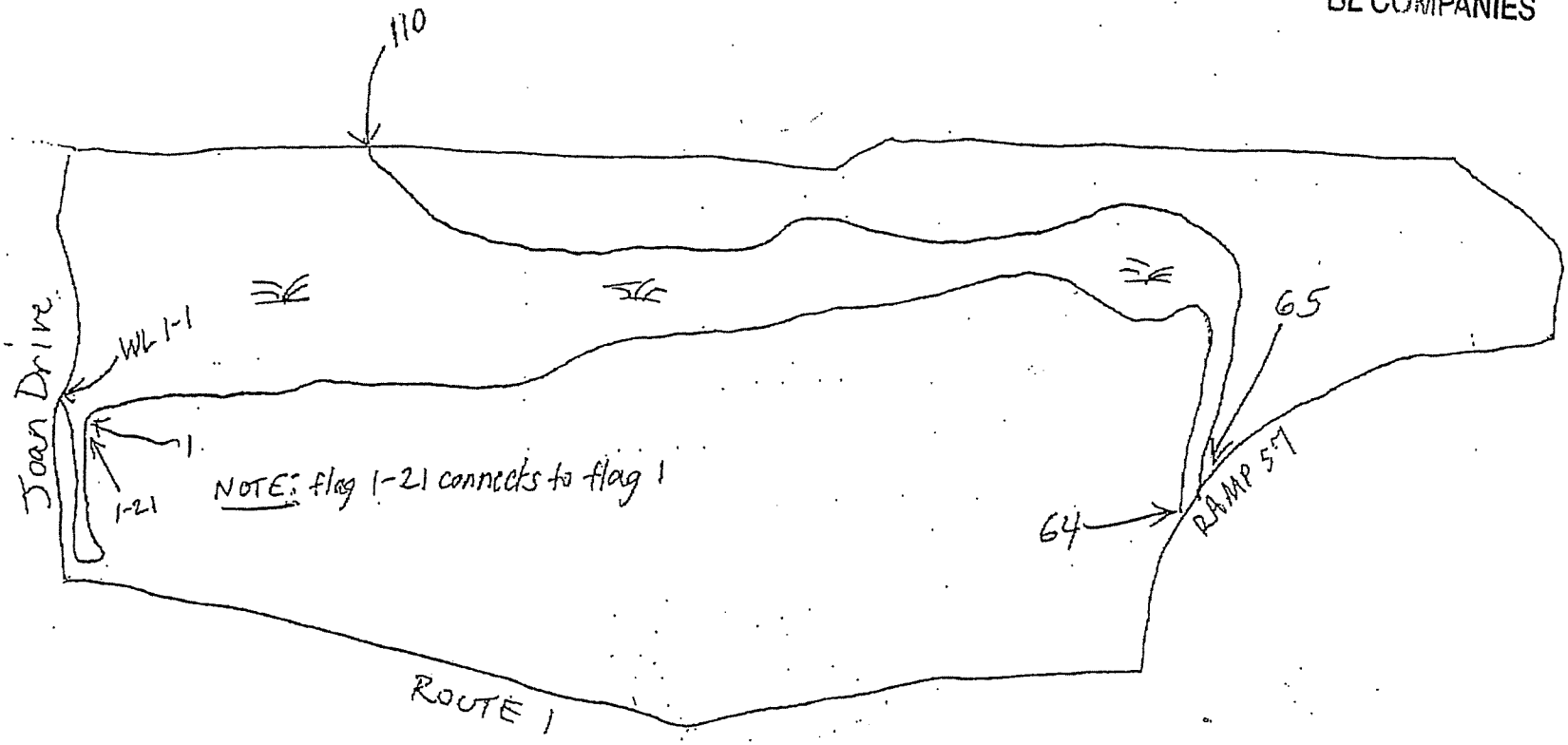
400 0 400 800 Feet

Environmental Planning Services, West Hartford, CT (860) 236-1578

WETLAND FLAGGING SKETCH

Environmental Planning Services
89 Belknap Road
West Hartford, CT 06117
860-236-1578

& Report is in the mail.



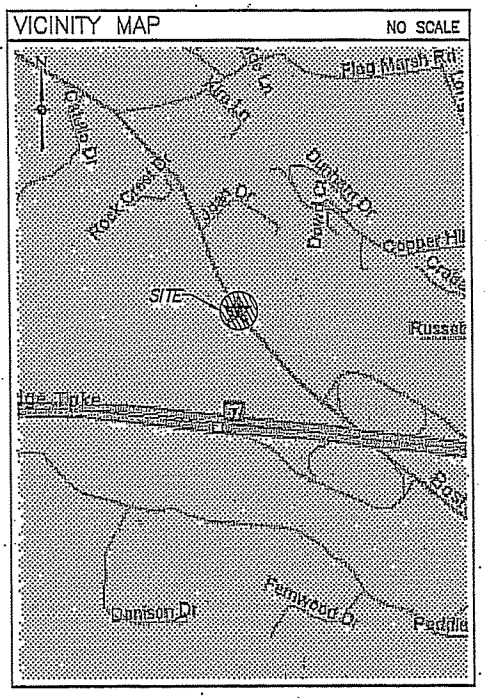
SITE LOCATION:	
FROM:	Eric Davison Phone: 860-803-0938 (cell) Email: edavison@snet.net
TO:	Jen Marks
DATE:	1/17/05

Note: the information shown on this sketch, including the wetland Boundary, is approximate. This map is intended for surveying purposes only.

WIRELESS COMMUNICATIONS FACILITY
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

VICINITY MAP — NO SCALE



PROJECT SUMMARY

SITE NAME:	GUILFORD
SITE ADDRESS:	1919 BOSTON POST ROAD GUILFORD, CONNECTICUT
CONTACT PERSON:	GLOBAL SIGNAL XXXX XXXX
JURISDICTION:	CONNECTICUT STATE SITING COUNCIL
GOVERNING CODE:	CONNECTICUT STATE BUILDING AND LIFE SAFETY CODE
APPLICANT:	GLOBAL SIGNAL XXX XXX
ARCHITECT:	UBS CORPORATION A.E.S. 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067
M/E/P ENGINEER:	UBS CORPORATION A.E.S. 500 ENTERPRISE ROCKY HILL, CT 06067

LEGEND

SYMBOL	DESCRIPTION
	SECTION OR DETAIL NUMBER SHEET WHERE DETAIL/SECTION OCCURS
	ELEVATION NUMBER SHEET WHERE ELEVATION OCCURS

ABBREVIATIONS

MIN.	MINIMUM
V.I.F.	VERIFY IN FIELD
O.C.	ON CENTER
PSF	POUND/SQUARE FOOT
TYP.	TYPICAL
FT.	FEET
SQ.FT.	SQUARE FEET
N/A	NOT APPLICABLE

SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET – GENERAL NOTES AND LEGENDS
SC-1	SITE PLAN, COMPOUND PLAN AND ELEVATION

A&E FIRM
UBS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(800)-520-8002

A&E SEAL

PROJECT NO: 3699?????????

JOB NO: GSI-001

DRAWN BY: RRH

CHECKED BY:

ISSUED FOR

0	05-25-06	REVIEW

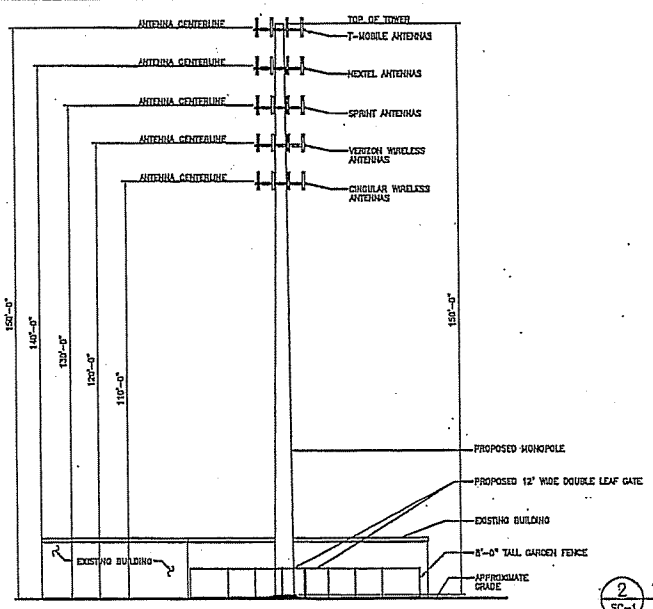
GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

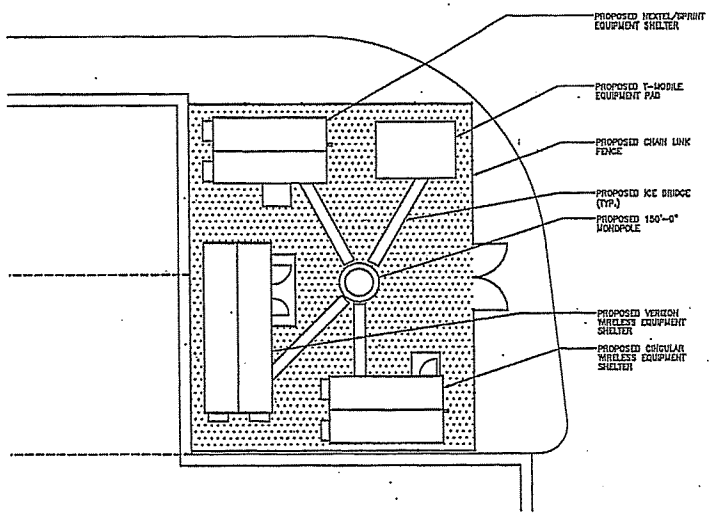
SCALE: AS NOTED

TITLE SHEET-
GENERAL NOTES
AND LEGENDS

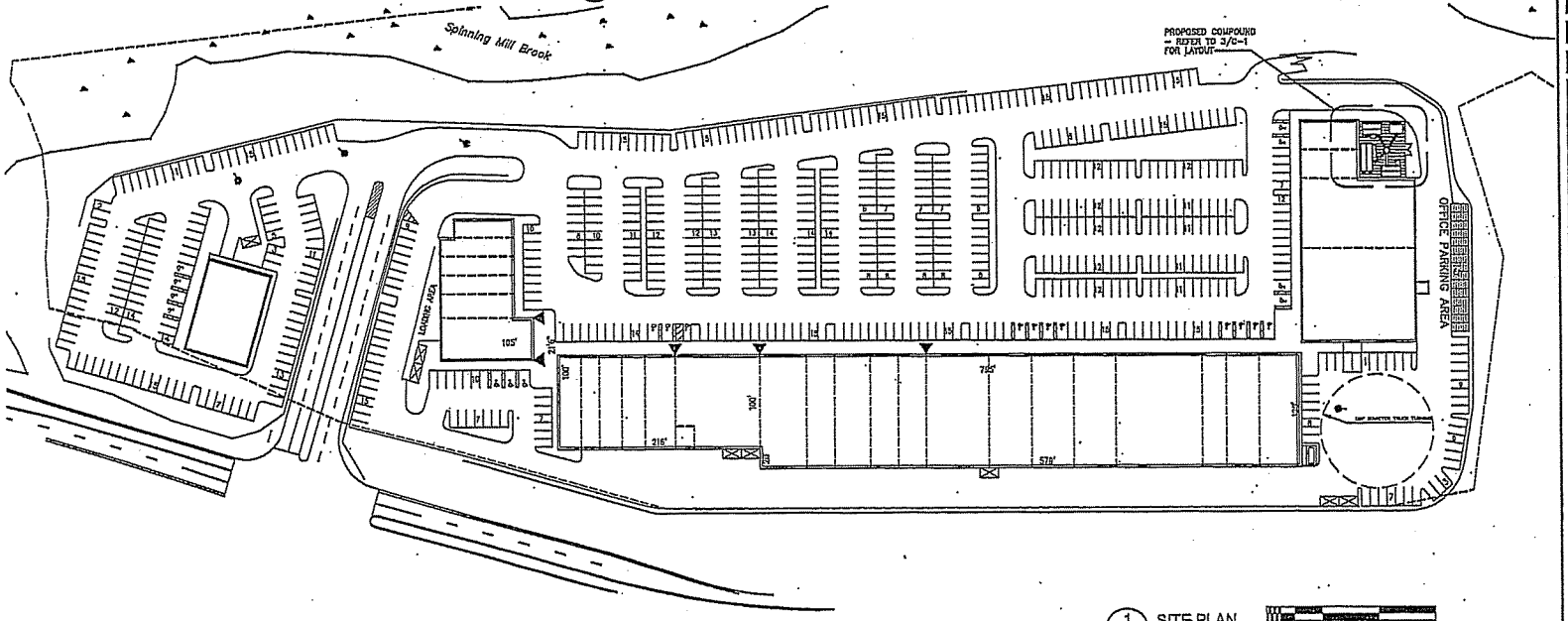
T-1



2 SC-1 TOWER ELEVATION
SCALE: 1" = 15'-0"



3 SC-1 COMPOUND PLAN
SCALE: 1"=10'-0"
0 5 10 20 30



1 SC-1 SITE PLAN
SCALE: 1"=60'-0"
0 30 60 120 180

A&E FIRM
OBS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8502

A&E SEAL

PROJECT NO: J00777777777

JOB NO: GS1-001

DRAWN BY: WHB

CHECKED BY:

ISSUED FOR

0	05-25-06	REVIEW

GUILFORD

1919 BOSTON POST ROAD
GUILFORD, CONNECTICUT

SCALE: AS NOTED

SITE PLAN, COMPOUND PLAN AND ELEVATION

SC-1

COHEN and WOLF P.C.
ATTORNEYS AT LAW

CARRIE L. LARSON

Please Reply To Bridgeport
E-Mail: clarson@cohenandwolf.com

July 21, 2006

VIA FEDERAL EXPRESS

First Selectman Carl Balestracci, Jr.
Office of the First Selectman
Town of Guilford
31 Park Street
Guilford, CT 06437

Re: Proposed Re-Location/Development of a Telecommunications Facility
1919 Post Road, Guilford, Connecticut

Dear First Selectman Balestracci:

Enclosed please find two (2) copies of the technical report in compliance with Connecticut General Statutes Section 16-501(e) and in anticipation of filing an application for a Certificate of Environmental Compatibility and Public Need for the re-location, construction, maintenance and operation of a telecommunications facility at the above-referenced location. The technical report includes information regarding the public need for the facility, the site selection process, and the environmental effects of the facility.

The municipality may conduct public hearings and meetings as it deems necessary to provide recommendations or comments to Global Signal. concerning this proposal. If a hearing or meeting is scheduled, we request notice and will be pleased to provide an informational summary of the proposal. If the Town has any recommendations or comments, it must provide them to us within sixty (60) days of the receipt of this filing.

We would like to meet with you (or your designee) to review the proposed project and will contact you next week to set up an appointment at your convenience.

If you have any questions, please do not hesitate to contact me directly.

Very truly yours,

Carrie L. Larson

1115 Broad Street
P.O Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

190 Main Street
Westport, CT 06880
Tel: (203) 222-1034

112 Prospect Street
Stamford, CT 06904
Tel: (203) 964-9907
Fax: (203) 576-8504

COHEN and WOLF P.C.
ATTORNEYS AT LAW

CLL
Enclosures

cc: Julie D. Kohler, Esq.
John Knuff, Esq.
Brett Buggeln

1115 Broad Street
P.O Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

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Stamford, CT 06904
Tel: (203) 964-9907
Fax: (203) 576-8504

****
* Federal Airways & Airspace *
* Summary Report *
****

File: 3017663NEW

Location: New Haven, CT
Distance: 11.4 Statute Miles
Direction: 273° (true bearing)

Latitude: 41°-17'-57.48" Longitude: 072°-42'-19.18"

SITE ELEVATION AMSL..... 96 ft.
STRUCTURE HEIGHT.....200 ft.
OVERALL HEIGHT AMSL.....296 ft.

NOTICE CRITERIA
FAR 77.13(a)(1): NNR (DNE 200 ft AGL)
FAR 77.13(a)(2): NNR (DNE Notice Slope)
FAR 77.13(a)(3): NNR (Not a Traverse Way)
FAR 77.13(a)(4): PNR (Circling Approach Area)
FAR 77.13(a)(4): PNR (Straight-In Procedure. Check FAF distance for TERPS® impact. HVN)
FAR 77.13(a)(5): NNR (Off Airport Construction)

Notice to the FAA is not required at the analyzed location and height.

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required

OBSTRUCTION STANDARDS
FAR 77.23(a)(1): DNE 500 ft AGL
FAR 77.23(a)(2): DNE - Airport Surface
FAR 77.25(a): DNE - Horizontal Surface
FAR 77.25(b): DNE - Conical Surface
FAR 77.25(c): DNE - Primary Surface
FAR 77.25(d): DNE - Approach Surface
FAR 77.25(e): DNE - Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: N04: GRISWOLD
Type: AIR RD: 43500 RB: 103.56 RE: 4
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): Does Not Apply.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: HVN: TWEED-NEW HAVEN
Type: AIR RD: 50152 RB: 255.45 RE: 5
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): DNE - Greater Than 6 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)
FAR 77.23(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.23(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 400 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	DISTANCE IN N.M.	DELTA ARP ELEVATION
CT54	HEL	NORTH BRANFORD	299.5	4.431	+41

No Impact to Private Landing Facility
Structure is beyond notice limit by 21923 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	ANGLE
MAD	VOR/DME	ON	0110.4	34.27	6420	+66	CT	MADISON	.59

FCC AM PROOF-OF-PERFORMANCE
NOT REQUIRED: Structure is not near a FCC licensed AM radio station Proof-of-Performance is not required.
Please review AM Station Report for details.

No AM Stations were located within 3.2 km.

Airspace® Summary Version 2006.9

10-03-2006
13:46:06