



June 28, 2013

By Hand Delivery

Planning Board
Town Hall
Town of Acton
472 Main Street
Acton, MA 01720
Attn: Kim Gorman

Re: Application for Special Permit
Property Address: 5 Craig Road, Acton, Massachusetts
Applicant: SBA Towers II, LLC (the "Applicant")

Dear Honorable Members of the Planning Board:

Enclosed for filing in connection with the above-referenced matter, please find one (1) original two (2) copies of the Applicant's Application for Special Permit for a Wireless Communications Facility. Also enclosed, please find original abutters list, certified by the Town of Acton Assessor's Office, as well as a \$2,500 check representing the required filing fees. Kindly acknowledge the receipt of these documents by date-stamping the enclosed copy of this letter.

Please do not hesitate to contact me if you have any questions or concerns.

Thank you for your attention to this matter

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian S. Grossman'.

Brian S. Grossman

**APPLICATION for SPECIAL PERMIT
for a
WIRELESS COMMUNICATION FACILITY**

SBA TOWERS II, LLC
33 Boston Post Road West
Suite 320
Marlborough, MA 01752
Applicant

Property Location:

**5 Craig Road
Acton, Massachusetts
Assessor's Map H4 Lot 45**

**Prepared by: Brian S. Grossman, Esq.
Prince Lobel Tye LLP
100 Cambridge Street, Suite 2200
Boston, MA 02114
Telephone: (617) 456-8184
Facsimile: (617) 456-8100**

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ACTON PLANNING BOARD

APPLICATION for a PERSONAL WIRELESS FACILITY SPECIAL PERMIT

Refer to the "Rules and Regulations for Personal Wireless Facility Special Permits" available from the Planning Department for details on the information and fees required for this application. Contact the Planning Department at 978-929-6631 with any questions concerning the Rules. Incomplete applications may be denied.

Please type or print your application.

- 1. Applicant's Name SBA Towers II, LLC
 Address c/o Brian S. Grossman, Esq., Prince Lobel Tye LLP, 100 Cambridge Street, Suite 2200, Boston, MA 02114
 Telephone 617.456.8184 E-Mail bgrossman@princelobel.com
- 2. Record Owner's Name Palmer Realty Trust
 Address 7 Craig Road, Acton, MA 01720
 Telephone _____ E-Mail _____
- 3. Location and Street Address of Site 5 Craig Road
- 4. Town Atlas Map & Parcel Number(s) Map H4 Lot 45
- 5. Zoning District(s) of Parcel(s) Light Industrial
- 6. Area of Site 3.65 acres
- 7. Proposed Height of Facility 110 feet
- 5. Proposed Carriers
AT&T _____

The undersigned hereby apply to the Planning Board for a public hearing and a Personal Wireless Facility Special Permit under Section 3.10 of the Zoning Bylaw.

The undersigned hereby certify that the information on this application and plans submitted herewith is correct, and that the application complies with all applicable provisions of Statutes, Regulations, and Bylaws to the best of his/her knowledge.

The above is subscribed to and executed by the undersigned under the penalties of perjury in accordance with MGL Ch. 268, Section 1-A.

6/27/2013 _____
 Date Signature of Applicant

RECORD OWNER'S KNOWLEDGE AND CONSENT

I hereby assert that I have knowledge of and give my consent to the application presented above.

_____ Please see letter of authorization _____
 Date Signature of Owner

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June 27, 2013

Planning Board
Town Hall
Town of Acton
472 Main Street
Acton, MA 01720

Re: Application for Special Permit
Property Address: 5 Craig Road, Acton, Massachusetts
Applicant: SBA Towers II, LLC (the "Applicant")

Dear Honorable Members of the Planning Board:

This firm represents the Applicant in connection with an application for a special permit from the Town of Acton Planning Board (the "Board") to allow the installation of a wireless communications facility on the Property. The Property is located in the Light Industrial zoning district. Pursuant to Section 3.10.5.1 of the Town of Acton Zoning Bylaw (the "Bylaw"), the use of the Property for a wireless communications facility is allowed by special permit. The Applicant's proposed facility satisfies the requirements for the grant of the requested special permit as set forth in Sections 3.10 and 10.3 of the Bylaw.

The Applicant seeks to install and operate a wireless communications facility including a proposed 110-foot monopine-style monopole (the "Tower"). The Applicant's anchor tenant, AT&T will locate its wireless communications facility consisting of up to twelve (12) wireless telecommunications antennas mounted to the Tower. AT&T's accessory radio equipment will be placed within the proposed fenced compound. The facility is shown on the plans attached hereto, and incorporated herein by reference (the "Plans").

I. Background

The Applicant is in the business of constructing and leasing telecommunications towers to carriers licensed by the FCC, such as AT&T, to provide the necessary infrastructure for AT&T to provide personal wireless services in areas that include the Town of Acton, Massachusetts.

AT&T is licensed by the Federal Communications Commission to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the Town of Acton. A copy of the AT&T's FCC license is attached hereto. AT&T is in the process of designing and constructing a telecommunications system to serve all of the Commonwealth of Massachusetts. One of the key design objectives of its systems is to provide seamless coverage. Such a system requires a grid of radio transmitting and receiving links located

approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the existing use of the network and the existing topography. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear path from the facility to the user on the ground. This dynamic requires the antennas to be located above the tree line, and in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. RF Coverage Determination

AT&T has performed a study of radio frequency coverage for the Town of Acton and from the Property, the results of which are shown on the coverage maps submitted herewith. AT&T has a gap in coverage in the Town of Acton and has determined that a wireless communications facility located on the Property will provide adequate coverage to the targeted sections of the Town of Acton and the immediately surrounding area if the Applicant's antennas are located at the requested height. In connection herewith, AT&T has submitted radio frequency propagation maps, which show its current coverage and the gap in coverage that the proposed site will fill, and a radio frequency propagation map showing the anticipated coverage from the site.

III. The Facility

As depicted on the Plans, the Applicant proposes to install a 110-foot Tower, disguised as a pine tree. The Applicant also proposes to enclose the 90' x 30' compound within a 6' high chain-link fence.

AT&T proposes to install up to twelve (12) panel antennas and associated cabling on the proposed Tower. The cabling will connect the panel antennas to radio communications equipment located within a 12' x 20' equipment shelter to be located within the fenced compound.

Per FCC mandate, enhanced emergency (E911) service is required to meet nationwide standards for wireless communications systems and will be achieved through the installation of one (1) Global Positioning System (GPS) antenna.

After installation, the facility will be unmanned and will only require bi-weekly maintenance visits by authorized personnel who will inspect the facility to ensure it remains in good working order. The only utilities required to operate this facility are standard 120-volt electrical power as well as telephone service. The facility will comply with all applicable local, state and federal safety codes.

IV. Legal Arguments

A. **The Applicant's Proposal Satisfies the Requirements for the Grant of a Special Permit Pursuant to Section 3.10 of the Bylaw.**

Section 3.10 of the Bylaw, provides that (Bylaw in ***bold***):

The purpose of this section [3.10 Special Requirements for Wireless Communication Facilities] is as follows:

3.10.1.2 To minimize their adverse impacts on adjacent properties, local historic districts, residential neighborhoods, and scenic vistas.

As set forth herein and in the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

3.10.1.3 To establish requirements for their approval, and standards for their design, placement, safety, monitoring, modification, and removal.

As set forth herein and demonstrated by the supplemental materials submitted herewith, the Applicant's proposed facility complies with the applicable approval standards within the Bylaw.

3.10.1.4 To limit the overall number and height of such facilities to what is essential to serve the public convenience and necessity; and

In accordance with the above provision, the proposed Tower is limited to the height necessary allow the Applicant to provide adequate coverage to this significant gap in its network and to provide for meaningful co-location opportunities for competing wireless communications carriers as required by the Bylaw.

3.10.1.5 To promote shared use of facilities to reduce the need for new facilities.

No existing structure in the area is capable of accommodating the Applicant's facility at a height necessary to allow the Application to provide adequate coverage to this significant gap in its network. Accordingly, this application for the proposed Tower is necessary. However, consistent with this provision, the Tower will be designed to accommodate installations for at least three other wireless communications carriers.

3.10.2 No Wireless Communication Facility shall be erected or installed except in compliance with the provisions of this Section 3.10.

Pursuant to the above provision, the Applicant has filed this application with the Planning Board.

3.10.2 Applicability 3.10.2.1 This Section 3.10 shall apply to all reception and transmission Facilities that aid, facilitate, and assist with the provision of Personal Wireless Services.

Pursuant to the above provision, the Applicant has filed this application with the Planning Board.

3.10.2.2 No such Facility shall be erected or installed except in compliance with the provisions of this Section 3.10.

Pursuant to the above provision, the Applicant has filed this application with the Planning Board.

3.10.2.3 Nothing in this Bylaw shall be construed to regulate or prohibit customary installations for the reception of radio communication signals at home or business locations.

Not applicable.

3.10.2.4 Nothing in this Bylaw shall be construed to regulate or prohibit a tower or antenna installed solely for use by a federally licensed amateur radio operator. For regulations on amateur radio towers see Section 3.8.3.6 of this Bylaw.

Not applicable.

3.10.4 General Prohibitions and Requirements

3.10.4.1 Lattice style towers and similar facilities requiring more than one leg or guy wires for support are prohibited. However, additional equipment may be mounted to an existing lattice tower.

The proposed Tower complies with this provision of the Bylaw.

3.10.4.2 A Personal Wireless Tower shall not be erected in a Local Historic District or within one thousand feet (1000') of the boundary of a Local Historic District measured from the center point of a Tower at its base.

The proposed Tower complies with this provision of the Bylaw.

3.10.4.3 All STRUCTURES, equipment, utilities and other improvements associated with Personal Wireless Facilities shall be removed within one year after cessation of USE.

The Applicant will comply with this requirement of the Bylaw.

3.10.4.4 Night lighting of Personal Wireless Facilities is prohibited except for low intensity lights installed at or near ground level in or on the Equipment Compound and in compliance with the Outdoor Lighting Regulations of this Bylaw, Section 10.6.

The Applicant's proposed facility complies with this provision of the Bylaw.

3.10.4.5 At least one sign shall be installed in a visible location at the Equipment Compound that provides the telephone number where the operator in charge can be reached at all times.

The Applicant's proposed facility complies with this provision of the Bylaw.

3.10.4.6 Section 6 (Parking Standards) of the Acton Zoning Bylaw shall not apply to Wireless Communication Facilities.

No response required.

3.10.4.7 Nothing in this Bylaw shall be construed to regulate or prohibit a Personal Wireless Facility on the basis of the environmental effects of radio frequency emissions, provided the Facility complies with regulations of the Federal Communications Commission concerning such emissions.

The Applicant's proposed facility will comply with the FCC regulations concerning radio frequency emissions. See Radio Frequency Affidavit and FCC Compliance Calculations attached hereto.

3.10.5 Personal Wireless Facilities Allowed by Right

3.10.5.1 In all zoning districts, a Personal Wireless Facility shall be allowed and no special permit shall be required,

a) if the Antenna(s) and Antenna mounting apparatus or STRUCTURE does not exceed 3 feet in diameter and 12 feet in height and is otherwise in compliance with applicable dimensional requirements of this Bylaw as they relate to the Personal Wireless Facility Site, or

b) if the Facility is located entirely within, or mounted on, a BUILDING or STRUCTURE that is occupied or used primarily for other purposes, provided that the BUILDING or STRUCTURE, including the Facility, meets all dimensional requirements of this Bylaw for the zoning district in which the Site is located. A cupola or other appurtenance, that is consistent with the general characteristics of the zoning district within which the Facility is located, that is otherwise allowed by right, and that fully conceals all Antennas, cables, and other related hardware may be added to a BUILDING when the supporting equipment belonging to the Facility is installed within the BUILDING.

The above exemptions are not applicable to the Applicant's proposed facility. Accordingly, the Applicant has filed this application with the Planning Board.

3.10.5.2 In the Office Districts (OP-1, OP-2), the Industrial Districts (LI, GI, LI-1, IP, SM), the Powder Mill District (PM), and the Limited Business District (LB), a Monopole Tower shall be allowed and no special permit shall be required, if its height does not exceed applicable height limitations for STRUCTURES and BUILDINGS in the zoning district in which it is located, and if its setback, measured from its center point at its base to all Site boundary lines, is at least the distance equal to its height, but not less than the otherwise applicable minimum yard requirement for BUILDINGS and STRUCTURES in the zoning district.

The above exemptions are not applicable to the Applicant's proposed facility. Accordingly, the Applicant has filed this application with the Planning Board.

3.10.6 Special Permit for Facilities

3.10.6.1 Any Personal Wireless Facility, and any increase in height or size, or reconstruction or replacement of an existing Facility that does not meet the criteria under Section 3.10.5 above, may only be allowed by special permit from the Planning Board in accordance with M.G.L. Ch. 40A, S. 9, subject to the following statements, regulations, requirements, conditions and limitations.

3.10.6.2 For the purpose of this Section 3.10, public hearing notices shall be sent to parties in interest and to all LOT owners within one thousand feet of the property line of the Site where the Facility is proposed.

The Applicant will comply with the notice requirements set forth in this provision of the Bylaw. The Applicant has provided herewith a list of all property owners within one thousand feet of the boundaries of the Property.

3.10.6.3 A Personal Wireless Tower shall not exceed a height of 175 feet from ground level, or a height that is allowed without illumination at night under Federal Aviation Administration or Massachusetts Aeronautics Commission regulations, whichever is less. For purposes of determining the height of a Tower, the height shall be the higher of the two vertical distances measured as follows:

- a) The elevation of the top of the Tower STRUCTURE including any Antennas or other appurtenances above the pre-construction mean ground elevation directly at the base of the pole; or
- b) The elevation of the Tower STRUCTURE including any Antennas or other appurtenances above the mean ground elevation within 500 feet of the base of the pole. **3.10.6.4 Personal Wireless Towers shall be CAMs. On a case by case basis, generally when aesthetic considerations are less important, the Planning Board may allow Monopoles with external Flush Mounted Antennas, or external standard Antenna mounting frames that extend laterally from the Monopole.**

The Applicant's proposed 110-foot Tower complies with this provision of the Bylaw.

3.10.6.5 Personal Wireless Towers shall be located, designed, and constructed as Monopoles that are extended to or structurally extendable to the maximum height allowed under Section 3.10.6.3 above, capable of accommodating the maximum number of technically feasible Co-locator Antennas on the portion of the Monopole above the trees as well as an Equipment Compound physically able to, or capable of being enlarged to, fully accommodate the maximum number of Personal Wireless Service Carriers and other equipment necessary for the maximum number of technically feasible Co-locators at the Site.

The Applicant's proposed 110-foot Tower and the associated fenced in compound complies with this provision of the Bylaw.

3.10.6.6 In all Residential Districts, the setback of a Tower, measured from the center point of the Tower at its base to the boundary lines of the Site, shall be at least one hundred and seventy five feet (175').

This provision of the Bylaw is not applicable to the Applicant's proposed Tower located within the Light Industrial zoning district.

3.10.6.7 The center point of any Personal Wireless Tower at its base shall be separated from any existing residential BUILDING by a horizontal distance that is at least three hundred and fifty feet (350'), unless the residential BUILDING and the Facility are located on the same LOT.

The Applicant's proposed Tower complies with this provision of the Bylaw.

3.10.6.8 An Equipment Compound, if employed, shall be located in the immediate vicinity of the base of a Tower. The Equipment Compound, including fencing, shall not extend more than 100 feet from the center point of the Tower in the direction of any residential BUILDING on a neighboring LOT.

The Applicant's proposed fenced compound complies with this provision of the Bylaw.

3.10.6.9 Any Tower shall be designed to accommodate the maximum feasible number of Carriers.

The Applicant's proposed Tower complies with this provision of the Bylaw.

a) The Planning Board may require the employment of all available technologies and Antenna arrangements to minimize vertical space consumption, and require sufficient room and structural capacity for all necessary cables and Antennas.

The Applicant has designed the Tower to accommodate the proposed antennas of its anchor tenant plus the antennas of at least one other wireless communications carrier, as currently configured. As required by the Bylaw, the Applicant will design the Tower to be capable of accommodating additional height if needed by future carriers. The Applicant will work with co-locating carriers to appropriately install their facilities.

b) The Planning Board may require the owner of such Tower to permit other Providers to Co-locate at such Facility upon payment of a reasonable charge, which shall be determined by the Planning Board if the parties cannot agree.

The Applicant agrees to permit other wireless communication service providers to co-locate on the facility at previously negotiated and/or commercially reasonable rates, and otherwise reserves its rights.

c) The Planning Board may require that the equipment of all users of a Tower shall be subject to rearrangement on the Tower or in the Equipment Compound if so directed by the Planning Board at a later time in its effort to maximize Co-location of Carriers. This may result in different vertical Antenna locations, reduced vertical separation of Antennas, and changes of Antenna arrangements, to the extent feasible without causing technically unacceptable radio frequency signal interference between the Antennas of the Co-locators and without creating new Significant Gap in the existing coverage of incumbent Providers on the Tower.

The Applicant has designed this facility to work in conjunction with its other existing (and possible future) facilities and the proposed design, height, and location take into account the characteristics of those facilities, just as future facilities will take into account the design, height, and location of this facility. Accordingly, the Applicant will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves its rights.

d) The Planning Board may require that the equipment of all Carriers on a Tower shall be subject to relocation to another nearby Facility if such relocation, when considered individually or in concert with existing or potential new Facilities, does not create a Significant Gap in the Carrier's coverage when so directed by the Planning Board at a later time in its effort to maximize Co-location of Carriers. It may then order the removal of a Tower after the relocation is completed.

The Applicant has designed this facility to work in conjunction with its other existing (and possible future) facilities and the proposed design, height, and location take into account the characteristics of those facilities, just as future facilities will take into account the design, height, and location of this facility. Accordingly, the Applicant will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves its rights.

e) The Planning Board may require long-term easements, leases, licenses, or other enforceable legal instruments that fully support a Facility at its maximum potential technical capacity, including sufficient space on the Tower and for Facility base equipment to accommodate the maximum number of technically feasible Co-locators at the Site, adequate ACCESS and utility easements to the Facility from a public STREET, and the right for the maximum number of technically feasible Co-locators to Co-locate on the Tower and to upgrade the utilities and equipment as needed for maintaining and improving service and capacity.

The Applicant will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves its rights.

3.10.6.10 Unauthorized entry into an Equipment Compound shall be prevented by the installation of security measures such as fencing (for outdoor Equipment Compounds) or locked rooms or buildings. Towers shall be secured against unauthorized climbing. The Planning Board shall require suitable fencing and landscape screening or other mitigation means to shield the installation from the view of nearby residences or ways.

The Applicant's proposed facility complies with this provision of the Bylaw. As depicted on the Plans submitted herewith, the proposed facility will be surrounded by a 6-foot high fence with a locked gate to prevent unauthorized access.

3.10.6.11 The Planning Board may require that all ground equipment must be placed inside a BUILDING where the Planning Board finds that a fenced-in compound does not adequately address reasonable and legitimate aesthetic concerns. In such cases, the Planning Board shall have the power under the special permit to regulate the size, shape, and exterior appearance of the BUILDING.

As set forth herein and as depicted on the Plans submitted herewith, the proposed facility will be surrounded by a 6-foot high fence with a locked gate to prevent unauthorized access. The Applicant respectfully requests the Board to determine that the proposed fencing is adequate and reasonable to address any safety and aesthetic concerns.

3.10.6.12 A Tower approved hereunder shall be used only for the transmission of signals for Personal Wireless Services, except with the specific authorization of the Planning Board.

The Applicant's proposed facility will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves it's rights.

a) The Planning Board may approve or require the installation of transmission devices owned, operated, or used by the Town of Acton or any of its agencies, and may allow such devices to extend above the otherwise applicable maximum Tower height. The Planning Board may waive or modify the approved appearance provision of Subsection 3.10.5.3 for such devices.

No response required.

b) The Planning Board may also approve the installation of communication devices by entities other than Personal Wireless Service Carriers as secondary occupants of a Facility that are subject to Planning Board termination upon six months notice of the Planning Board, provided that they do not interfere with the Personal Wireless Services and that the intent of this Bylaw to maximize Co-location of Personal Wireless Service Providers is not compromised. 3.10.6.13 The Planning Board shall in its special permit make adequate provisions for the removal of the Tower and Equipment Compound after its USE for

Personal Wireless Services has ended. It shall require that the Facility location shall be restored to pre-existing conditions as much as is reasonably possible so that no traces of the Facility, including foundation, gravel pads, and driveways, remain visible above ground, and that the location be otherwise stabilized and naturalized as appropriate for the particular Site.

The Applicant's proposed facility will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves its rights.

3.10.6.14 The Planning Board may, as a condition of any special permit, require all Carriers at a Facility, upon the written request of the Planning Board from time to time, to file with the Planning Board and Town Clerk a report, prepared and stamped by a Massachusetts Registered Professional Engineer, that certifies that such Carrier's Facility is, and such Co-locator's Facilities are, in compliance with the terms and conditions of the special permit and the Acton Zoning Bylaw. The Planning Board may also require the Carriers to file with the Planning Board certifications from other independent, qualified engineers or other appropriate professionals that the Facility is in compliance with applicable state and federal laws, such as those regarding radio frequency emissions, noise, or aeronautical navigation safety. The Planning Board may make such requests not more frequently than once every two years, unless the Planning Board has reasonable grounds to believe that the Facility is not in compliance in any substantial or material respect with the terms and conditions of the special permit or any applicable FCC or other State or Federal laws.

The Applicant will comply with this provision of the Bylaw to the extent lawful and applicable and otherwise reserves its rights.

3.10.6.15 The Planning Board may limit the number of Towers on a Site to one, or to any other number it deems necessary and appropriate for the Site. Multiple Towers on a single Site shall be separated by such reasonable distance that prevents excessive interference (mechanical or electromagnetic) between Carriers' services and that creates the most harmonious appearance to the general public, but by not less than 40 feet measured between the center points at the Towers' respective bases.

Not applicable. The Applicant is not proposing to locate multiple towers on the Property.

3.10.6.16 The Special Permit application for a Personal Wireless Facility shall be accompanied by a plan showing the Facility location in relation to the boundary lines of the Facility Site and all BUILDINGS within 500 feet, and plans for the installation or construction of the Facility adequate to show compliance with the provisions of this Bylaw, and such supplemental information as may be required by the Planning Board in the Rules and Regulations for a Special Permit for Personal Wireless Facilities. The application shall also include maps showing areas where the proposed Facility will be visible when there is foliage and when there is not.

Please see the Plans submitted herewith. The Applicant will provide the required visibility study after the visual demonstration, the timing of which will be coordinated with the Board, is completed.

3.10.6.17 Mandatory Findings – The Planning Board shall not issue a special permit for a Personal Wireless Facility unless it finds that the Facility:

a) is designed to minimize any adverse visual or economic impacts on abutters and other parties in interest, as defined in M.G.L. Ch. 40A, S. 11;

The proposed facility is designed to minimize any adverse visual or economic impacts on abutters and other parties in interest to the extent feasible. The Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

b) is designed to provide, in the most community-compatible method practicable, Service Coverage to a Significant Gap within the Town. The applicant shall bear the burden of demonstrating, by clear and convincing evidence, the existence of such Significant Gap;

As set forth herein and in the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

c) is designed in the most community-compatible method practicable and is necessary to satisfy a Significant Gap in service. The applicant shall bear the burden of demonstrating that other methods preferred by the Town are not feasible for providing Service Coverage to satisfy such Significant Gap;

As set forth herein and in the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing

AT&T and potential future carriers the flexibility to meet future network needs.

d) cannot for technical or physical reasons be located on an existing Personal Wireless Facility or Tower that would be expected to provide comparable Service Coverage. Such alternative existing location or locations need not provide full service to the entire Significant Gap if, in the determination of the Planning Board, the remaining Gap to have been served by the proposed Facility is not Significant and/or if remaining portions of the Significant Gap can be served by new Facilities preferred by the Planning Board;

As set forth herein and in the supplemental materials submitted herewith, there are no existing wireless communications facilities that will allow AT&T to provide adequate coverage to this significant gap in its network. As also demonstrated by the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

e) cannot be located at any other practicably available site that is less objectionable to the general public due to technical requirements, topography, or other unique circumstances. The applicant shall have the burden of showing what alternative sites and technologies it considered and why such sites and technologies are not practicably available;

As set forth herein and in the supplemental materials submitted herewith, there are no existing wireless communications facilities that will allow AT&T to provide adequate coverage to this significant gap in its network. As also demonstrated by the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

f) is sited in such a manner that it is suitably screened;

As discussed herein, and as will be demonstrated by the visual demonstration and analysis, to the extent feasible, the proposed Tower is screened from residential buildings or public streets within 500 feet. As

discussed herein, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

g) is colored so that it will as much as possible blend with or be compatible with its surroundings;

As discussed herein, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

h) is designed to accommodate the maximum number of users technologically feasible;

The Applicant has designed the Tower to accommodate the proposed antennas of its anchor tenant plus the antennas of at least one other wireless communications carrier, as currently configured. As required by the Bylaw, the Applicant will design the Tower to be capable of accommodating additional height if needed by future carriers. The Applicant will work with co-locating carriers to appropriately install their facilities.

i) is necessary because there is no other existing Facility or Facilities with available space or capacity available to satisfy the Significant Gap;

As set forth herein and in the supplemental materials submitted herewith, there are no existing wireless communications facilities that will allow AT&T to provide adequate coverage to this significant gap in its network. As also demonstrated by the supplemental materials submitted herewith, the proposed facility is the only feasible alternative to provide adequate coverage to AT&T's significant gap in its wireless communications network. In addition, the Applicant's proposed Tower is at the minimum necessary height to allow AT&T to provide adequate coverage to this significant gap in its wireless network coverage. Further, the Tower will be disguised as a pine tree to help minimize any visual impacts to the extent feasible, while allowing AT&T and potential future carriers the flexibility to meet future network needs.

j) is in compliance with applicable Federal Aviation Administration (FAA), Federal Communications Commission (FCC), Massachusetts Aeronautics Commission, and the Massachusetts Department of Public Health regulations; and

The Applicant has submitted herewith evidence demonstrating that the proposed facility complies with the applicable FAA and FCC guidelines.

k) complies with all applicable requirements of this Bylaw, including Section 10.3.

As set forth herein and demonstrated by the supplemental materials submitted herewith, the proposed facility complies with all applicable requirements.

3.10.6.18 The Planning Board under its special permit authority may waive one or more requirements of this Section 3.10.6 and its subsections, including dimensional requirements, and it may grant a waiver from the use restrictions contained in Section 3.4.10 of the Table of Principal Uses, where the Board finds that the relief is necessary to avoid an effective prohibition of Personal Wireless Services in the Town or avoid unreasonable discrimination among Providers of functionally equivalent services.

Not applicable.

a) Any request for such waivers shall be supported by a study prepared by a qualified radio frequency engineer or other qualified professional consultant demonstrating to the Planning Board's satisfaction that there exists a Significant Gap in coverage within the specific geographic area proposed, and clear and convincing evidence that no alternative locations, technologies, and/or configurations are available that meet the otherwise applicable requirements.

Not applicable.

b) In granting such a waiver or waivers, the Planning Board must find that the extent of the granted relief is mitigated by showing that any alternative for serving the Significant Gap that is feasible is no less objectionable in its impact on the community, that all practicable mitigation of the proposed Facility's impact is incorporated in the design and conditions, and that the desired relief may be granted without substantial detriment to the neighborhood and without denigrating from the intent and purpose of this Bylaw.

Not applicable.

c) However, the Board shall not grant relief from the maximum height limitation in Subsection 3.10.6.3.

Not applicable.

d) The Board shall be empowered hereunder to grant relief from any setback requirements in Subsections 3.10.6.6 or 3.10.6.7 provided that the Facility as proposed with such non-conforming setbacks is demonstrated to be necessary to serve the Significant Gap or that such relief

will produce a better result for the community than without such relief, consistent with Section 3.10.1 – Purposes, and its subsections.

Not applicable.

e) The applicant shall provide the Board with a written statement describing how the requested relief meets the objectives of the preceding paragraph (d) and is in the best interest of the Town with reference to Section 3.10.1 – Purposes, and its subsections.

In accordance with this provision of the Bylaw, the Applicant has submitted this supporting statement and the supplemental materials submitted herewith.

3.10.6.19 At the applicant's expense a full transcription or recording of the oral hearings shall be made.

The Applicant reserves its rights with respect to this provision of the Bylaw.

3.10.7 Nothing contained in this Section 3.10 shall, or is intended to, waive, restrict, modify, or limit any other of the Bylaws of the Town of Acton, or any rule or regulation made there under.

No response required.

B. The Applicant's Proposal Satisfies the Requirements for the Grant of a Special Permit Pursuant to Section 10.3.5 of the Bylaw.

Section 3.10 of the Bylaw, provides that (Bylaw in **bold**):

**10.3.5 Mandatory Findings by Special Permit Granting Authority – Except for a Site Plan Special Permit, the Special Permit Granting Authority shall not issue a special permit unless without exception it shall find that the proposed use:
10.3.5.1 is consistent with the Master Plan.**

The proposed installation is consistent with the Master Plan. It will provide residents with an additional competitive source for wireless communications services, as well as provide existing and future customers with reliable wireless service coverage for their business and personal needs. The proposed installation will also provide residents, businesses, and visitors with improved wireless communications capabilities during periods of emergency.

10.3.5.2 Is in harmony with the purpose and intent of this Bylaw.

As discussed herein, the proposed facility complies with the criteria for the grant of a special permit for a wireless communications facility, and consequently is in harmony with the purpose and intent of the Bylaw. The proposed Tower is designed and located to minimize any adverse impacts on the surrounding area to the extent feasible. In addition, it will provide co-location opportunities for additional wireless communications carriers, thereby reducing the likelihood that a new tower will be

required to provide coverage to this area of Acton. Moreover, the proposed facility will not generate any objectionable noise, heat, light, glare, pollution, smoke, noxious fumes, odors, waste, trash, rubbish, nor discharge any water or sewage. Once constructed, the proposed facility will only require bi-weekly visits by authorized personnel for routine maintenance, and will have no material increase on traffic on or near the Property.

10.3.5.3 Will not be detrimental or injurious to the neighborhood in which it is to take place.

The Applicant's proposed facility will not be detrimental or injurious to the neighborhood. The proposed Tower is designed and located to minimize any adverse impacts on the surrounding area to the extent feasible. In addition, it will provide co-location opportunities for additional wireless communications carriers, thereby reducing the likelihood that a new tower will be required to provide coverage to this area of Acton. Moreover, the proposed facility will not generate any objectionable noise, heat, light, glare, pollution, smoke, noxious fumes, odors, waste, trash, rubbish, nor discharge any water or sewage. Once constructed, the proposed facility will only require bi-weekly visits by authorized personnel for routine maintenance, and will have no material increase on traffic on or near the Property.

The Applicant's proposed facility will benefit residents by providing them with an additional competitive source for wireless communications services, as well as provide existing and future customers with reliable wireless service coverage for their business and personal needs. The proposed installation will also provide residents, businesses, and visitors with improved wireless communications capabilities during periods of emergency.

10.3.5.4 Is appropriate for the site in question.

As more fully discussed herein, the Applicant's proposed stealth facility is an appropriate use of the Property located in the Light Industrial zoning district.

10.3.5.5 Complies with all applicable requirements of this Bylaw.

As more fully discussed herein, the Applicant's proposed facility complies with all applicable requirements of the Bylaw.

Section 10.3.6 further provides that "[t]he Special Permit Granting Authority may impose such conditions, safeguards and limitations as it deems appropriate to protect the neighborhood or the Town including, but not limited to ..." Sections 10.6.1 through 10.6.9 enumerate a number of considerations for which the Boards may impose additional conditions. The Applicant will comply with reasonable conditions concerning its proposed installation.

Section 10.7 also provides that "[a] special permit shall lapse if a substantial use thereof has not commenced except for good cause or, in the case of a permit for construction has not commenced except for good cause within two years from the date of grant thereof." The Applicant will comply with this requirement of the Bylaw.

V. Conclusion

The Applicant hereby requests that the Board determine that its proposed telecommunications facility will not have any adverse effect on the neighborhood in particular, and the Town of Acton as a whole. The findings are made in view of the particular characteristics of the Property and of the proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

For the foregoing reasons, as well as to satisfy the mandate of Congress to facilitate competition in the telecommunications industry as set forth in the Telecommunications Act of 1996 (the "1996 Act"), the Applicant respectfully requests the Board to grant the foregoing special permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's proposed facility.

Sincerely,


Brian S. Grossman

3

PROJECT SUMMARY

SITE NAME: ACTON 2
SITE I.D.: MA-11845-S
SITE ADDRESS: 5 CRAIG ROAD
 ACTON, MA 01720
JURISDICTION: TOWN OF ACTON
COUNTY: MIDDLESEX
ZONING: LIGHT INDUSTRIAL, LI
PROPERTY OWNER: PALMER REALTY TRUST
 CRAIG D. PALMER & LEONARD PALMER
APPLICANT: SBA TOWERS II, LLC.
 5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487
 OFFICE: (561) 226-9332

SITE COORDINATES
LATITUDE: N 42° 28' 02.7" NAD 83
LONGITUDE: W 71° 25' 07.8" NAD 83
GROUND ELEVATION: 142.3 AMSL NAVD 88
 142.55 AMSL NGVD 29

OCCUPANCY TYPE: RAW LAND
CONSTRUCTION TYPE: PROPOSED 110' MONOPINE TOWER
DRIVING DIRECTIONS: FROM BOSTON, MA: TAKE I-90 WEST ABOUT 10 MILES TO EXIT 15. MERGE ONTO I-95 NORTH AND GO 6.2 MILES TO EXIT 29B. MERGE ONTO MA-2 WEST AND GO 4 MILES. TURN LEFT ONTO MA-2 WEST/CONCORD TURNPIKE AND GO 4.5 MILES. ENTER NEXT ROUNDABOUT AND TAKE 3RD EXIT ONTO MA-2 WEST. GO 2.3 MILES AND TURN LEFT ONTO MA-2 EAST. GO 1.4 MILES AND URN SLIGHT RIGHT ONTO SCHOOL STREET. TURN RIGHT ONTO CRAIG ROAD. END AT SITE.

HANDICAPPED REQUIREMENTS
 FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS NOT REQUIRED.

PLUMBING REQUIREMENTS
 FACILITY HAS NO PLUMBING.

CONSULTING TEAM

ARCHITECTURAL - ENGINEERING FIRM:
 TOWER ENGINEERING PROFESSIONALS, INC.
 3703 JUNCTION BOULEVARD, RALEIGH, NC 27603
 CONTACT: PETER G. JERNIGAN, P.E.
 PHONE: (919) 661-6351 FAX: (919) 661-6350

SURVEYING FIRM:
 CME ASSOCIATES, INC.
 50 ELM STREET, SOUTHBRIDGE, MA 01550
 CONTACT: TIM GOSSELIN
 PHONE: 1-860-928-7848 FAX: 1-860-928-7846

POWER COMPANY: NSTAR
 CONTACT: CUSTOMER SERVICE
 PHONE: 1-800-592-2000

TELEPHONE COMPANY: VERIZON
 CONTACT: CUSTOMER SERVICE
 PHONE: 1-800-837-4966

ELECTRICAL ENGINEER:
 TOWER ENGINEERING PROFESSIONALS, INC.
 3703 JUNCTION BOULEVARD, RALEIGH, NC 27603
 CONTACT: J. RUSSELL HILL, P.E.
 PHONE: (919) 661-6351 FAX: (919) 661-6350

TOWER VENDOR:
 SABRE COMMUNICATIONS
 2101 MURRAY STREET, SIOUX CITY, IA
 CONTACT: CHAD PETERS
 PHONE: (712) 258-6690



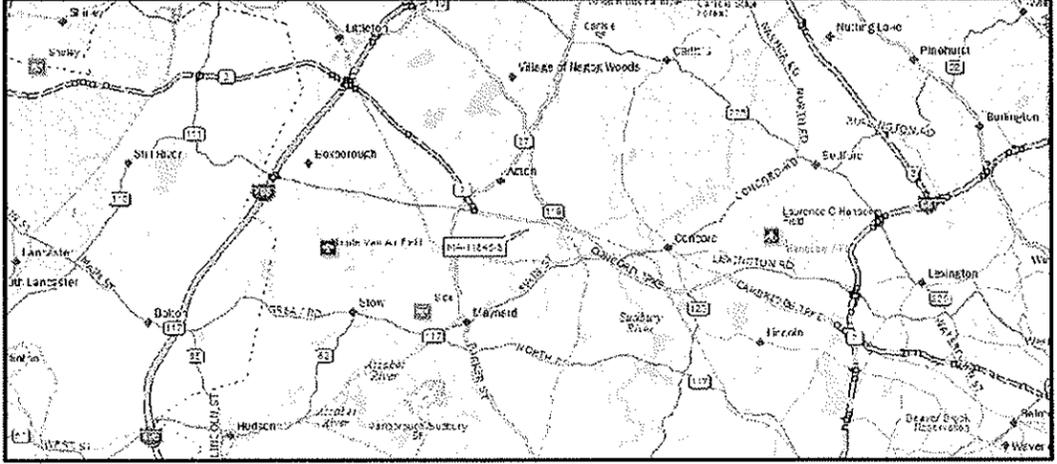
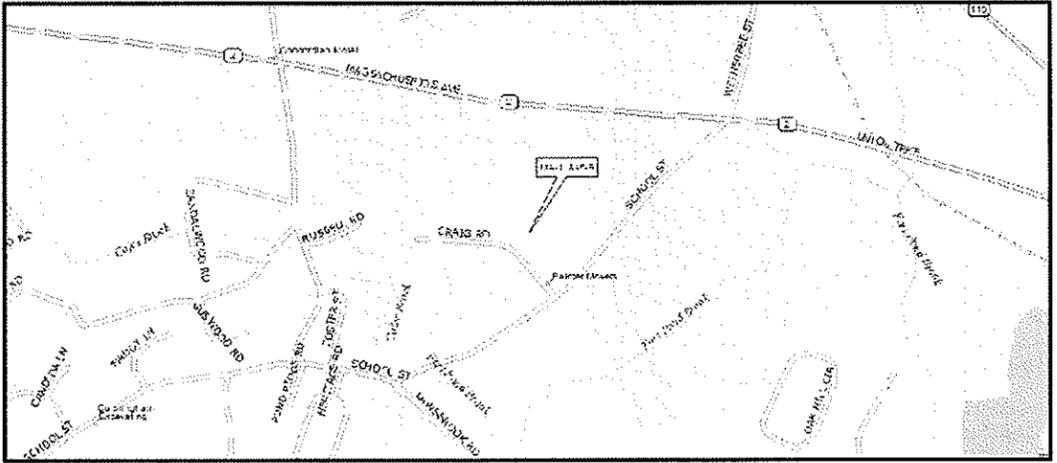
SITE NAME
ACTON 2

SBA SITE I.D.
MA-11845-S

E-911 ADDRESS (NOT CONFIRMED)
5 CRAIG ROAD
ACTON, MA 01720

PROJECT TYPE
PROPOSED 110' MONOPINE TOWER

LOCATION MAPS



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C-1	LOCUS NPLAN	13
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C-1B	SITE LAYOUT	13
C-1C	PROPERTY OWNERS	13
C-2	ENLARGED SITE PLAN	13
C-3	SITE ELEVATIONS	13
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C-5	SOIL AND EROSION CONTROL PLAN	13
C-6	AT&T SHELTER ELEVATIONS	13
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APPROVALS

LANDLORD		DATE
PROPERTY		DATE
CONSTRUCTION		DATE
RSM		DATE
TENANT		DATE
ZONING		DATE

1 (888) 344-7233
 www.digsafe.com

CONTRACTOR TO CALL MASSACHUSETTS DIG SAFE AT LEAST (2) WORKING DAYS PRIOR TO DIGGING.

APPLICANT/LESSEE:

SBA

5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487
 OFFICE: (561) 226-9332

PROJECT INFORMATION:

ACTON 2
(MA-11845-S)

5 CRAIG ROAD
 ACTON, MA 01720
 (MIDDLESEX COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 3703 JUNCTION BOULEVARD
 RALEIGH, NC 27603-5263
 OFFICE: (919) 661-6351
 www.tepgroup.net

SEAL:

June 10, 2013

13	06-10-13	FINAL ZONING
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11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:
DRAWN BY: JIU		CHECKED BY: KSM

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: T-1
REVISION: 13
 TEP #: 29864-5657

ZONING INFORMATION

ZONING DISTRICT TYPE: LI, LIGHT INDUSTRIAL (INDUSTRIAL DISTRICT)
 GROUNDWATER PROTECTION DISTRICT: ZONE 2
 PROPERTY ID H4-45 AND H4-13 ARE TO BE COMBINED. DATA IN TABLE BELOW IS BASED ON COMBINED PROPERTY
 PROPOSED USE: WIRELESS COMMUNICATION FACILITY

ZONING REGULATION	REQUIRED		EXISTING	PROPOSED
	MINIMUM	MAXIMUM		
LOT SIZE	-	-	3.65 AC.	N/A
TOTAL LOT COVERAGE	-	-	56,150 SQ.FT	59,550 SQ.FT
% OF LAND NOT PERMITTED IN ZONING DISTRICT	-	-	0%	0%
OPEN SPACE*	70%	-	81.78%	81.32%
UNDISTURBED OPEN SPACE	40%	-	54.23%	51.97%
IMPERVIOUS COVER*	-	30%	68.70%**	67.19%**
% WETLANDS	-	50%	0 %	0 %
% FLOOD PLAIN	-	-	0 %	0 %
DEVELOPABLE SITE AREA	-	-	92,380 SQ.FT	88,780 SQ.FT
FRONT YARD SETBACK	50 FT	-	-	91.4 FT
SIDE YARD SETBACK	30 FT	-	-	30.0 FT
REAR YARD SETBACK	30 FT	-	-	106.9 FT
SITE FRONTAGE	200 FT	-	448 FT	448 FT
BUILDING HEIGHT	-	40 FT	-	9.8 FT
FLOOR AREA RATIO	-	20%	18.22 %	18.85%
PARKING SPACES	0	-	UNKNOWN	2 ADDITIONAL

THE TABLE ABOVE IS CONSIDERING THE COMBINED PROPERTY

*EXISTING GRAVEL AREA IS CONSIDERED AS IMPERVIOUS COVER. OPEN SPACE AND IMPERVIOUS COVER SUM TO MORE THAN 100% BECAUSE IMPERVIOUS GRAVEL IS DOUBLE COUNTED. SEE "OPEN SPACE TABLE" ON SHEET C-1A FOR INDIVIDUAL AREAS.

**PROPERTY IS MOSTLY GRAVEL. THE PROPOSED SITE DECREASES IMPERVIOUS AREA SINCE THE EXISTING GRAVEL IS TURNED INTO PERVIOUS LANDSCAPING. THIS EXPLAINS THE DECREASE FROM EXISTING TO PROPOSED CONDITIONS.

NOTES:

1. THE USE OF FILL CONTAINING HAZARDOUS MATERIALS IS FORBIDDEN.
2. THE CONTRACTOR SHALL MARK THE LIMITS OF WORK PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.
3. THE CLEANING OF CATCHBASIN SUMPS AND STORMWATER BASINS FOLLOWING CONSTRUCTION AND THEREAFTER IS REQUIRED BY THE SITE OWNER.
4. THE HAULING OF EARTH TO AND FROM THE SITE IS NOT PERMITTED BETWEEN THE HOURS OF 9AM AND 4PM, MONDAY THROUGH FRIDAY, IF EARTH MATERIALS ARE INTENDED TO BE REMOVED FROM OR BROUGHT TO THE SITE.
5. EXISTING DRIVEWAY CONDITIONS SHALL BE IMPROVED AS NEEDED. FOR DETAILS SEE SHEET C-12.
6. ALL STRUCTURES ASSOCIATED WITH THE WIRELESS COMMUNICATION FACILITIES SHALL BE REMOVED WITHIN ONE YEAR OF CONCESSION OF USE (BYLAW SECTION 3.8.3.6).
7. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND POSITIONS OF ALL PROJECT OWNER'S EQUIPMENT ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
8. ONCE THE FACILITY BECOMES FULLY OPERATIONAL, NORMAL AND ROUTINE MAINTENANCE BY PROJECT OWNER'S TECHNICIANS WILL BE PERFORMED ON A MONTHLY BASIS. THEREFORE, THE ESTIMATED VEHICLE TRIP GENERATION RATE IS 2 TRIPS PER MONTH. THE AVERAGE DAILY TRIP GENERATION RATE (ADJ) IS 0.07.
9. PERMANENT STANDBY EMERGENCY POWER WILL BE UTILIZED BY PROJECT OWNER'S BY USE OF PROPOSED DIESEL GENERATOR.

APPLICANT/LESSEE:



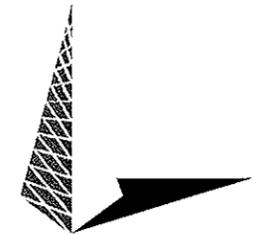
5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487
 OFFICE: (561) 226-9332

PROJECT INFORMATION:

**ACTON 2
 (MA-11845-S)**

5 CRAIG ROAD
 ACTON, MA 01720
 (MIDDLESEX COUNTY)

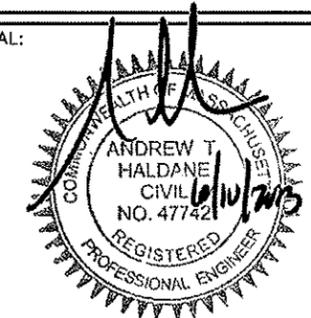
PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

3703 JUNCTION BOULEVARD
 RALEIGH, NC 27603-5263
 OFFICE: (919) 661-6351
 www.tepgroup.net

SEAL:



June 10, 2013

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DRAWN BY: JHJ CHECKED BY: KSM

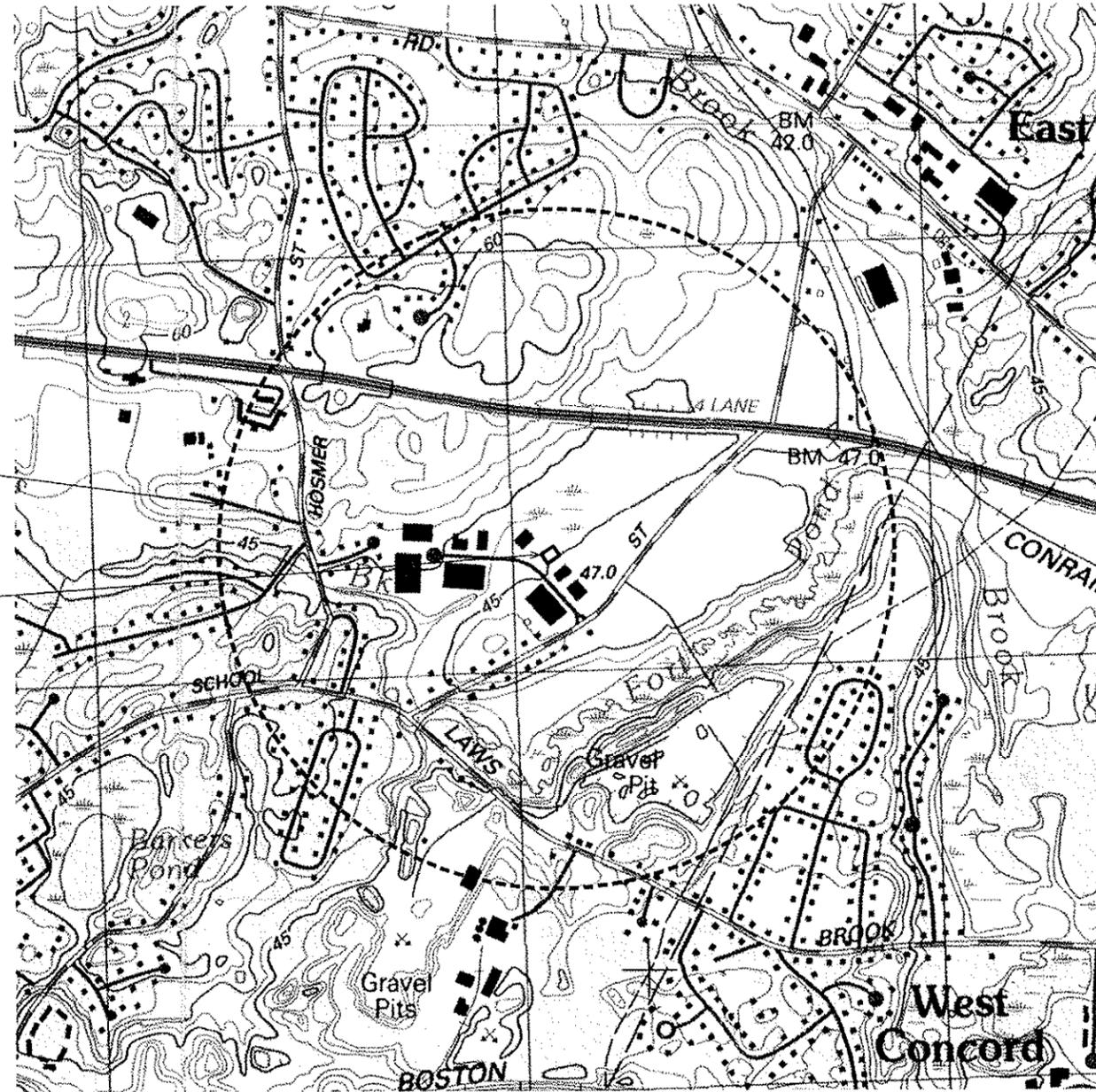
SHEET TITLE:

**ZONING
 INFORMATION**

SHEET NUMBER: N-1	REVISION: 13
	TEP #: 29864-5657

ZONING INFORMATION

SCALE: N.T.S.



1 MILE DIAMETER CIRCLE.

PROPOSED TOWER FACILITY.

*USGS TOPOGRAPHIC QUAD IMAGES 205914 AND 20591.0

APPLICANT/LESSEE:



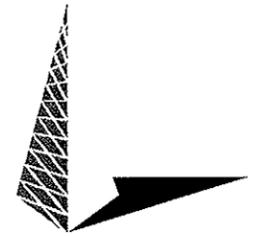
5900 BROKEN SOUND PARKWAY NW
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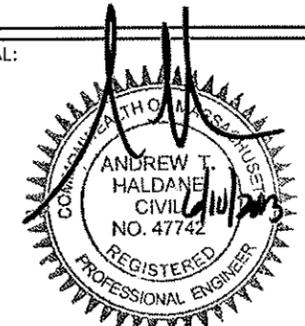
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DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

LOCUS PLAN

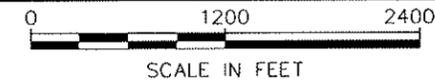
SHEET NUMBER:

C-1

REVISION:

13

TEP #: 29864-5657



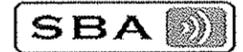
LOCUS PLAN

SCALE: 1" = 1200'

NOTES:

1. THE SITE AND SURROUNDING AREA ARE LOCATED IN GROUNDWATER PROTECTION DISTRICT ZONE 2.
2. THE EXISTING LOCATION OF THE TOWER IS NOT LOCATED IN A FLOOD PLAIN (FEMA - FIRM COMMUNITY-PANEL NUMBER 2501760007C, DATED JANUARY 6, 1988).
3. ELEVATIONS SHOWN THROUGHOUT THESE PLANS REFERENCE NAVD 88. THE FOLLOWING CONVERSION FACTOR MAY BE USED TO OBTAIN NGVD 29: (NGVD 29) = 1.001722 * (NAVD 88).

APPLICANT/LESSEE:



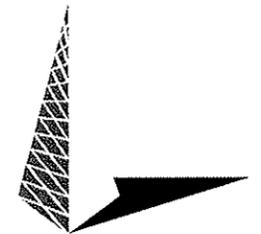
5900 BROKEN SOUND PARKWAY NW
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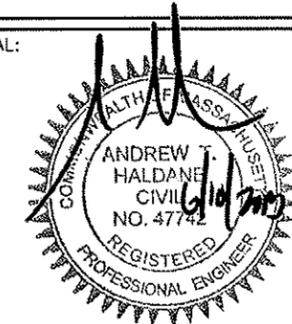
5 CRAIG ROAD
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(MIDDLESEX COUNTY)

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10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

SITE PLAN

SHEET NUMBER: C-1A	REVISION: 13 TEP #: 29864-5657
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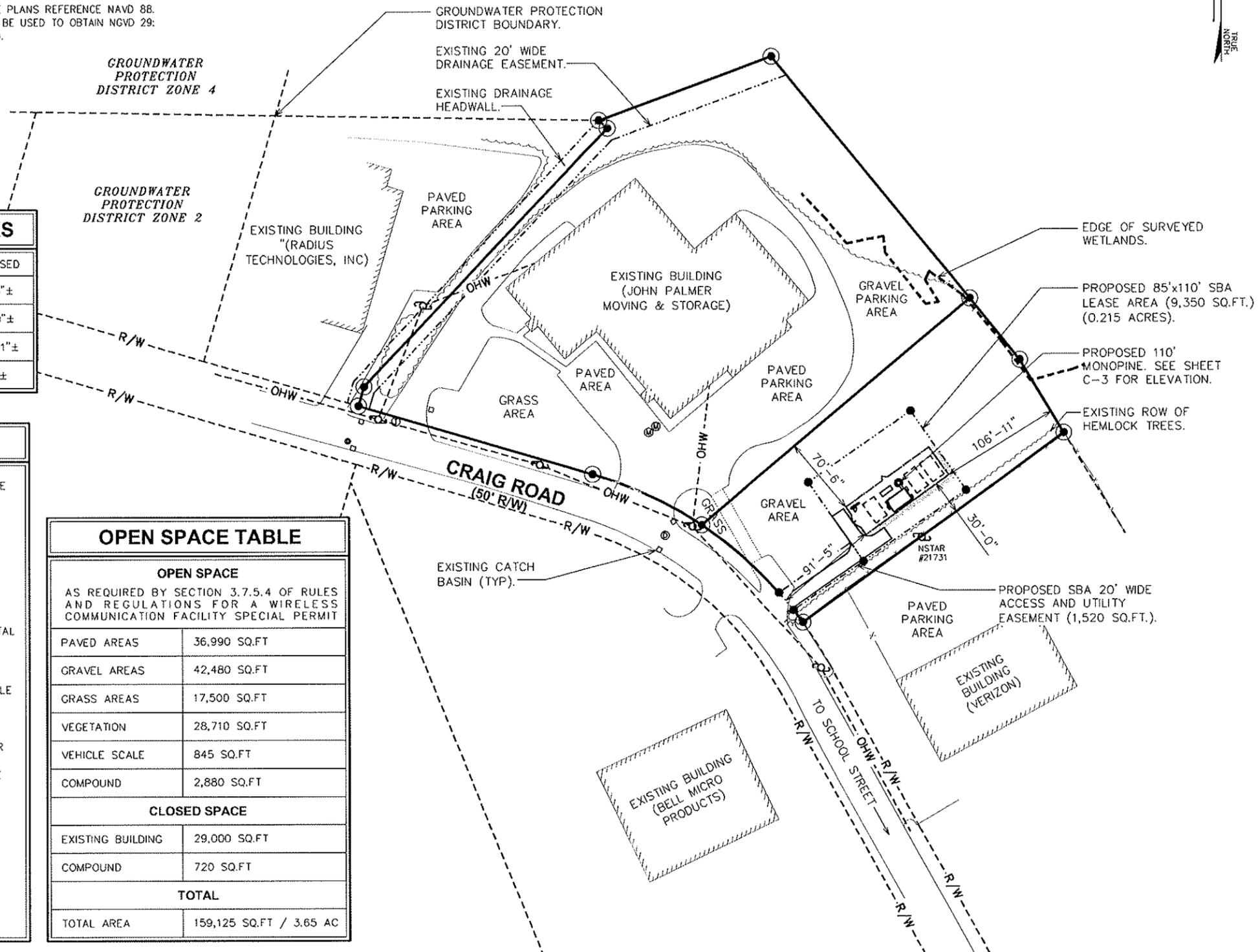
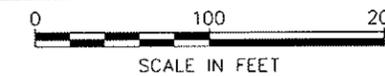
BUILDING SETBACKS		
	REQUIRED	PROPOSED
FRONT	50'	91'-5"±
SIDE	30'	30'-0"±
REAR	30'	106'-11"±
SITE FRONTAGE	200'	448'±

LEGEND	
	EXIST. PROPERTY LINE
	ADJ. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. LIGHT POLE
	EXIST. HYDRANT
	EXIST. TELCO PEDESTAL
	EXIST. MANHOLE
	EXIST. TELCO MANHOLE
	PROPERTY CORNER
	LEASE/EASE. CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

OPEN SPACE TABLE	
OPEN SPACE	
AS REQUIRED BY SECTION 3.7.5.4 OF RULES AND REGULATIONS FOR A WIRELESS COMMUNICATION FACILITY SPECIAL PERMIT	
PAVED AREAS	36,990 SQ.FT
GRAVEL AREAS	42,480 SQ.FT
GRASS AREAS	17,500 SQ.FT
VEGETATION	28,710 SQ.FT
VEHICLE SCALE	845 SQ.FT
COMPOUND	2,880 SQ.FT
CLOSED SPACE	
EXISTING BUILDING	29,000 SQ.FT
COMPOUND	720 SQ.FT
TOTAL	
TOTAL AREA	159,125 SQ.FT / 3.65 AC

SITE PLAN

SCALE: 1" = 100'



NOTES:

1. THE SITE AND SURROUNDING AREA ARE LOCATED IN GROUNDWATER PROTECTION DISTRICT ZONE 2.
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3. ELEVATIONS SHOWN THROUGHOUT THESE PLANS REFERENCE NAVD 88. THE FOLLOWING CONVERSION FACTOR MAY BE USED TO OBTAIN NGVD 29: (NGVD 29) = 1.001722 * (NAVD 88).

BUILDING SETBACKS

	REQUIRED	PROPOSED
FRONT	50'	91'-5"±
SIDE	30'	30'-0"±
REAR	30'	106'-11"±
SITE FRONTAGE	200'	448'±

LEGEND

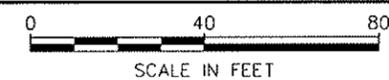
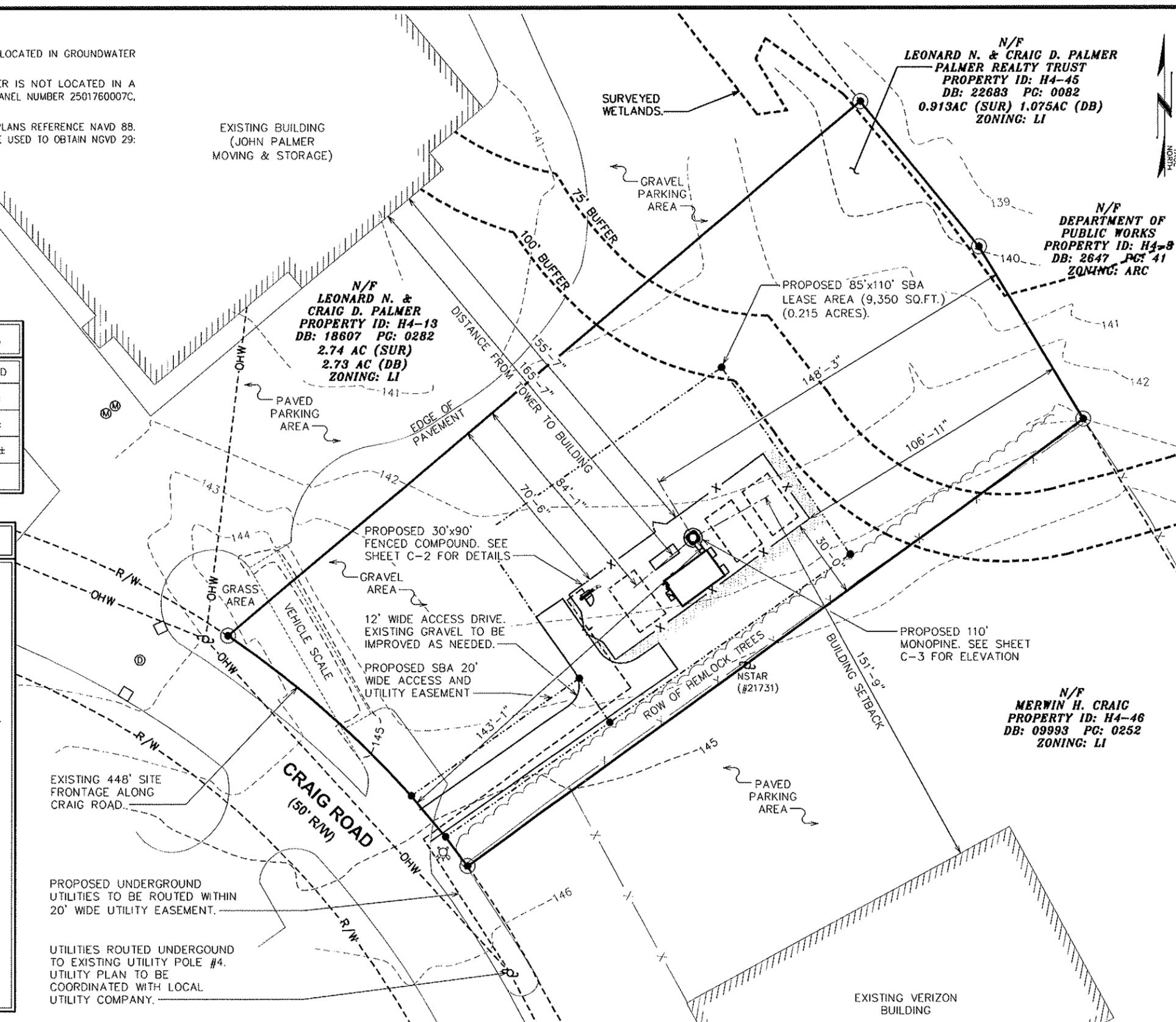
	EXIST. PROPERTY LINE
	ADJ. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. LIGHT POLE
	EXIST. HYDRANT
	EXIST. TELCO PEDESTAL
	EXIST. MANHOLE
	EXIST. TELCO MANHOLE
	PROPERTY CORNER
	LEASE/EASE. CORNER
	EXIST. CONTOUR LINE
	EDGE OF PAVEMENT
	OVERHEAD WIRE
	RIGHT-OF-WAY
	CHAIN LINK FENCE
	EXISTING TREE LINE

PROPOSED UNDERGROUND UTILITIES TO BE ROUTED WITHIN 20' WIDE UTILITY EASEMENT.

UTILITIES ROUTED UNDERGROUND TO EXISTING UTILITY POLE #4. UTILITY PLAN TO BE COORDINATED WITH LOCAL UTILITY COMPANY.

SITE LAYOUT

SCALE: 1" = 40'



APPLICANT/LESSEE:
SBA
 5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487
 OFFICE: (561) 226-9332

PROJECT INFORMATION:
ACTON 2 (MA-11845-S)
 5 CRAIG ROAD
 ACTON, MA 01720
 (MIDDLESEX COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 3703 JUNCTION BOULEVARD
 RALEIGH, NC 27603-5263
 OFFICE: (919) 661-6351
 www.tepgroup.net

SEAL:

 June 10, 2013

13	06-10-13	FINAL ZONING
12	05-28-10	FINAL ZONING
11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:
SITE LAYOUT

SHEET NUMBER: **C-1B** REVISION: **13**
 TEP #: 29864-5657

N/F
LEONARD N. & CRAIG D. PALMER
PALMER REALTY TRUST
 PROPERTY ID: H4-45
 DB: 22683 PG: 0082
 0.913AC (SUR) 1.075AC (DB)
 ZONING: LI

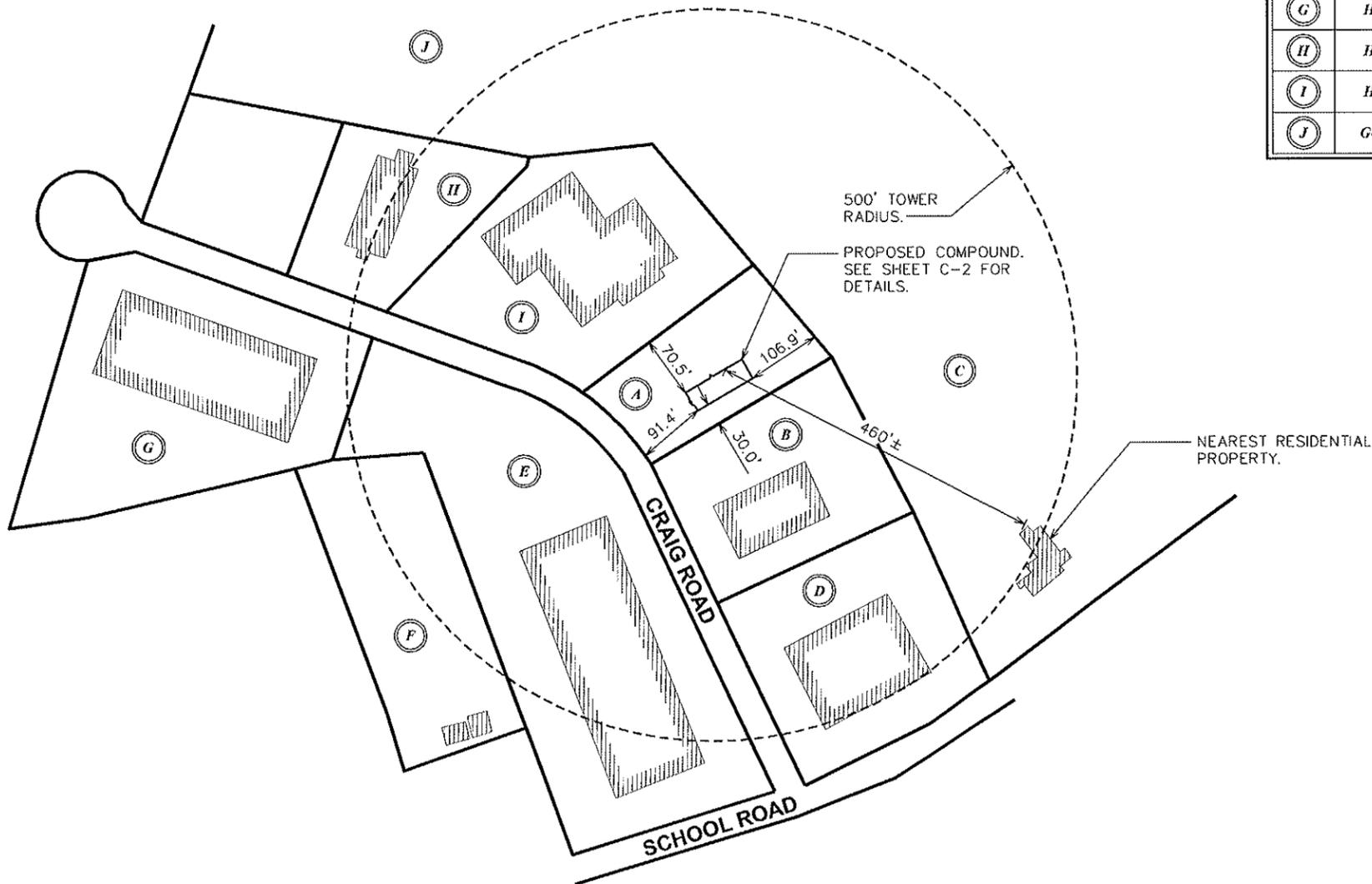
N/F
LEONARD N. & CRAIG D. PALMER
 PROPERTY ID: H4-13
 DB: 18607 PG: 0282
 2.74 AC (SUR)
 2.73 AC (DB)
 ZONING: LI

N/F
DEPARTMENT OF PUBLIC WORKS
 PROPERTY ID: H4-8
 DB: 2647 PG: 41
 ZONING: ARC

N/F
MERWIN H. CRAIG
 PROPERTY ID: H4-46
 DB: 09993 PG: 0252
 ZONING: LI

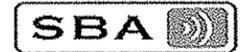
NOTE:

THE MAP SHOWN BELOW IS BASED ON INFORMATION TAKEN FROM THE TOWN OF ACTON, MA GEOGRAPHIC INFORMATION SYSTEM.



PARCEL INFORMATION				
REF.	PROPERTY ID	N/F PROPERTY OWNER	DB - PG	ZONING DISTRICT
(A)	H4-45	LEONARD N. & CRAIG D. PALMER	22683-0082	LI
(B)	H4-46	MERWIN H. CRAIG	09993-0252	LI
(C)	H4-5	DEPARTMENT OF PUBLIC WORKS	2647-41	ARC
(D)	H4-66	STEVEN P. MURPHY TRUSTEE OF JELRICH TRUST OF 2001	49012-82	LI
(E)	H4-25	STEVEN P. MURPHY TRUSTEE OF JELRICH TRUST OF 2001	49012-82	LI
(F)	H4-55	GEORGE PAQUETTE	15173-128	R-2
(G)	H4-14	STEVEN P. MURPHY TRUSTEE OF JELRICH TRUST OF 2001	49012-82	R-1
(H)	H4-12	15 CRAIG ROAD, LLC.	36079-193	LI
(I)	H4-13	LEONARD N. & CRAIG D. PALMER	18607-0282	LI
(J)	G4-198	DEPARTMENT OF PUBLIC WORKS	-	ARC

APPLICANT/LESSEE:



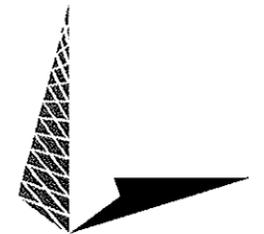
5900 BROKEN SOUND PARKWAY NW
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PROJECT INFORMATION:

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(MA-11845-S)**

5 CRAIG ROAD
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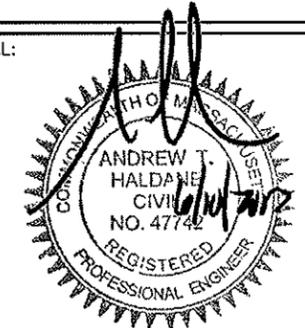
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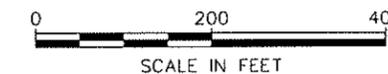
SHEET TITLE:

PROPERTY OWNERS

SHEET NUMBER:	REVISION:
C-1C	13
TEP #: 29864-5657	

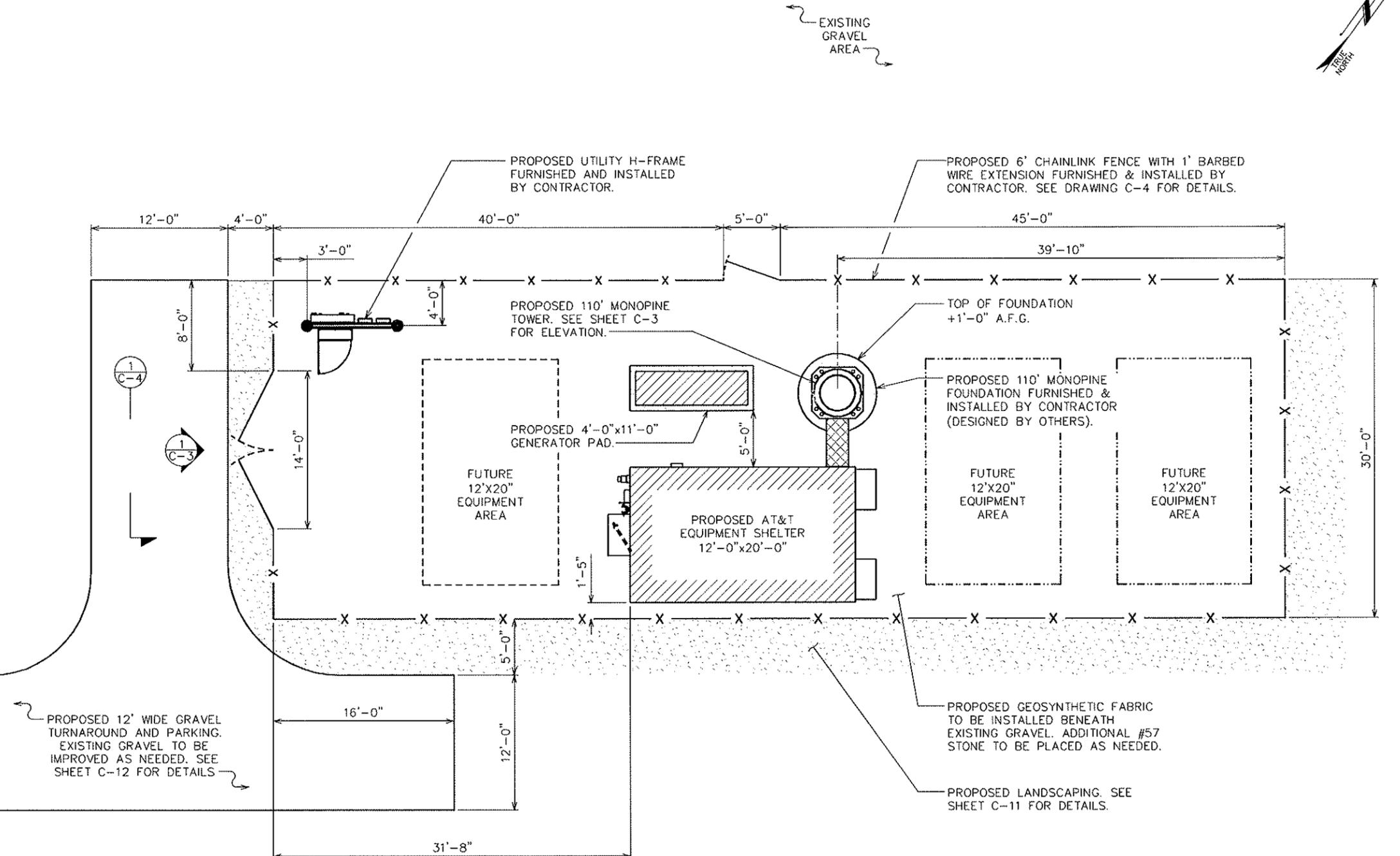
PROPERTY OWNERS

SCALE: 1" = 200'



NOTE:

WORK LIGHT SHALL BE A COVERED 60W INCANDESCENT HALOGEN. THIS COMPLIES WITH SECTION 10.6 OF BYLAW.



APPLICANT/LESSEE:

SBA

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10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHU CHECKED BY: KSM

SHEET TITLE:

**ENLARGED
SITE PLAN**

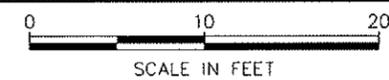
SHEET NUMBER: **C-2**

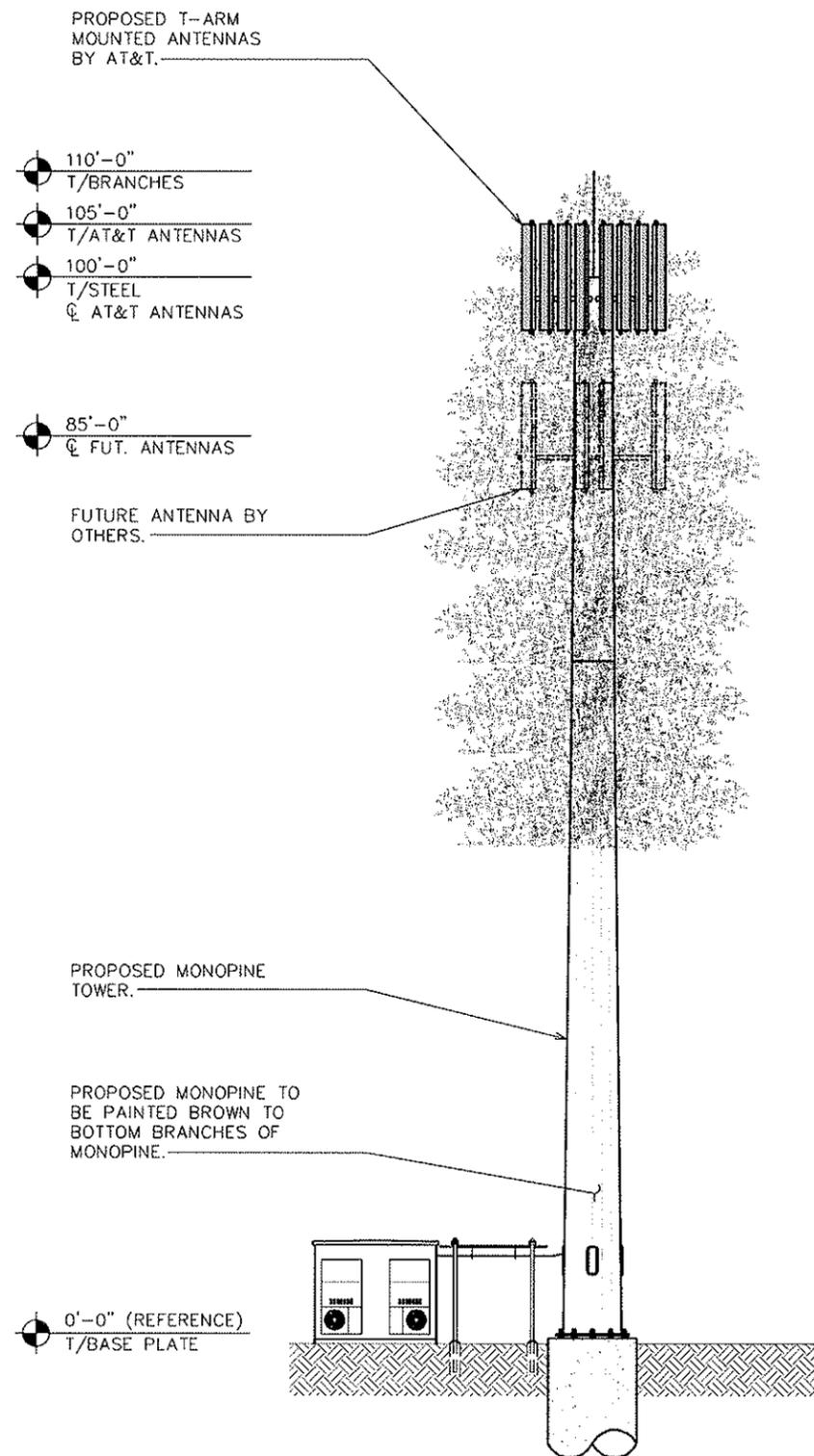
REVISION: **13**

TEP #: 29864-5657

ENLARGED SITE PLAN

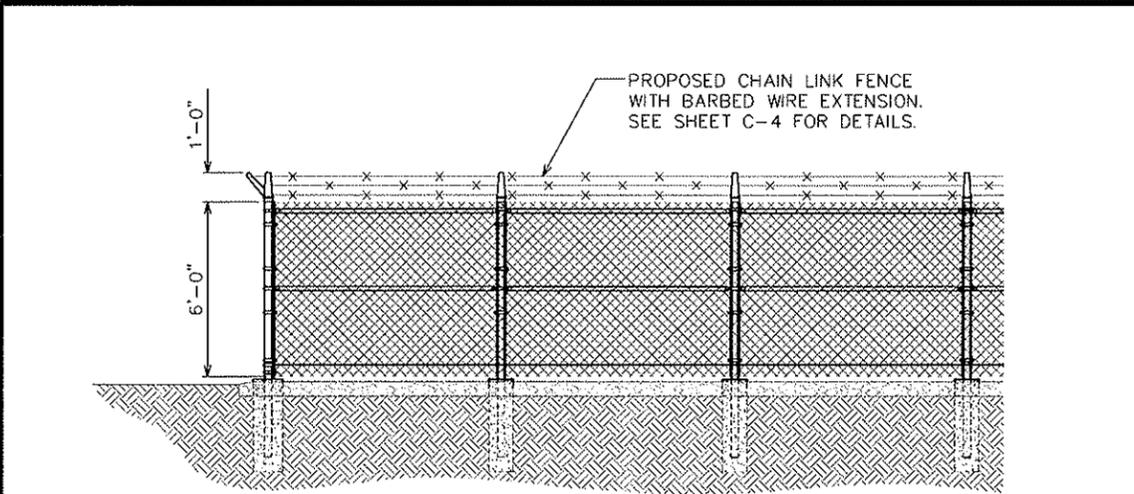
SCALE: 1" = 10'





TOWER NOTES:

1. TOWER SHALL BE ILLUMINATED ONLY AS REQUIRED BY THE FEDERAL COMMUNICATIONS COMMISSION (FCC), THE FEDERAL AVIATION ADMINISTRATION (FAA), OR OTHER STATE OR FEDERAL AGENCY OF COMPETENT JURISDICTION.
2. TOWER SHALL BE DISGUISED AS A PINE TREE.
3. A SINGLE SIGN, 2 FEET SQUARE, IN A VISIBLE LOCATION SHALL BE REQUIRED WITH NAME AND EMERGENCY TELEPHONE NUMBER OF THE TOWER OWNER AND ALL COMPANIES OPERATING ON THE TOWER. NO ADVERTISING SHALL BE ATTACHED TO THE TOWER.
4. PROPOSED COAX TO BE RUN UP INSIDE OF PROPOSED POLE USING HOISTING GRIPS.
5. T-ARM MOUNTED PANEL ANTENNAS TO BE PAINTED TO MATCH FOLIAGE AND TRUNK COLOR.
6. TOWER TO BE PAINTED BROWN UP TO THE BOTTOM BRANCHES OF MONOPINE.



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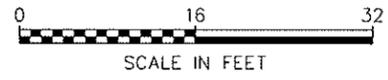
DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:
**SITE
 ELEVATION**

SHEET NUMBER: **C-3** REVISION: **13**
 TEP #: 29864-5657

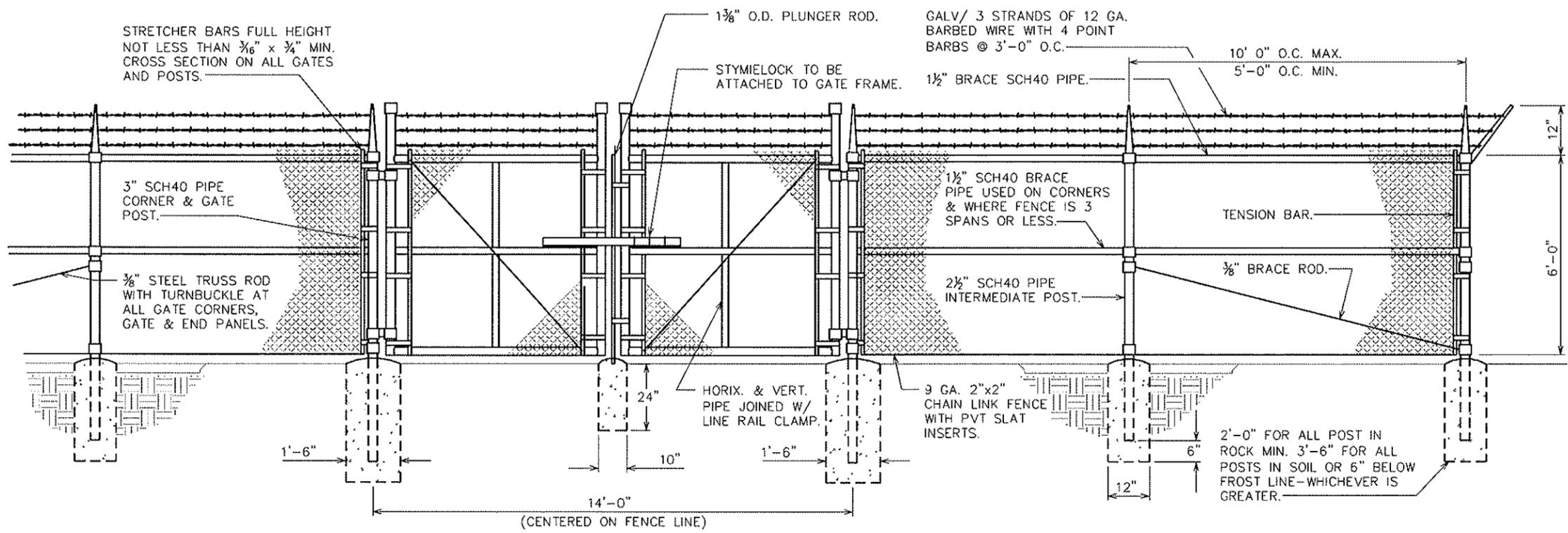
ELEVATION VIEW

SCALE: 1/8" = 1'-0"



ELEVATION VIEW @ FENCE CORNERS

SCALE: N.T.S.



TYPICAL FENCE ELEVATION

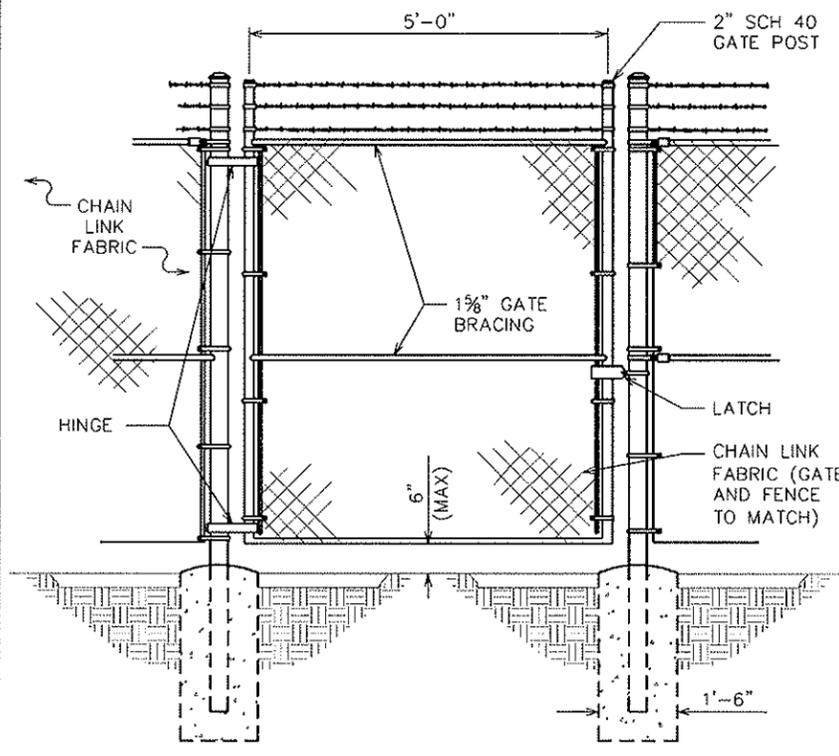
SCALE: N.T.S.

APPLICANT/LESSEE:
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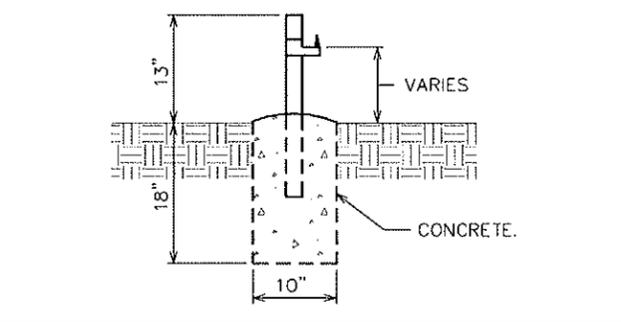
PLANS PREPARED BY:

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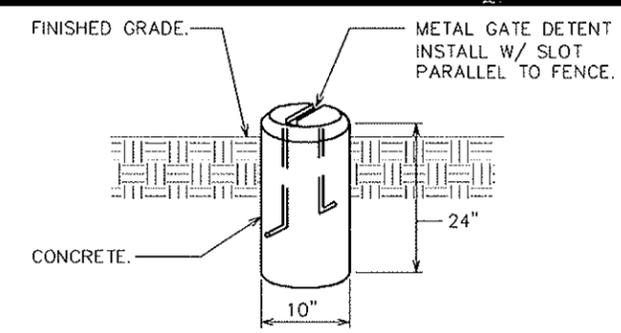
TYPICAL MAN GATE DETAIL

SCALE: N.T.S.



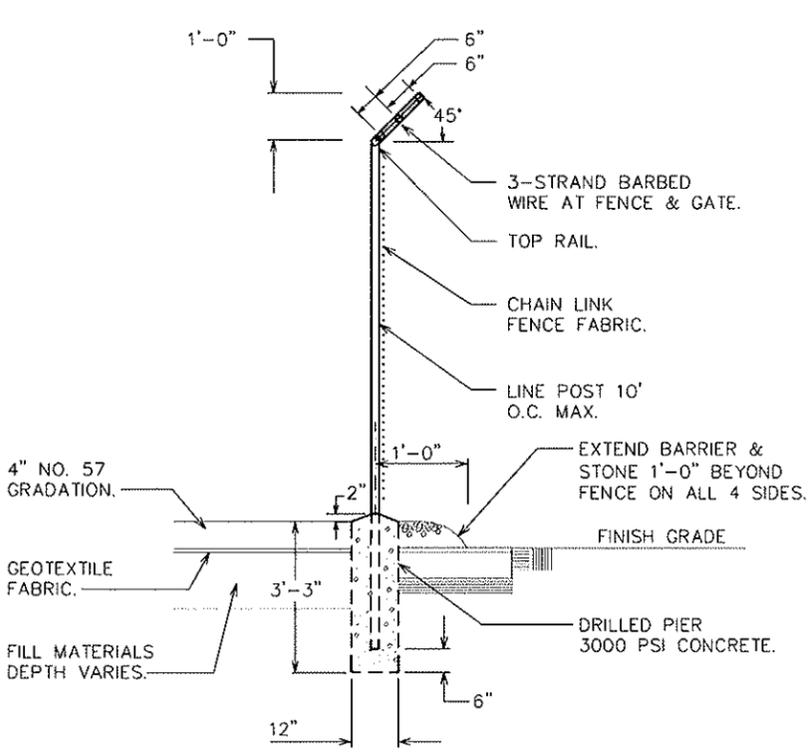
GATE STOP / KEEPER DETAIL

SCALE: N.T.S.



GATE DETENT DETAIL

SCALE: N.T.S.



FENCE / BARBED WIRE ARM DETAIL

SCALE: N.T.S.

SEAL:

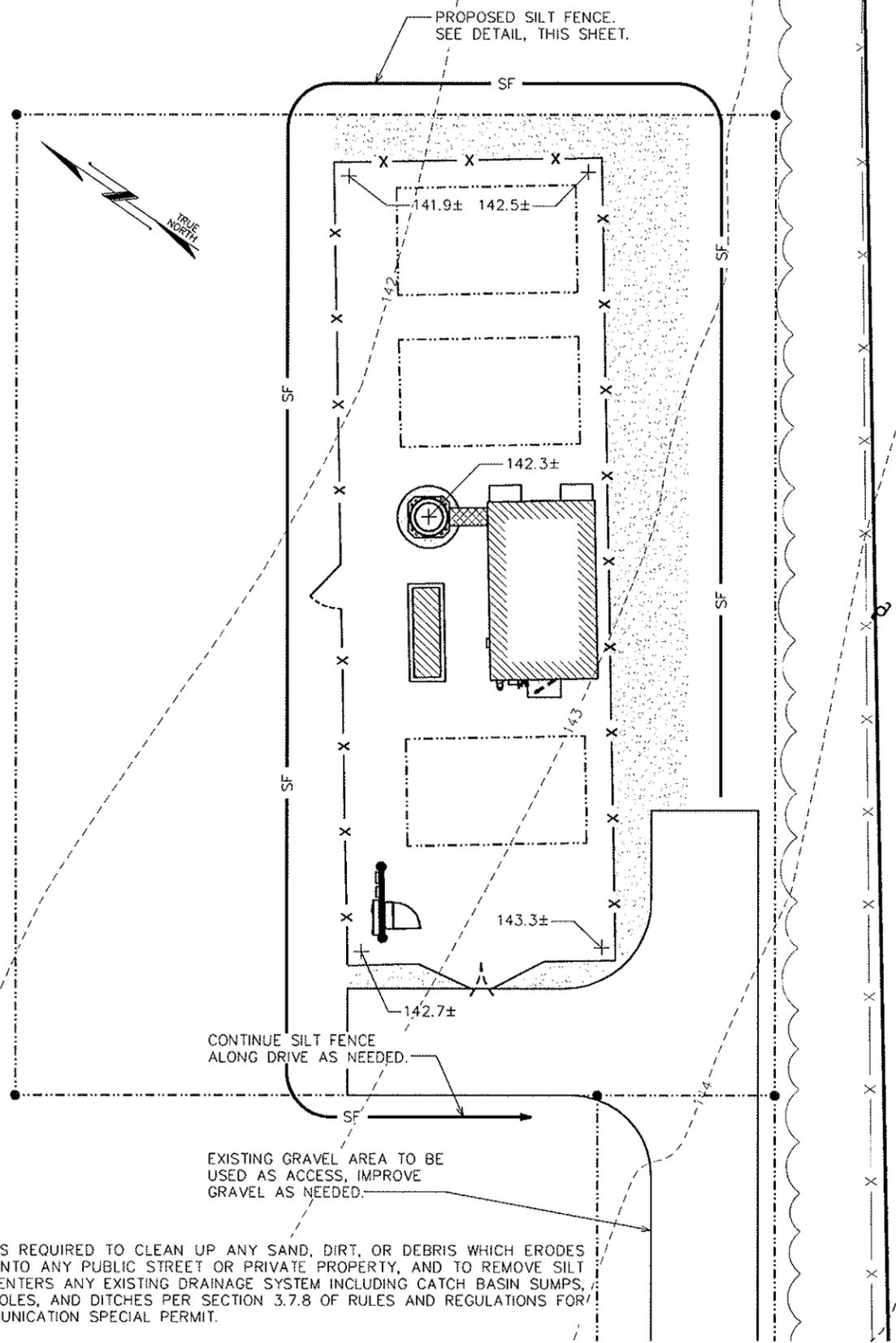
 ANDREW T. HALDANE
 CIVIL ENGINEER
 NO. 4774
 REGISTERED PROFESSIONAL ENGINEER
 June 10, 2013

13	06-10-13	FINAL ZONING
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REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:
FENCE DETAILS

SHEET NUMBER: **C-4** REVISION: **13**
 TEP #: 29864-5657



NOTE:

THE DEVELOPER IS REQUIRED TO CLEAN UP ANY SAND, DIRT, OR DEBRIS WHICH ERODES FROM THE SITE ONTO ANY PUBLIC STREET OR PRIVATE PROPERTY, AND TO REMOVE SILT OR DEBRIS THAT ENTERS ANY EXISTING DRAINAGE SYSTEM INCLUDING CATCH BASIN SUMPS, PIPE LINES, MANHOLES, AND DITCHES PER SECTION 3.7.8 OF RULES AND REGULATIONS FOR A WIRELESS COMMUNICATION SPECIAL PERMIT.

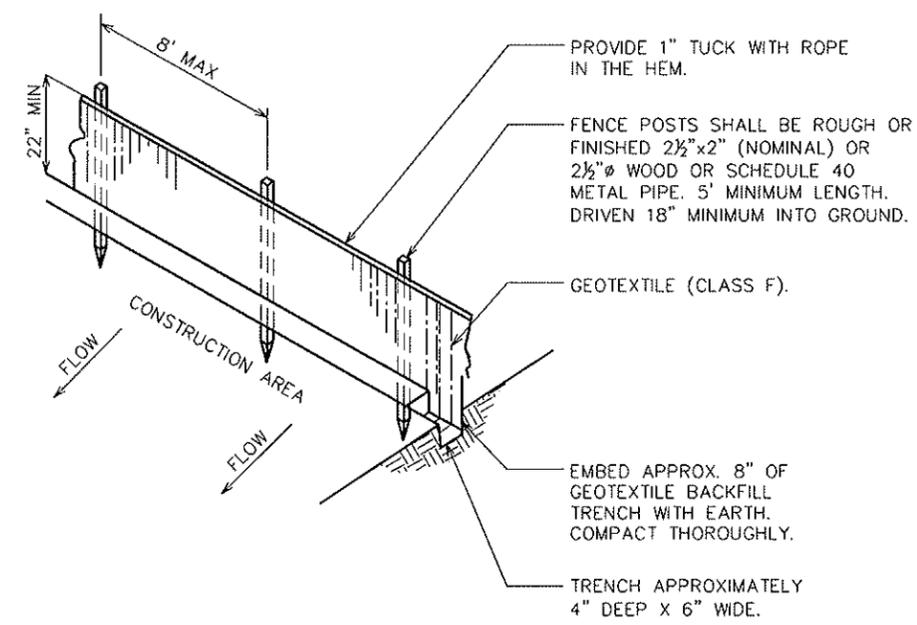
GRADING PLAN

SCALE: 1/16" = 1'-0"



NOTES:

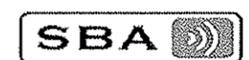
1. GEOTEXTILE FABRIC TO BE FASTENED SECURELY TO FENCE POST BY USE OF WIRE TIES OR HOG RINGS. 3 FASTENERS PER POST.
2. ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE SHALL BE SECURELY FASTENED TO A COMMON POST OR OVERLAPPED 3' (MINIMUM).
3. THIS DEVICE IS INTENDED TO CONTROL SHEET FLOW ONLY. IT WILL NOT BE USED IN AREAS OF CONCENTRATED FLOW WITH A DRAINAGE AREA OF 1/2 ACRE OR MORE.



SILT FENCE DETAIL

SCALE: N.T.S.

APPLICANT/LESSEE:



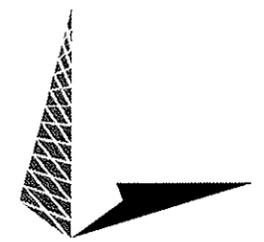
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487
OFFICE: (561) 226-9332

PROJECT INFORMATION:

**ACTON 2
(MA-11845-S)**

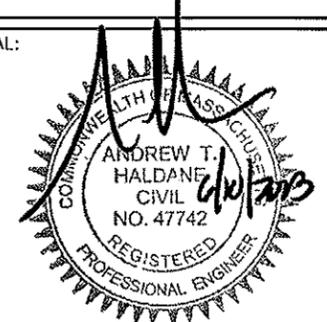
5 CRAIG ROAD
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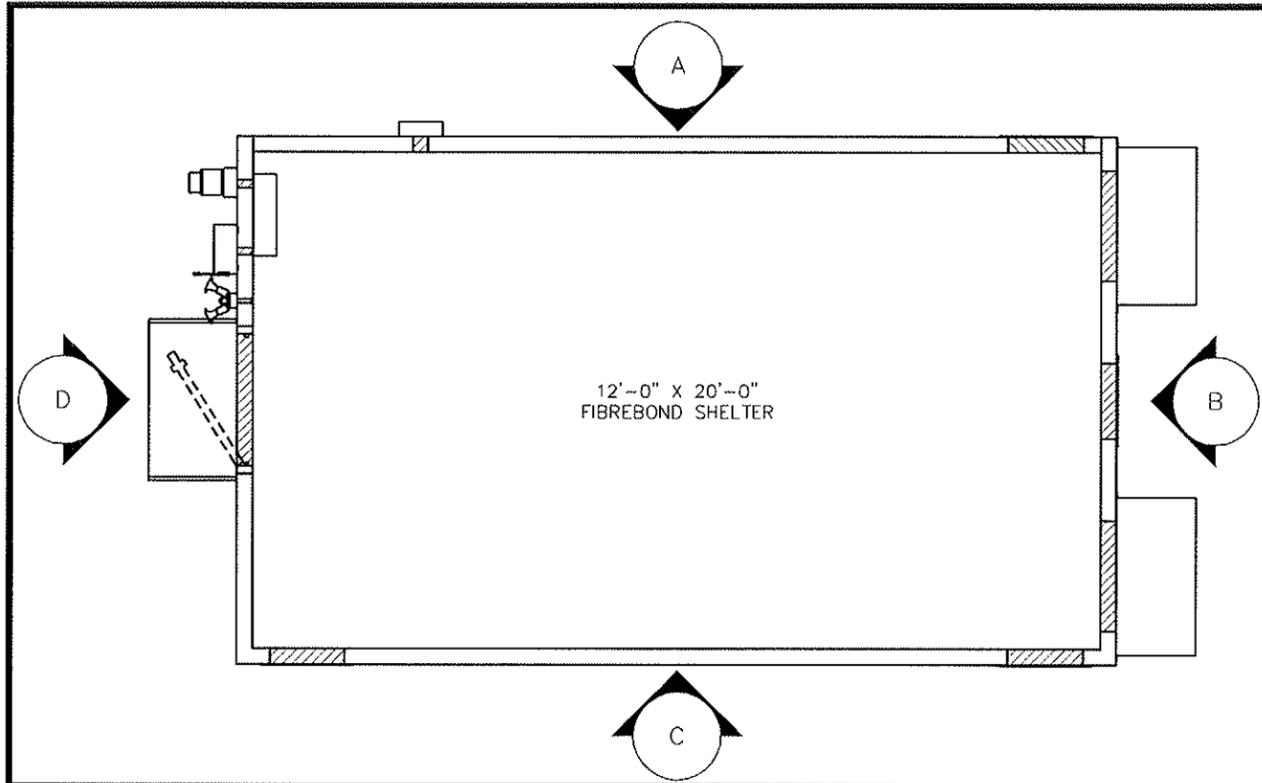
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DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

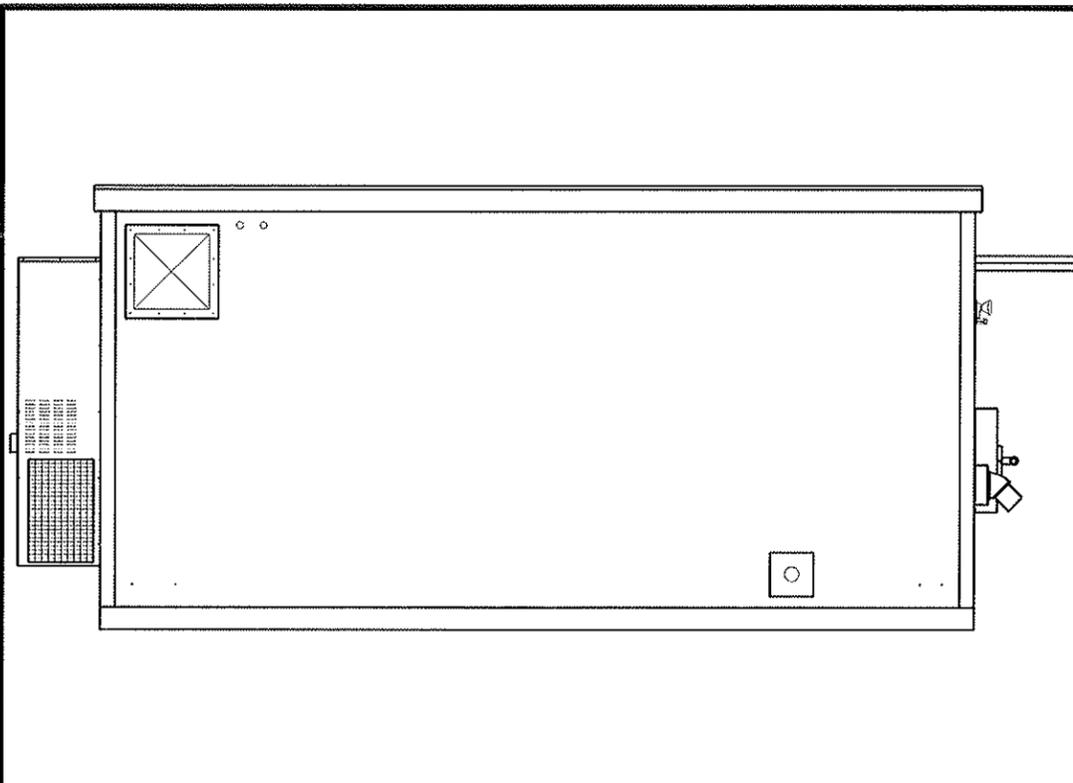
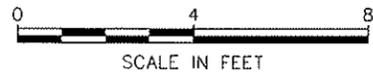
**SOIL EROSION
AND CONTROL
PLAN**

SHEET NUMBER: C-5	REVISION: 13
TEP #: 29864-5657	



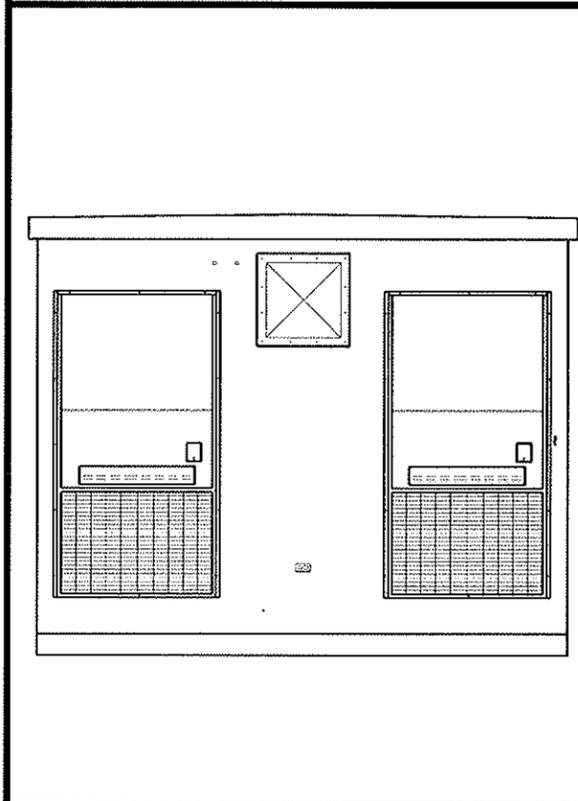
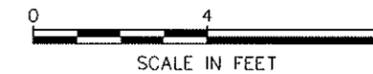
EQUIPMENT LAYOUT

SCALE: 1/4" = 1'-0"



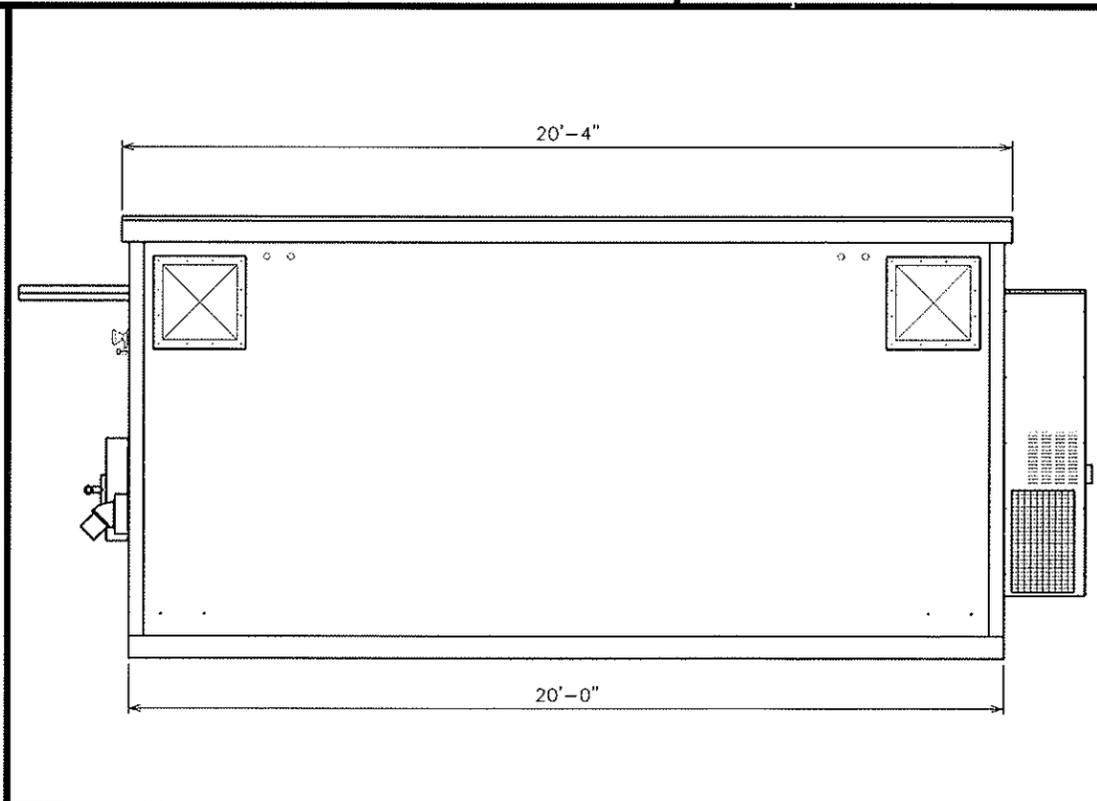
ELEVATION A

SCALE: 1/4" = 1'-0"



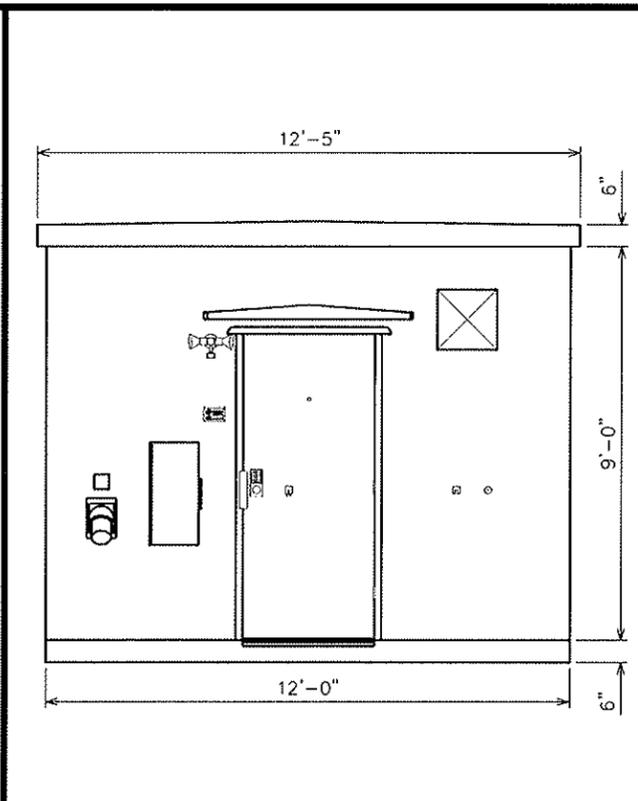
ELEVATION B

SCALE: 1/4" = 1'-0"



ELEVATION C

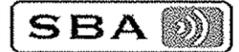
SCALE: 1/4" = 1'-0"



ELEVATION D

SCALE: 1/4" = 1'-0"

APPLICANT/LESSEE:



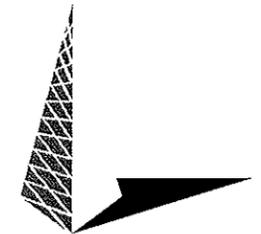
5900 BROKEN SOUND PARKWAY NW
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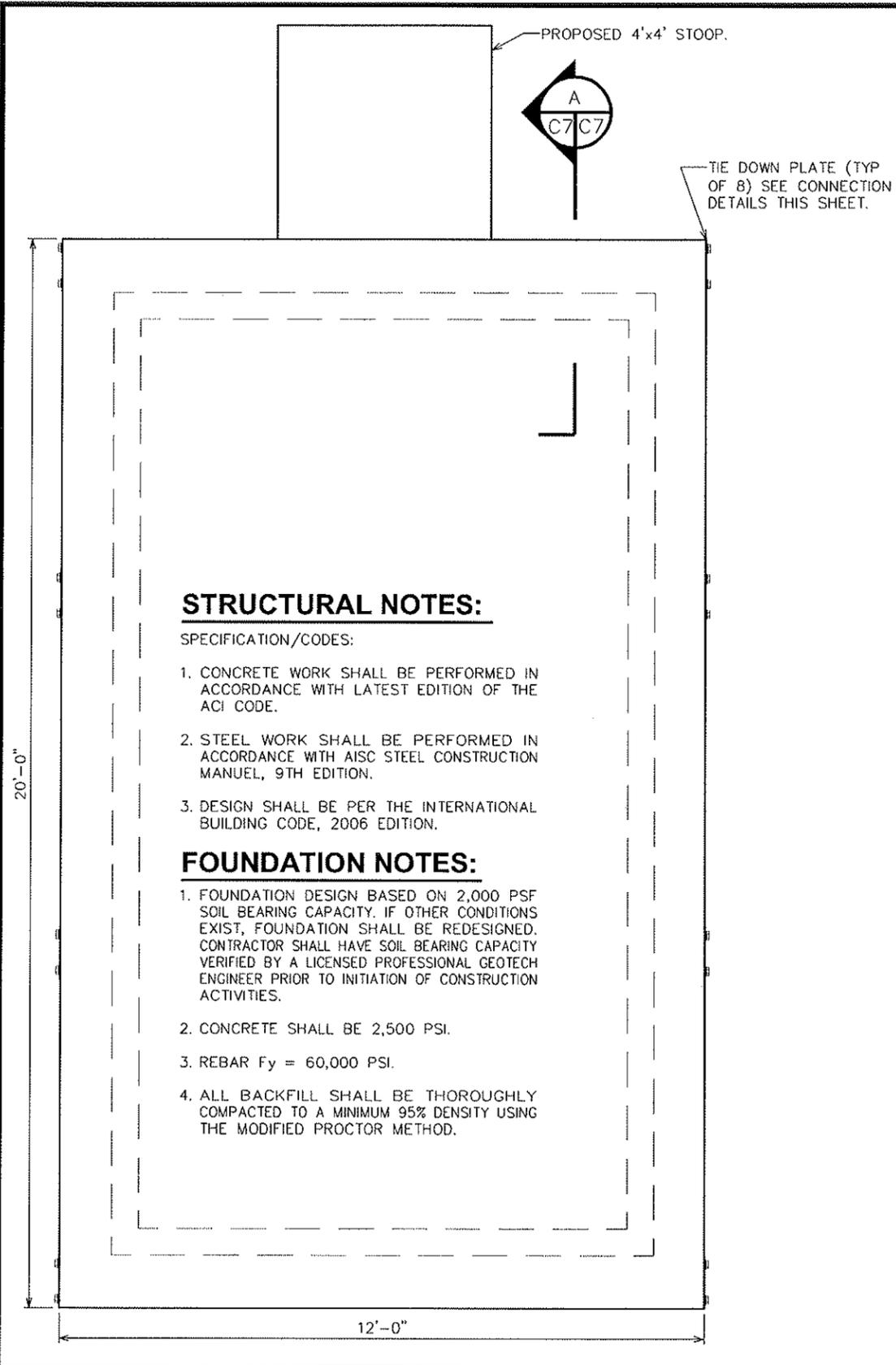
13	06-10-13	FINAL ZONING
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10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

**AT&T SHELTER
ELEVATIONS**

SHEET NUMBER: C-6	REVISION: 13
TEP #: 29864-5657	



STRUCTURAL NOTES:

SPECIFICATION/CODES:

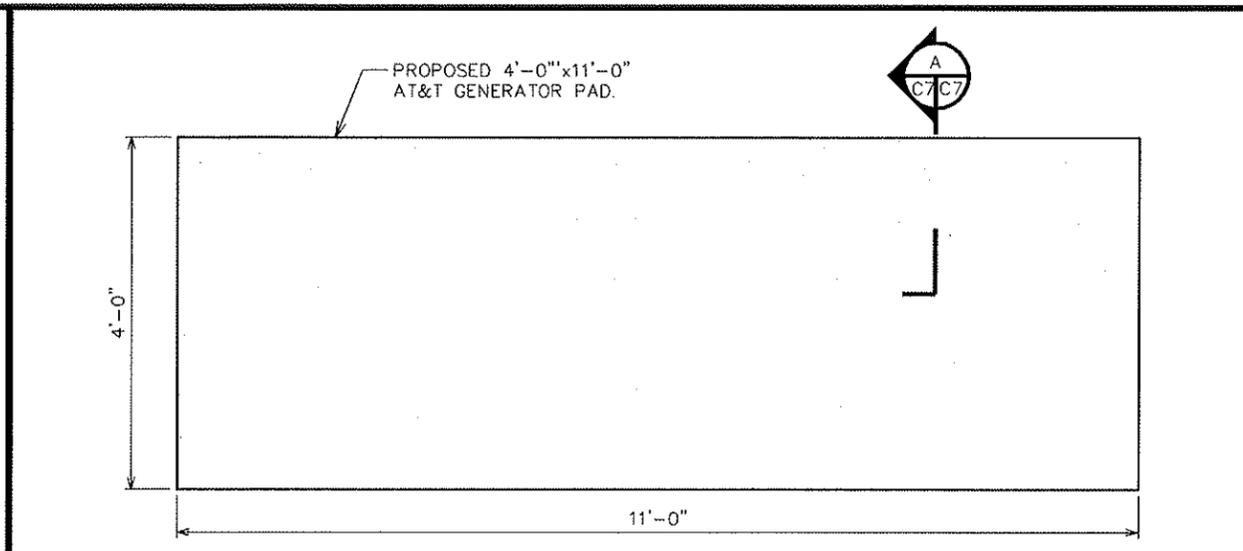
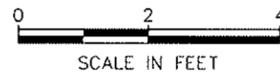
1. CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
2. STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, 9TH EDITION.
3. DESIGN SHALL BE PER THE INTERNATIONAL BUILDING CODE, 2006 EDITION.

FOUNDATION NOTES:

1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BEARING CAPACITY. IF OTHER CONDITIONS EXIST, FOUNDATION SHALL BE REDESIGNED. CONTRACTOR SHALL HAVE SOIL BEARING CAPACITY VERIFIED BY A LICENSED PROFESSIONAL GEOTECH ENGINEER PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
2. CONCRETE SHALL BE 2,500 PSI.
3. REBAR $F_y = 60,000$ PSI.
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM 95% DENSITY USING THE MODIFIED PROCTOR METHOD.

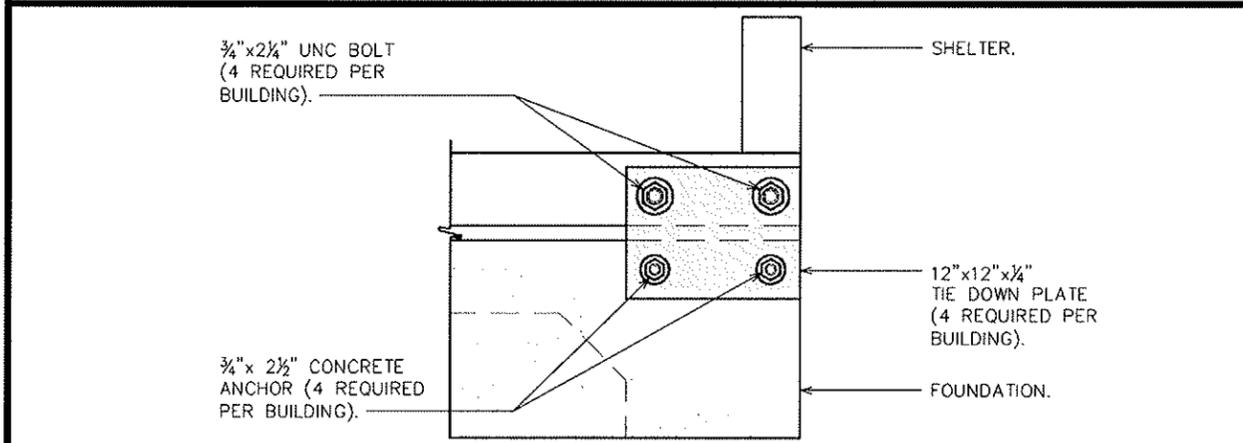
SHELTER FOUNDATION PLAN

SCALE: $\frac{3}{8}'' = 1'-0''$



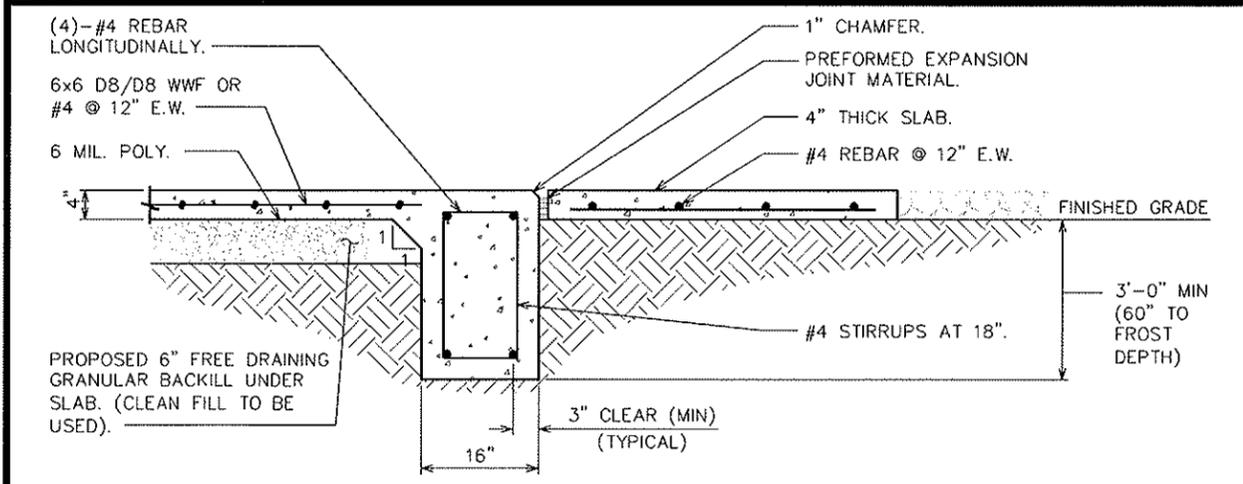
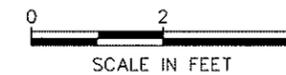
GENERATOR FOUNDATION PLAN

SCALE: $\frac{1}{2}'' = 1'-0''$



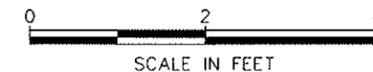
CONNECTION DETAIL

SCALE: $\frac{3}{8}'' = 1'-0''$



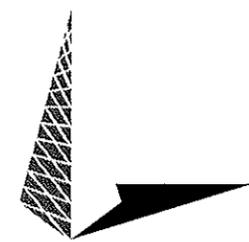
PAD SECTION

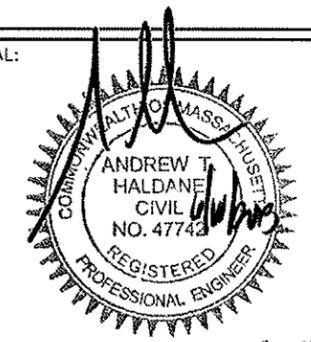
SCALE: $\frac{1}{2}'' = 1'-0''$



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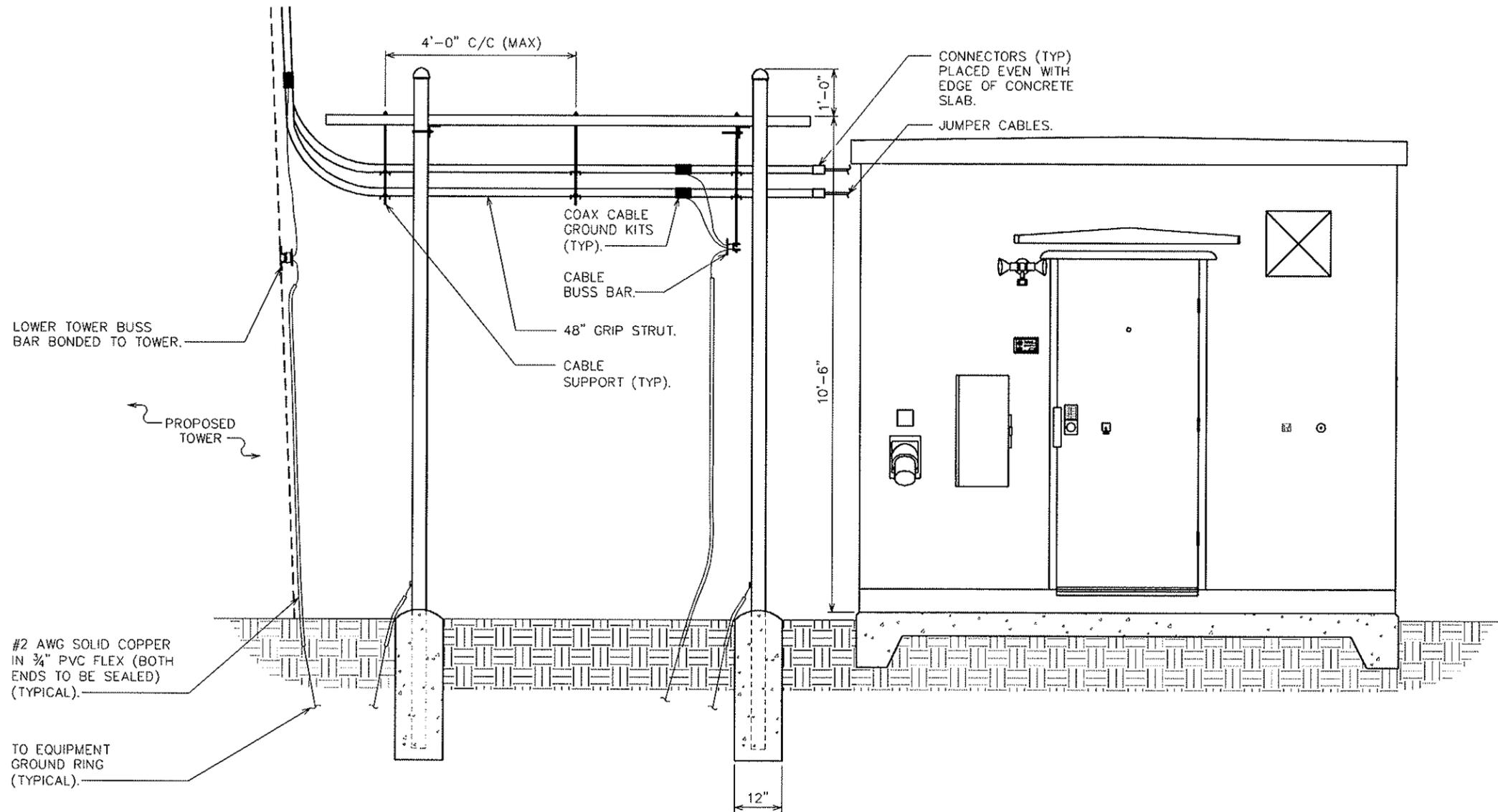
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DRAWN BY: JFJ CHECKED BY: KSM

SHEET TITLE:
AT&T SHELTER FOUNDATION DETAILS

SHEET NUMBER: **C-7** REVISION: **13**
 TEP #: 29864-5657



APPLICANT/LESSEE:

SBA

5900 BROKEN SOUND PARKWAY NW
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SEAL:

ANDREW T. HALDANE
 CIVIL
 NO. 4774
 REGISTERED
 PROFESSIONAL ENGINEER

June 10, 2013

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10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

**ICE BRIDGE DETAILS
 (SIDE VIEW)**

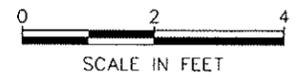
SHEET NUMBER: **C-8**

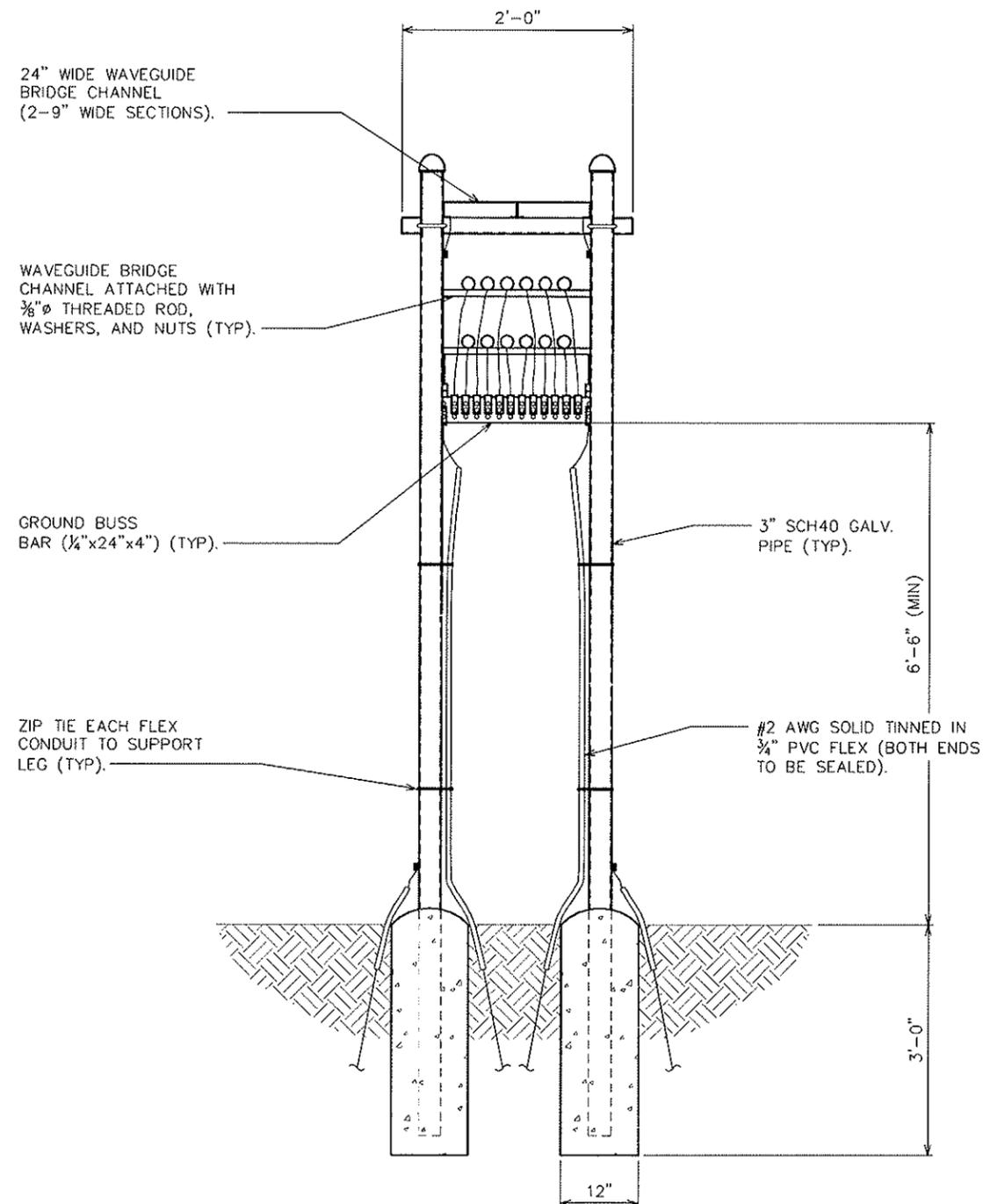
REVISION: **13**

TEP #: 29864-5657

ICE BRIDGE DETAILS (SIDE VIEW)

SCALE: 3/8" = 1'-0"





APPLICANT/LESSEE:

SBA

5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487
OFFICE: (561) 226-9332

PROJECT INFORMATION:

**ACTON 2
(MA-11845-S)**

5 CRAIG ROAD
ACTON, MA 01720
(MIDDLESEX COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

ANDREW T. HALDANE
CIVIL ENGINEER
NO. 4774
REGISTERED PROFESSIONAL ENGINEER

June 10, 2013

13	06-10-13	FINAL ZONING
12	05-28-10	FINAL ZONING
11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHU CHECKED BY: KSM

SHEET TITLE:

**ICE BRIDGE DETAIL
(FRONT VIEW)**

SHEET NUMBER: **C-9**

REVISION: **13**

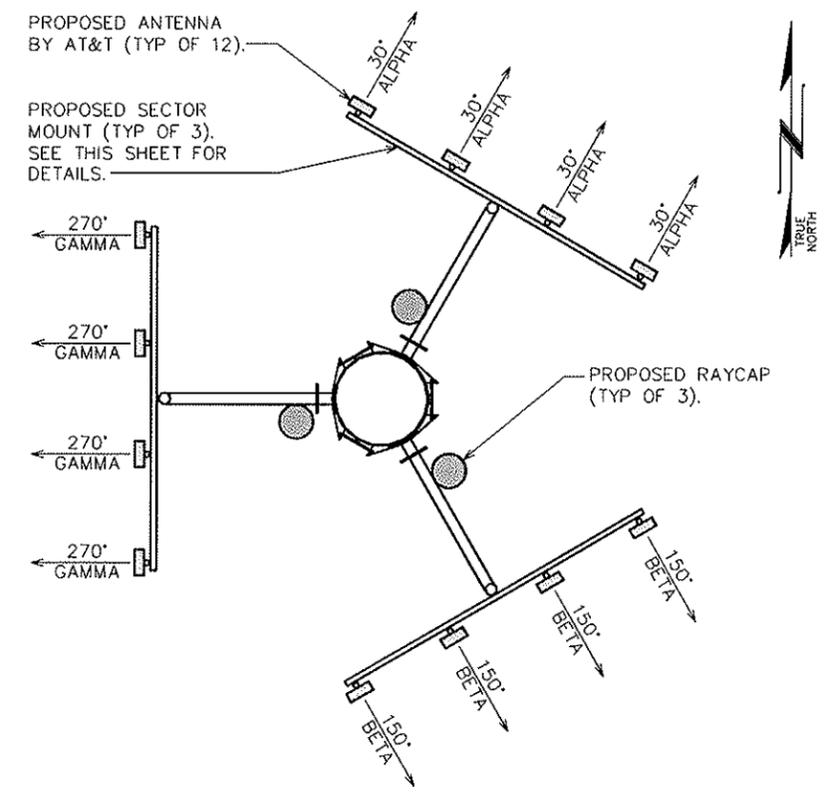
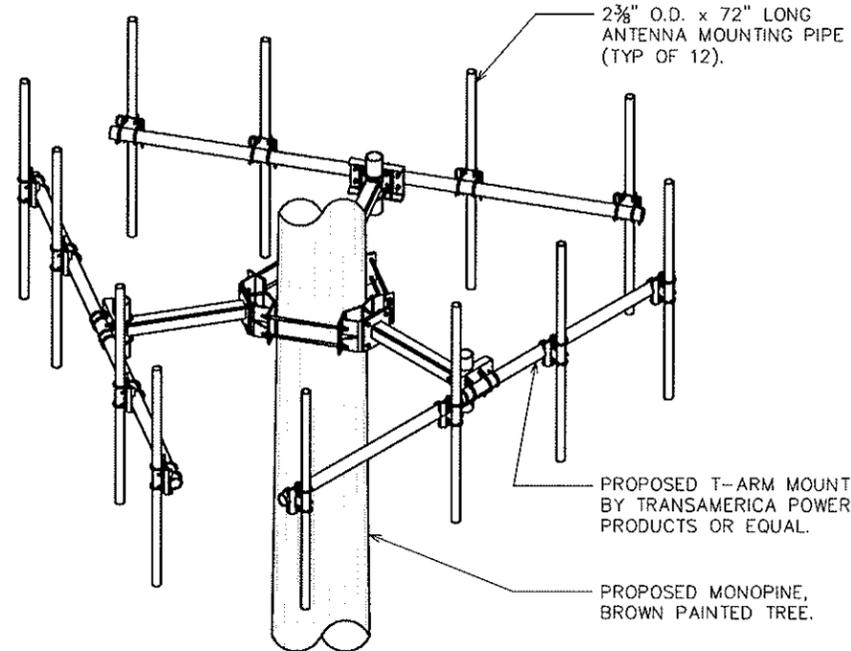
TEP #: 29864-5657

ICE BRIDGE DETAILS (FRONT VIEW)

SCALE: N.T.S.

NOTES:

1. AN EQUIVALENT ANTENNA MOUNT IS ACCEPTABLE WITH APPROVAL FROM THE SBA PROJECT MANAGER.
2. VERIFY MONOPINE DIAMETER WITH TOWER MANUFACTURER.



MOUNT ORIENTATION
SCALE: N.T.S.

APPLICANT/LESSEE:
SBA
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487
OFFICE: (561) 226-9332

PROJECT INFORMATION:
ACTON 2 (MA-11845-S)
5 CRAIG ROAD
ACTON, MA 01720
(MIDDLESEX COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

PROPOSED ANTENNA/COAX SCHEDULE

ANTENNA	SECTOR	MANUFACTURER (MODEL #)	AZIMUTH (TRUE NORTH)	MOUNTING HEIGHT	CABLE	COAX LENGTH	MECH. D-TILT
A1	ALPHA	KMW AM-X-CD17-65-00T-RET	30°	℄ @ 100'-0"	(1) RET (1) FIBER (2) DC	110'-0"±	0°
A2	ALPHA	KMW AM-X-CD17-65-00T-RET	30°	℄ @ 100'-0"		110'-0"±	0°
A3	ALPHA	KMW AM-X-CD17-65-00T-RET	30°	℄ @ 100'-0"		110'-0"±	0°
A4	ALPHA	ERICSSON KRC118-054/1	30°	℄ @ 100'-0"		110'-0"±	0°
B1	BETA	KMW AM-X-CD17-65-00T-RET	150°	℄ @ 100'-0"	(1) RET (1) FIBER (2) DC	110'-0"±	0°
B2	BETA	KMW AM-X-CD17-65-00T-RET	150°	℄ @ 100'-0"		110'-0"±	0°
B3	BETA	KMW AM-X-CD17-65-00T-RET	150°	℄ @ 100'-0"		110'-0"±	0°
B4	BETA	ERICSSON KRC118-054/1	150°	℄ @ 100'-0"		110'-0"±	0°
C1	GAMMA	KMW AM-X-CD17-65-00T-RET	270°	℄ @ 100'-0"	(1) RET (1) FIBER (2) DC	110'-0"±	0°
C2	GAMMA	KMW AM-X-CD17-65-00T-RET	270°	℄ @ 100'-0"		110'-0"±	0°
C3	GAMMA	KMW AM-X-CD17-65-00T-RET	270°	℄ @ 100'-0"		110'-0"±	0°
C4	GAMMA	ERICSSON KRC118-054/1	270°	℄ @ 100'-0"		110'-0"±	0°

*(15) PROPOSED RRU'S BY ERRICSSON (ONE PER ANTENNA/RAYCAP).
**(3) PROPOSED RAYCAP - DC6-48-60-18-F (ONE PER SECTOR).

SEAL:

June 10, 2013

13	06-10-13	FINAL ZONING
12	05-28-10	FINAL ZONING
11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JFU CHECKED BY: KSM

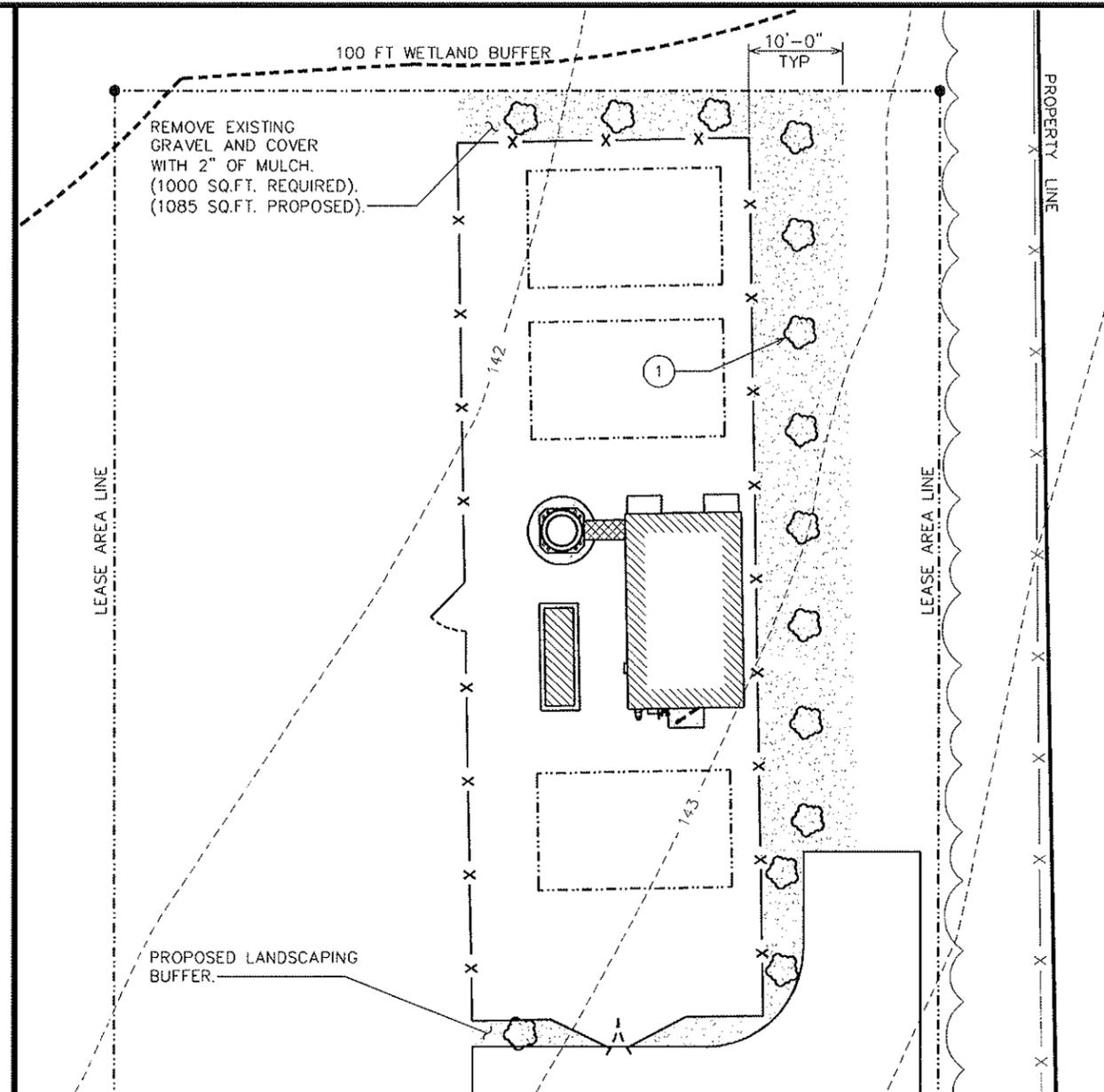
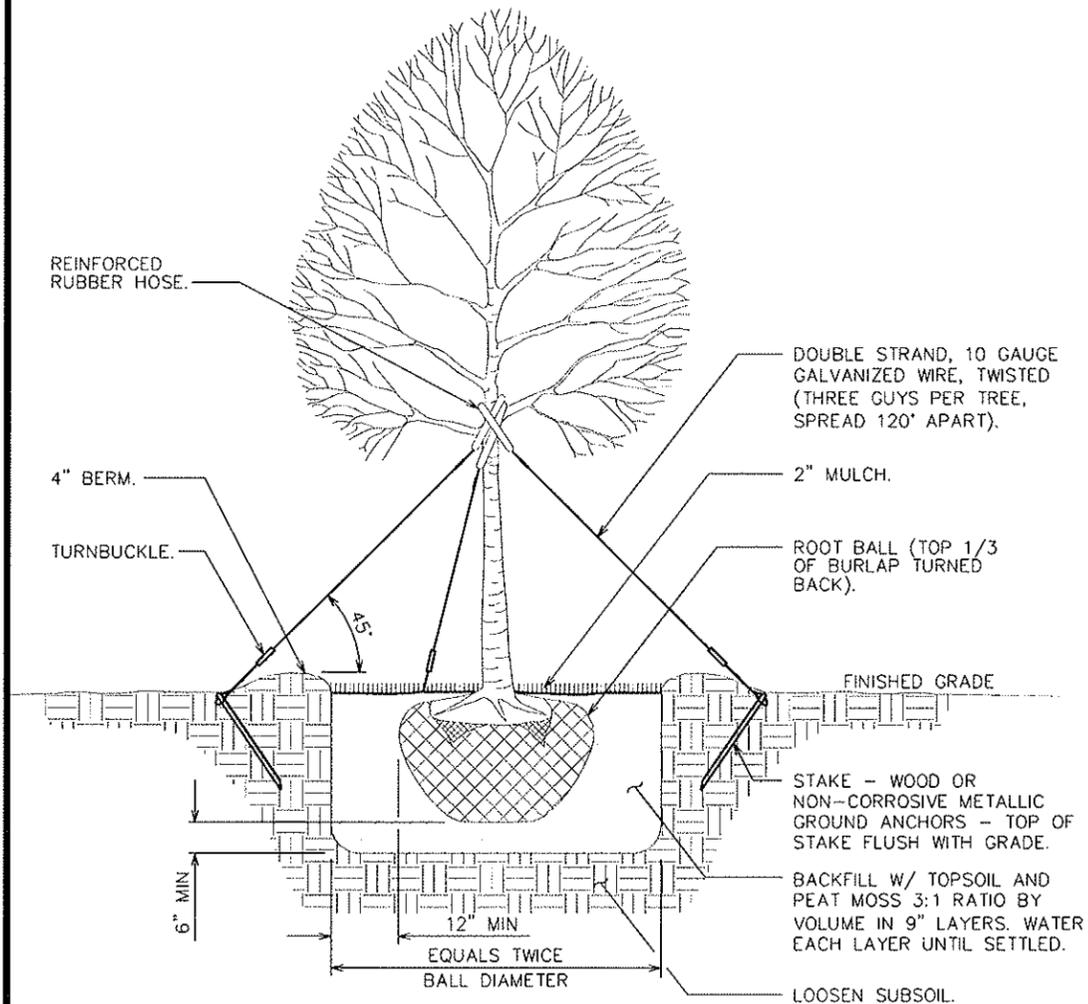
SHEET TITLE:
ANTENNA MOUNT DETAILS

SHEET NUMBER: **C-10** REVISION: **13**
TEP #: 29864-5657

ANTENNA MOUNT DETAILS
SCALE: N.T.S.

LANDSCAPE GENERAL NOTES

1. TOPSOIL TO BE PROVIDED BY SITE CONTRACTOR IN ROUGH GRADE TO WITHIN 1" OF FINISH GRADE.
2. EACH PLANT TO BE IN THE TOP OF ITS CLASS AFTER SHEARING AND PRUNING.
3. EACH PLANT TO BE FREE FROM DISEASE, INSECT INFESTATION, AND MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR FIELD PLANTING.
4. ALL PLANTS TO BE FULLY GUARANTEED (LABOR AND MATERIALS) FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF INSTALLATION.
5. PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1-1973 IN REGARD TO SIZING, GROWING, AND B&B SPECIFICATIONS.
6. CONTRACTOR SHALL PROTECT ALL EXISTING TREES AND SHRUBS WITHIN CONSTRUCTION AREA IDENTIFIED AS "TO REMAIN" FROM DAMAGE BY EQUIPMENT AND CONSTRUCTION ACTIVITIES.



LANDSCAPING PLAN

SCALE: N.T.S.

PLANTING SCHEDULE

ITEM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT @ PLANTING	HEIGHT @ MATURITY	SPREAD/ CALIPER	SPACING	REMARKS
TREES								
1	14	<i>(Juniperus virginiana)</i>	EASTERN RED CEDAR	4'-0"	25'-0"	-	SEE PLAN THIS SHEET	SHOWN AS

LANDSCAPING DETAILS

SCALE: N.T.S.

APPLICANT/LESSEE:



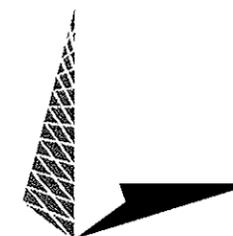
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487
OFFICE: (561) 226-9332

PROJECT INFORMATION:

**ACTON 2
(MA-11845-S)**

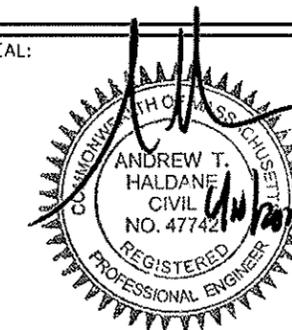
5 CRAIG ROAD
ACTON, MA 01720
(MIDDLESEX COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



June 10, 2013

13	06-10-13	FINAL ZONING
12	05-28-10	FINAL ZONING
11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JFJ CHECKED BY: KSM

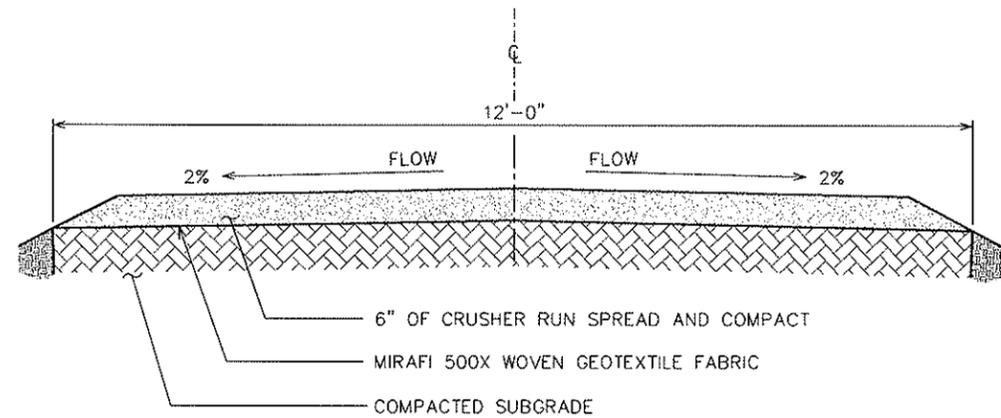
SHEET TITLE:

**LANDSCAPING
DETAILS**

SHEET NUMBER: C-11	REVISION: 13 TEP #: 29864-5657
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NOTE:

EXISTING SITE CONDITION IS A GRAVEL AREA.
IMPROVE EXISTING DRIVE CONDITIONS AS NEEDED.



STANDARD ROAD SECTION

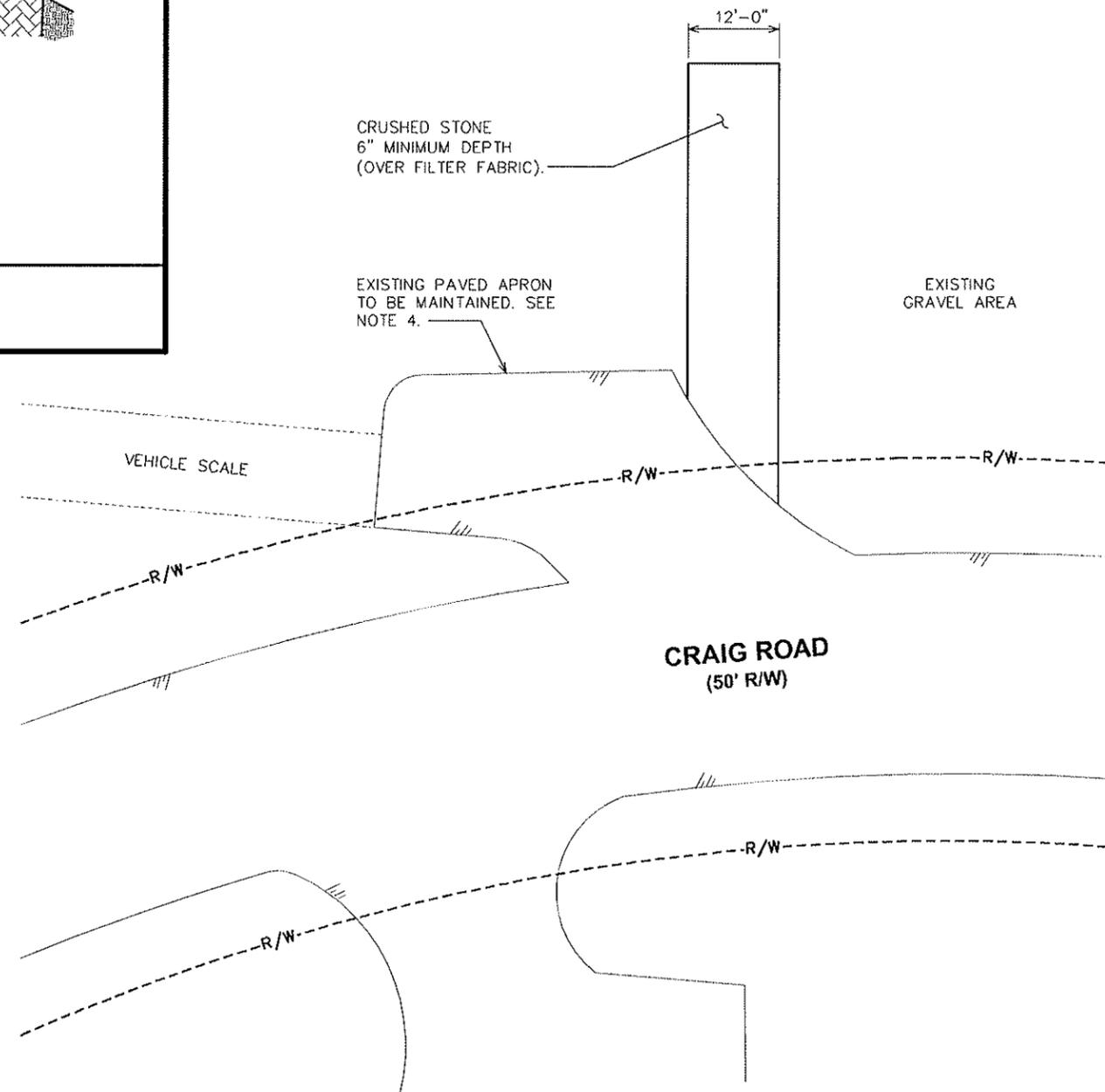
SCALE: N.T.S.

NOTES:

1. IMPROVE THE EXISTING SITE CONDITIONS IF NEEDED OR REQUIRED BY THE PROPERTY OWNER OR TOWN OF ACTON.
2. TURNING RADIUS THAT IS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
3. THE ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
4. ENTRANCE(S) MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
5. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
6. GRAVEL CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

DRIVEWAY DETAILS

SCALE: N.T.S.



APPLICANT/LESSEE:



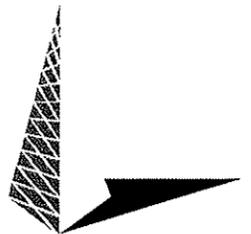
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487
OFFICE: (561) 226-9332

PROJECT INFORMATION:

**ACTON 2
(MA-11845-S)**

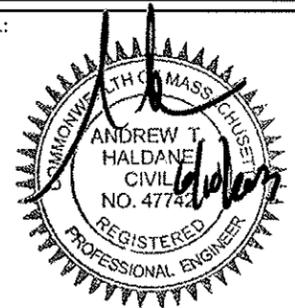
5 CRAIG ROAD
ACTON, MA 01720
(MIDDLESEX COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



June 10, 2013

13	06-10-13	FINAL ZONING
12	05-28-10	FINAL ZONING
11	05-03-10	FINAL ZONING
10	03-10-10	FINAL ZONING
REV	DATE	ISSUED FOR:

DRAWN BY: JHJ CHECKED BY: KSM

SHEET TITLE:

**DRIVEWAY
DETAILS**

SHEET NUMBER:	REVISION:
C-12	13
TEP #: 29864-5657	

4

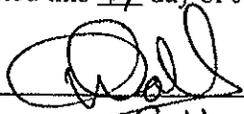
REPORT OF
RADIO FREQUENCY ENGINEER

The undersigned hereby states the following in support of the application by SBA Towers, LLC to construct a 100' Monopole and attach panel antennas, GPS antennas, cables, and install electronic equipment and other appurtenances and associated equipment thereto, and add fiber cable, coaxial cable, electronic equipment and other appurtenances as shown on the plans submitted with the application (the "Facility") located at 5 Craig Road (Assessor's Map H4, Lot 45), Acton, Massachusetts (the "Site").

1. I am a Radio Frequency Engineer employed by AT&T, with an office located at 550 Cochituate Road, Framingham, Massachusetts. Attached is a copy of my qualifications.
2. My primary responsibilities include radio frequency design and planning in the Commonwealth of Massachusetts, including the Town of Acton and surrounding communities.
3. As enabled under its Federal Communications Commission ("FCC") License, AT&T seeks to design its wireless network to provide reliable and adequate wireless services to its customers, whether those customers are on the street, in a vehicle, or in a building. Providing reliable and adequate service to its customers in each context is critical for AT&T to provide the quality of wireless service that customers demand, and to meet the objectives of Congress that a robust, competitive and low cost wireless communications capacity be developed to serve the entire nation.
4. AT&T is also designing a network to provide high speed data services commonly referred to as "long term evolution" service ("LTE").
5. AT&T is using its best efforts, to the maximum extent possible, to install its wireless communications services facilities network utilizing existing structures to avoid the need to construct new tower sites.
6. I have thoroughly reviewed the radio frequency engineering studies, reports and computer models prepared by AT&T with respect to the Facility.
7. In order to build out its network and meet customer demand for voice and data services, as well as enhance its network to improve high speed data services, AT&T must have in place a system of low power 'cell sites' to serve portable wireless communication handsets and mobile telephones. A typical cell site, such as the one proposed, consists of antennas mounted to a building, tower, church or other structure. The antennas are connected to radio operating equipment housed at or near the structure.
8. To maintain effective, reliable and uninterrupted service, there must be a continuous series of cell sites located within close proximity to each other so as to overlap in a system comparable to a honeycomb pattern. If there is no cell site available to accept/receive the signal, network service to the mobile device, data service will terminate involuntarily. Accordingly, the overlap of coverage is necessary for the signal to transfer from one cell site to another cell site seamlessly and without involuntary termination.
9. A number of factors determine the distance between cell sites, including, but not limited to, topography, physical obstructions, foliage, antenna height, operating frequency and line-of-sight.

10. Based on the radio frequency studies, reports and computer models prepared in connection with this project, it is my professional assertion that there is inadequate network service available to AT&T customers within the Town of Acton, especially along Route 2 and surrounding neighborhoods.
11. Based on the radio frequency studies, reports and computer models prepared in connection with this Facility, it is my further professional opinion that AT&T would be able to achieve the coverage objective by filling these significant gaps in coverage through the installation of the Facility at the Site.
12. The Facility will enhance AT&T's ability to provide adequate coverage in the area and will increase its capacity to better serve the residents and businesses around these areas of Acton and to individuals traveling through these areas.
13. The Facility will be in compliance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
14. The Facility will be installed, erected, maintained and used in compliance with all applicable Federal, State and local regulations, including, but not limited to: the radio frequency emissions regulations set forth in the federal Telecommunications Act of 1996, and applicable regulations administered by the Federal Aviation Administration, Massachusetts Aeronautics Commission and the FCC.
15. Based upon the best radio frequency technology available at this time, it is my professional opinion that the Facility is at the height that is needed to ensure adequate service to area residents and businesses within the geographic area described above.

Executed this 17 day of June, 2013.

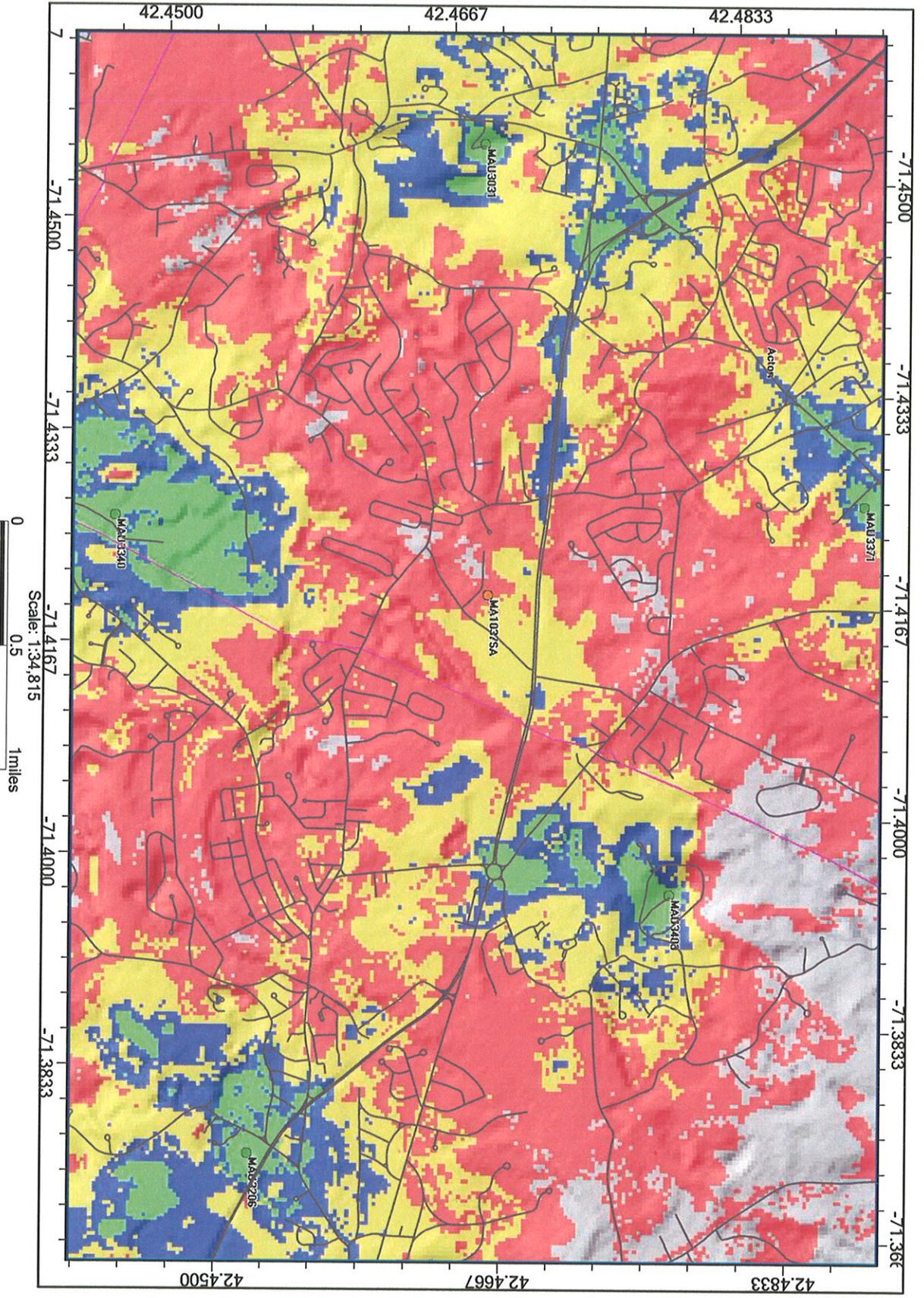


Deepak Rathore, RF ENGINEER, AT&T



at&t

Current coverage in Acton MA



Current coverage

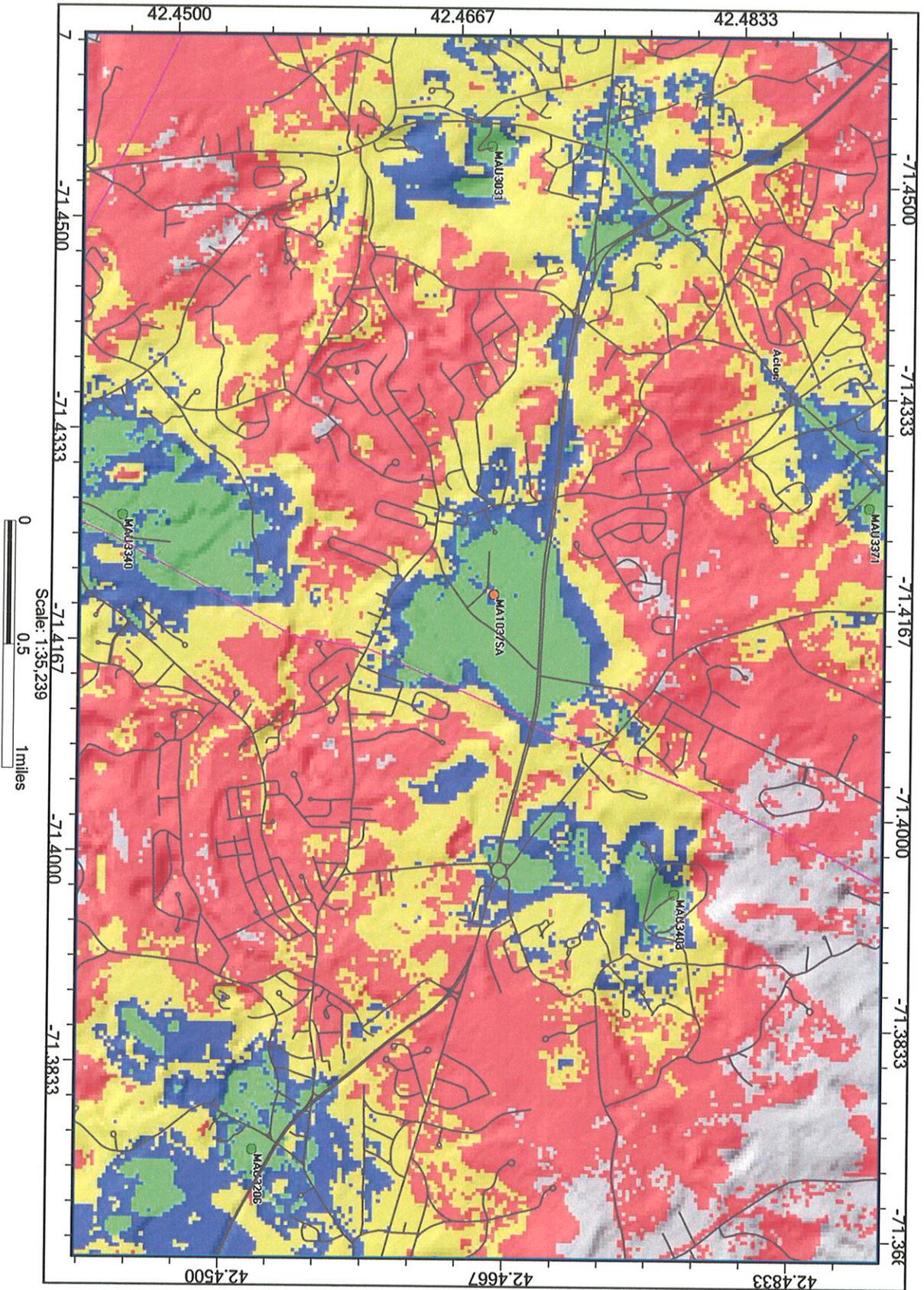
- >=-74 dBm
- >=-82 dBm
- >=-92 dBm
- >=-105 dBm

Green dots are current AT&T sites, and Orange dots are future AT&T sites.
 Plots prepared by Deepak Rathore, RF Engineer AT&T
 5/2/2013



at&t

Proposed coverage in Acton MA



Proposed coverage

- ≥ -74 dBm
- ≥ -82 dBm
- ≥ -92 dBm
- ≥ -105 dBm

Green dots are current AT&T sites, and Orange dots are future AT&T sites.
 Plots prepared by Deepak Rathore, RF Engineer AT&T
 5/2/2013

5

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**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
2200 N. GREENVILLE AVE, 1W
RICHARDSON, TX 75082

Call Sign WPZY689	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date 02-28-2007	Effective Date 11-24-2012	Expiration Date 01-03-2017	Print Date
Market Number BTA051	Channel Block C	Sub-Market Designator 2	
Market Name Boston, MA			
1st Build-out Date 12-07-2003	2nd Build-out Date 01-03-2007	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.711 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WPZY689

File Number:

Print Date:

Pursuant to Order DA 03-617 (rel. March 3, 2003), the designated entity holding period for this license is extended by 703 days, or until the licensee meets its five-year construction requirement, whichever is sooner.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: REGINALD YOUNGBLOOD
 NEW CINGULAR WIRELESS PCS, LLC
 2200 N. GREENVILLE AVE, 1W
 RICHARDSON, TX 75082

Call Sign KNLF216	File Number
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003291192

Grant Date 07-07-2005	Effective Date 11-24-2012	Expiration Date 06-23-2015	Print Date
Market Number MTA008	Channel Block A	Sub-Market Designator 17	
Market Name Boston-Providence			
1st Build-out Date 06-23-2000	2nd Build-out Date 06-23-2005	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

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Wireless Telecommunications Bureau**

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ATTN: REGINALD YOUNGBLOOD
NEW CINGULAR WIRELESS PCS, LLC
2200 N. GREENVILLE AVE., 1W
RICHARDSON, TX 75082

Call Sign KNKA226	File Number
Radio Service CL - Cellular	
Market Numer CMA006	Channel Block A
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003291192

Market Name Boston-Lowell-Brockton-Lawrenc				
Grant Date 10-05-2004	Effective Date 02-12-2013	Expiration Date 10-01-2014	Five Yr Build-Out Date	Print Date

Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	42-37-42.3 N	070-39-16.8 W	45.7	58.8	

Address: 40 DORY ROAD
City: GLOUCESTER **County:** ESSEX **State:** MA **Construction Deadline:**

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	158.853	205.617	68.628	9.427	0.642	0.431	2.268	29.488
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	0.459	5.462	56.429	198.529	168.403	38.276	3.953	0.786
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
Transmitting ERP (watts)	12.078	0.668	0.599	1.024	10.050	68.014	123.413	62.132

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	43-03-11.8 N	071-16-02.1 W	179.2	59.4	
Address: 80 Diamond Hill Road					
City: Candia County: ROCKINGHAM State: NH Construction Deadline:					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	52.325	70.778	16.988	1.425	0.187	0.144	0.491	7.084
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	0.343	3.851	33.085	100.313	84.855	19.494	2.061	0.299
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	6.845	0.890	0.107	1.038	6.652	7.633	3.304	6.905

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	42-54-55.1 N	071-21-37.4 W	100.9	46.3	1011624
Address: 15 INDEPENDENCE DRIVE					
City: LONDONDERRY County: ROCKINGHAM State: NH Construction Deadline:					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	161.221	224.756	47.602	3.692	0.510	0.437	1.233	19.454
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	0.510	3.172	43.604	213.248	156.639	22.374	1.350	0.496
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	11.168	0.691	0.533	0.586	7.854	87.092	266.329	94.294

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	42-00-32.6 N	071-19-15.2 W	90.5	51.8	

Address: 75 WASHINGTON SST
City: PLAINVILLE County: NORFOLK State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	84.752	97.052	31.772	5.158	0.550	0.224	2.803	20.645
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	0.380	5.181	37.013	100.829	79.042	20.699	2.118	0.824
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	24.577	1.736	0.715	2.292	18.444	139.378	281.180	142.336

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	41-46-57.1 N	070-44-06.5 W	12.5	58.8	

Address: KENDRICK ROAD
City: WAREHAM County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	186.898	242.551	75.777	10.617	0.738	0.508	2.730	35.860
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	0.361	5.818	47.861	150.309	121.062	28.493	2.933	0.991
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	18.390	1.111	0.538	1.628	13.482	98.897	203.625	103.938

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	41-53-35.2 N	070-56-35.0 W	17.7	106.1	1210211

Address: 326 W GROVE ST
City: Middleboro County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	125.283	153.432	54.208	6.550	0.674	0.363	2.675	27.340
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	0.351	5.901	52.455	151.828	120.612	27.887	2.679	0.991
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	14.428	1.006	0.875	1.215	13.317	87.541	159.641	85.795

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	42-14-21.9 N	070-51-09.3 W	54.9	55.8	

Address: 168 Turkey Hill Lane
City: Cohasset County: NORFOLK State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	185.522	243.217	80.727	11.598	0.756	0.499	2.589	34.953
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	0.521	6.371	65.693	238.024	196.107	43.191	4.256	0.906
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	9.488	0.543	0.538	1.234	8.977	53.553	85.290	45.661

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	41-56-02.0 N	070-35-08.0 W	82.9	128.0	1007828

Address: 265 STATE ROAD

City: PLYMOUTH County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	23.222	24.154	10.475	1.931	0.466	0.109	1.398	6.965
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	0.346	4.427	33.055	88.168	72.485	17.790	1.831	0.701
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	9.680	0.561	0.550	1.216	9.292	54.685	90.439	45.409

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	42-12-47.6 N	071-32-33.4 W	128.0	58.5	

Address: 26 LUMBER STREET

City: HOPKINTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	158.662	188.312	64.228	8.830	0.704	0.395	4.080	30.535
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	0.432	6.612	61.028	195.296	166.263	35.500	3.748	0.703
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	18.831	1.074	0.590	1.783	15.144	103.799	219.501	97.060

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	42-38-27.0 N	070-36-24.8 W	36.6	38.7	
Address: 38 Thatcher Rd					
City: ROCKLAND County: ESSEX State: MA Construction Deadline: 03-29-2013					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	170.519	227.554	76.127	10.393	0.706	0.470	2.520	32.796
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	0.462	5.689	58.840	206.264	174.760	39.385	4.197	0.837
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	20.761	1.510	0.812	1.238	15.269	110.467	237.338	124.965

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	42-36-37.9 N	071-33-28.9 W	148.4	46.3	
Address: 142 LOWELL RD					
City: GROTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013					

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	209.658	291.175	91.511	11.206	1.156	0.596	4.998	40.617
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	0.597	10.042	80.421	284.569	246.599	46.898	5.186	0.906
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	18.748	1.375	0.781	1.196	15.487	106.791	230.014	118.184

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	42-08-01.1 N	070-43-57.5 W	68.3	80.5	1017973

Address: 178 EAMES WAY

City: Marshfield County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	156.993	202.510	73.503	10.210	0.666	0.415	2.429	32.615
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	0.482	5.988	62.083	217.536	187.313	40.576	4.382	0.869
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	21.007	1.466	0.829	1.219	15.907	109.305	228.002	122.541

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	41-42-11.1 N	070-46-47.1 W	14.3	59.4	

Address: 55 BENSONBROOK ROAD

City: MARION County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	161.079	196.082	67.519	9.213	0.702	0.419	4.077	32.479
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	0.446	6.712	62.074	197.767	163.770	38.273	3.886	0.801
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	3.819	0.784	0.433	6.729	64.256	202.261	164.916	37.606

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location Latitude Longitude Ground Elevation Structure Hgt to Tip Antenna Structure
(meters) (meters) Registration No.
35 42-21-20.1 N 071-33-16.6 W 156.1 26.5
Address: 157 UNION STREET
City: MARLBOROUGH County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	280.304	377.489	119.970	14.810	1.525	0.802	6.660	52.209
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	0.801	13.105	105.660	375.949	325.389	63.339	6.978	1.142
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	30.606	2.831	1.046	2.632	27.909	187.774	419.392	197.441

Location Latitude Longitude Ground Elevation Structure Hgt to Tip Antenna Structure
(meters) (meters) Registration No.
36 42-39-54.6 N 070-38-19.9 W 59.4 44.5
Address: 68 JOHNSON ROAD
City: ROCKPORT County: ESSEX State: MA Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	126.741	159.124	54.189	7.443	0.564	0.334	3.098	25.685
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	0.353	5.360	49.103	157.255	130.117	30.639	2.895	0.641
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	15.787	0.974	0.495	1.442	11.730	84.942	168.331	87.120

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
40	43-05-58.2 N	070-47-28.6 W	7.6	67.4	

Address: 165 GOSLING RD

City: NEWINGTON County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	205.727	278.300	62.928	5.059	0.711	0.597	1.577	25.136
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	0.559	3.335	47.419	236.351	181.187	26.867	1.510	0.563
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	10.525	0.618	0.497	0.555	7.391	82.592	243.998	90.540

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	43-04-39.1 N	071-07-30.3 W	107.0	60.7	1231475

Address: 150 Raymond Road

City: Nottingham County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	160.334	230.049	54.265	4.271	0.586	0.522	1.415	21.993
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	0.493	3.289	48.427	238.724	177.920	27.618	1.619	0.581
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	10.353	0.693	0.601	0.662	8.753	100.864	305.315	110.743

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
42	43-13-24.3 N	071-14-23.2 W	189.0	38.7	

Address: 50 OLD CANTERBURY RD
City: NORTHWOOD County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	114.248	162.456	37.049	2.808	0.392	0.366	0.961	16.015
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	0.544	3.573	49.915	233.638	184.420	30.453	1.413	0.618
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	8.132	0.494	0.387	0.467	6.390	72.302	182.164	77.916

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
43	42-59-40.7 N	070-46-58.5 W	12.5	59.4	

Address: 96 GROVE RD
City: RYE County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	146.515	206.846	49.164	3.766	0.505	0.452	1.193	17.877
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	0.464	2.913	42.460	206.462	152.606	24.148	1.373	0.460
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	10.168	0.644	0.536	0.576	7.457	86.483	257.603	87.494

Control Points:

Control Pt. No. 2

Address: 100 LOWDER BROOK DR

City: WESTWOOD County: NORFOLK State: MA Telephone Number: (617)462-7094

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNKA226

File Number:

Print Date:

Waivers/Conditions:

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

The Cellular Geographic Service Areas of the following cellular systems have been combined (listed by call sign): KNKA359, KNKA226, KNKA345, KNKN705, KNKN849, KNKA292.

The action taken with respect to Application #0004361617 does not preclude or prejudice any potential enforcement action regarding this Application, and does not constitute a waiver of any of the Commission's rules with respect to this Application.

The action taken with respect to Application #0005036051 does not preclude or prejudice any potential enforcement action regarding this Application, and does not constitute a waiver of any of the Commission's rules with respect to this Application.

The action taken with respect to Application #0005519888 does not preclude or prejudice any potential enforcement action regarding this Application, and does not constitute a waiver of any of the Commission's rules with respect to this Application.

6



C Squared Systems, LLC
65 Dartmouth Dr., Unit A3
Auburn, NH 03032
Phone: (603) 644 2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions



MA1037S

(Acton 2)

5 Craig Road, Acton, MA 01720

May 30, 2013

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT&T antenna arrays mounted on the planned stealth “monopine” tower located at 5 Craig Road in Acton, MA. The coordinates of the tower are 42° 28' 2.7" N, 71° 25' 7.8" W.

AT&T is proposing the following installation:

- 1) Install twelve multi-band (700/850/1900/2100 MHz) antennas for their UMTS and LTE networks (four per sector),

This report uses the planned antenna configuration for AT&T¹ to derive the resulting % MPE of their final configuration, once the installations have been completed.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached “FCC Limits for Maximum Permissible Exposure (MPE)” in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ Based upon AT&T’s preliminary RFDS dated March 26, 2013.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{EIRP}}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor of 2.0

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

The percent of MPE values presented in this report reflect levels that one may encounter from one sector of each carrier's antennas. Most carriers use 3 sectors per site with azimuths approximately 120 degrees apart, therefore one could not be standing in the main beam of all 3 sectors at the same time. Although carriers are free to orient their antennas in whichever direction necessary to support their network coverage objectives, this report assumes that all carriers are using the same azimuth for each sector. In cases where downtilt and antenna models are not uniform across all 3 sectors, the downtilt and antenna model with the highest gain was used for the calculations. This results in a conservative or "worst case" assumption for percent of MPE calculations.

4. Proposed Antenna Inventory

Table 1 below outlines AT&T's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachment C.

Operator	Sector	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBd)	Power ERP (Watts)	Antenna Model	Beam Width	Mech. Downtilt	Length (feet)	Antenna Centerline Height (feet)
AT&T	Alpha	850	40	15.35	1371.1	AM-X-CD-17-65-00T	64	0	8	100
		1900	80	15.55	2871.4		65			
		700	60	14.65	1750.5	AM-X-CD-17-65-00T	66			
		850	60	15.35	2056.6	AM-X-CD-17-65-00T	64			
		700	60	14.65	1750.5	KRC 118 054/1 *	66			
	Beta	850	40	15.35	1371.1	AM-X-CD-17-65-00T	64	0	8	100
		1900	80	15.55	2871.4		65			
		700	60	14.65	1750.5	AM-X-CD-17-65-00T	66			
		850	60	15.35	2056.6	AM-X-CD-17-65-00T	64			
		700	60	14.65	1750.5	KRC 118 054/1 *	66			
	Gamma	850	40	15.35	1371.1	AM-X-CD-17-65-00T	64	0	8	100
		1900	80	15.55	2871.4		65			
		700	60	14.65	1750.5	AM-X-CD-17-65-00T	66			
		850	60	15.35	2056.6	AM-X-CD-17-65-00T	64			
		700	60	14.65	1750.5	KRC 118 054/1 *	66			

Table 1: Proposed Antenna Inventory^{2 3}

² Antenna height listed for AT&T is in reference to the Tower Engineering Professionals Site Plans dated April 22, 2013.

³ Asterisks indicate cases where a comparable antenna pattern was utilized for calculation purposes.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. Each frequency band and technology is calculated (one line is displayed to represent the combination of all technologies) as well as the resulting total percent of MPE. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the tower. In addition to the other worst case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas were completed using a local maximum off beam antenna gain (within ± 10 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

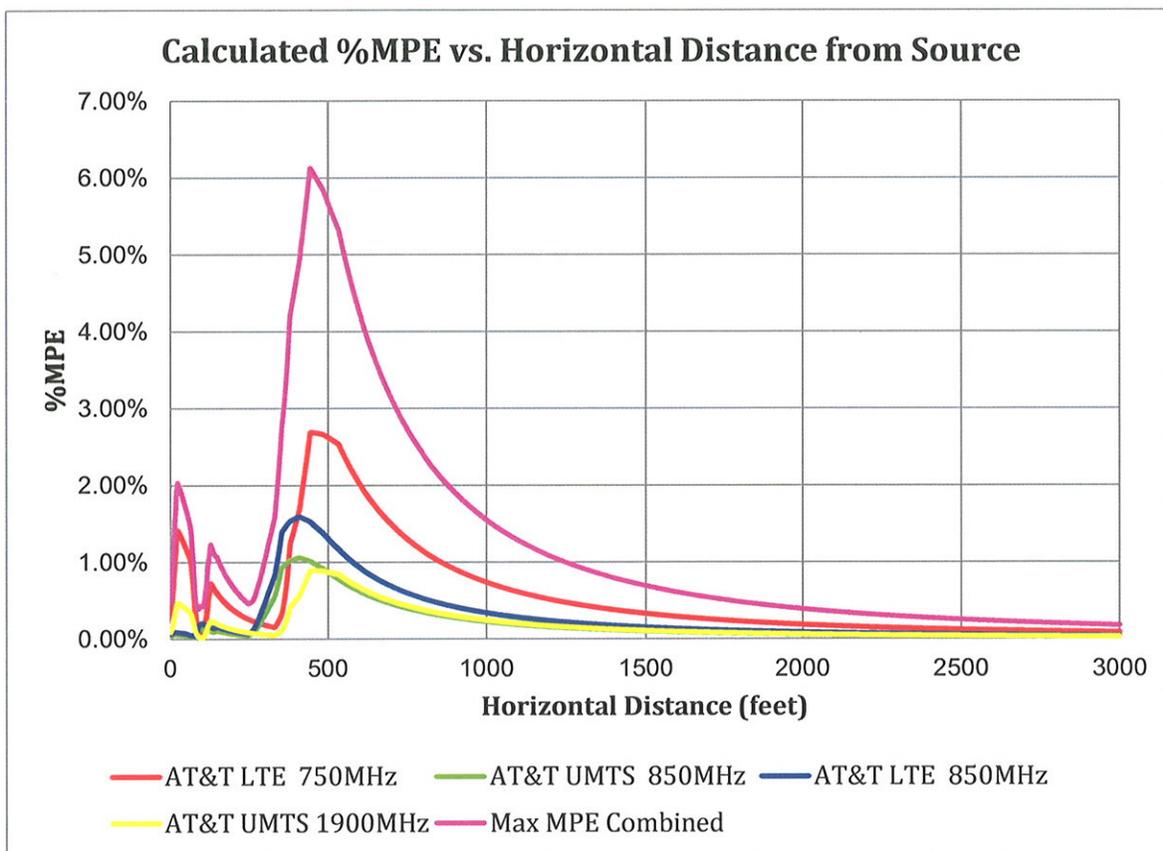


Figure 1: Graph of Percent of MPE vs. Distance

The highest composite percent of AT&T's MPE (6.13%) was calculated to occur at a horizontal distance of 443 feet from the tower. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 600 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE value for each technology as well as the associated parameters that were included in the calculations. The highest composite percent of MPE value was calculated to occur at a horizontal distance of 443 feet from the tower (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, 6 feet was subtracted from the height of the antennas for this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the finished installation.

Carrier	Number of Trans.	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	%MPE
AT&T LTE 750MHz	4	30.0	100.0	443	0.013442	0.500	2.69%
AT&T LTE 850MHz	2	30.0	100.0	443	0.008643	0.567	1.53%
AT&T UMTS 850MHz	1	40.0	100.0	443	0.005762	0.567	1.02%
AT&T UMTS 1900MHz	2	40.0	100.0	443	0.008962	1.000	0.90%
						Total	6.13%

Table 2: Maximum Percent of Emissions Values⁴

⁴ Transmit power assumes 0 dB of cable loss

6. Conclusion

The above analysis verifies that the AT&T emissions from the site will be well below the maximum levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum percent of MPE calculated at ground level is **6.13%** of the FCC limit. This maximum percent of MPE value is calculated to occur 443 feet away from the proposed site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

May 30, 2013

Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure⁵

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure⁶

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

⁵ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

⁶ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

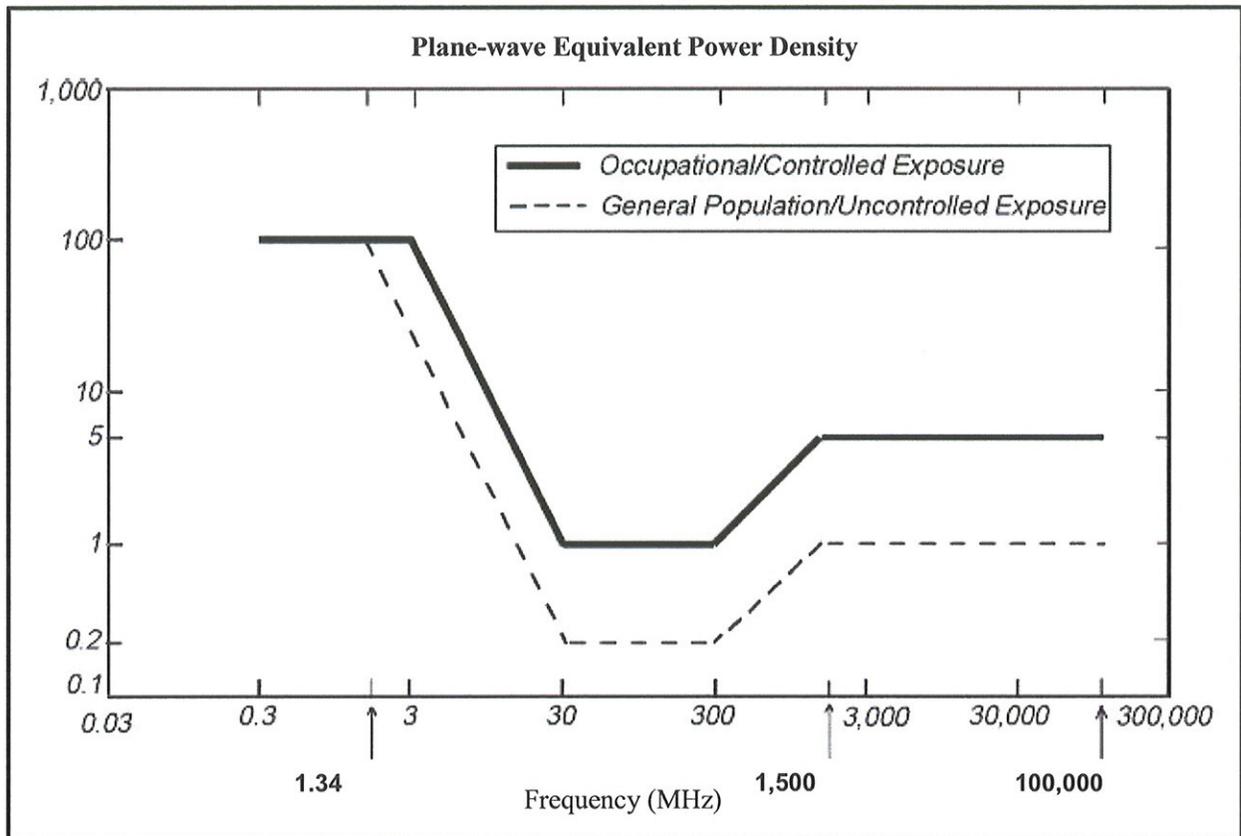
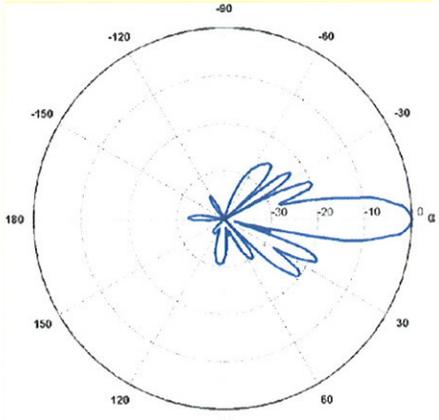
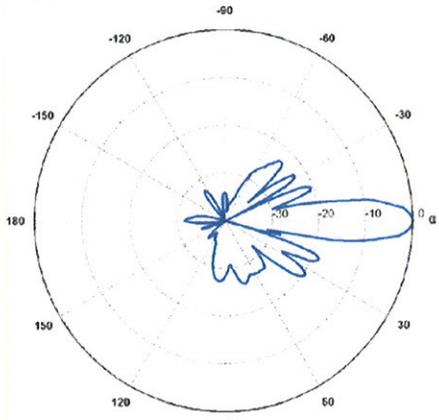
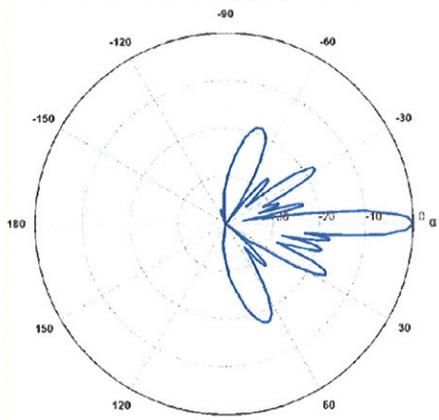


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T's Antenna Model Data Sheets and Electrical Patterns

<p>700 MHz</p> <p>Manufacturer: KMW Model #: AM-X-CD-17-65-00T-RET Frequency Band: 698-806 MHz Gain: 14.65 dBd Vertical Beamwidth: 10° Horizontal Beamwidth: 66° Polarization: Dual Slant ±45° Size L x W x D: 96.0" x 11.8" x 6.0"</p>	
<p>850 MHz</p> <p>Manufacturer: KMW Model #: AM-X-CD-17-65-00T-RET Frequency Band: 824-894 MHz Gain: 15.35 dBd Vertical Beamwidth: 9° Horizontal Beamwidth: 64° Polarization: Dual Slant ±45° Size L x W x D: 96.0" x 11.8" x 6.0"</p>	
<p>1900 MHz</p> <p>Manufacturer: KMW Model #: AM-X-CD-17-65-00T-RET Frequency Band: 1850-1900 MHz Gain: 15.55 dBd Vertical Beamwidth: 6.4° Horizontal Beamwidth: 65° Polarization: Dual Slant ±45° Size L x W x D: 96.0" x 11.8" x 6.0"</p>	



JANE SWIFT
GOVERNOR

ROBERT P. GITTENS
SECRETARY

HOWARD K. KOH, MD, MPH
COMMISSIONER

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
Radiation Control Program
174 Portland Street, 5th Floor, Boston, MA 02114
(617) 727-6214 (617) 727-2098 - Fax

**NEW POLICY REGARDING RADIOFREQUENCY FACILITY
INSTALLATION APPROVAL**

Due to personnel and budget reductions imposed upon the Radiation Control Program, we are no longer requiring notification and approval from companies that install radiofrequency antennas or facilities as outlined under 105 CMR 122.021. Companies installing radiofrequency antennas should ensure that they are meeting the FCC requirements for the installation.

A guide for local government officials (June 2, 2000) concerning the FCC requirements which complements the FCC's OET Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", August 1997 is available along with Bulletin 65. To obtain this information, please contact the FCC's Office of Engineering and Technology (phone: 202-418-2464 or e-mail: rfsafety@fcc.gov). Bulletin 65 can also be accessed and downloaded from the FCC's "RF Safety" website: <http://www.fcc.gov/oet/rfsafety>.

Since the FCC requirements are now identical to the requirements under 105 CMR 122.021, reporting to the Massachusetts Department of Public Health is no longer necessary. The citation in the regulations will be changed during the next revision of the Radiation Control Program's regulations.

If there are any questions concerning health effects regarding radiofrequency antennas, individuals may contact the Bureau of Environmental Health Assessment of the Massachusetts Department of Public Health at 617-624-5757.

7

AFFIDAVIT
OF
SITE ACQUISITION SPECIALIST

The undersigned hereby states the following in support of the application by SBA Towers II LLC, (hereinafter "SBA") to construct, operate and maintain a wireless communications facility at 5 Craig Road, Acton, MA (the "Site").

1. My name is Stephen McGovern and I am the Manager of Real Estate Analysis for Airosmith Development Inc. I have been retained to provide services for the purpose of obtaining approvals, leases, and licenses as well as performing other site acquisition and development tasks involved in building and installing wireless communication facilities. I have performed, and am performing, such services in connection with SBA's proposed wireless communications facility, including radio communications antennas and equipment for SBA's tenant, AT&T, located at the Site.
2. I have participated directly or through my present and past employment in the development of such facilities, including wireless communication facilities collocated on and next to an existing structure such as the facility proposed for the Site. I have personally visited the Site and the area surrounding the Site on numerous occasions. I submit this affidavit based on my personal knowledge of the Site and the surrounding area, as well as a review of SBA's records, AT&T's records concerning the Site, and based on my professional experience in the development of wireless communication facilities.

3. When AT&T's radio frequency experts identify an area within which a wireless communications installation is required to provide coverage to a significant gap in its network coverage, the area is conveyed to, and discussed with, the Site Acquisition Specialist. Further, the area within which a wireless communications installation is required to provide coverage to a significant gap in its coverage network, it is illustrated upon a map and issued to the Site Acquisition Specialist.
4. In this instance, the area within which AT&T is experiencing a significant gap in reliable network coverage is centered along Route 2, near the intersection of Craig Road and School Street within the Town of Acton, Massachusetts, and has a radius of approximately .45 miles.
5. Part of my site acquisition and development duties include identifying potential candidates within the area identified by AT&T's radio frequency experts. The candidate identification process includes reviewing the applicable zoning ordinance to identify areas within which the proposed use is allowed. Whenever possible, preference is given to locations that closely comply with local zoning bylaws, or in the event no viable candidates are determined to be located within such areas, to identify other potentially suitable locations. Viable candidates consist of existing structures of sufficient height from which an antenna installation can provide sufficient coverage, or lacking such a structure, parcels located within the narrowly defined search area upon which a tower may be constructed to a sufficient height. In order to be viable, a candidate must provide adequate coverage to the significant gap in AT&T's network coverage. In addition, all viable candidates must be available and have a willing landowner with whom which a commercially reasonable lease agreement may be negotiated.

6. In connection with this site, I have provided site acquisition services, including researching the area, identifying potential alternative candidates, and lease negotiations for the Site.
7. The geographic area defined by AT&T's radio frequency experts consists of an area centered south of the intersection of Route 2 and School Street. This area is predominantly characterized by a mix of residential and commercial development, low buildings, and a large amount of open, vacant land. All of the existing structures in the area either lack the necessary height to provide AT&T with adequate coverage, are too far away from the coverage area, are too close to existing on air sites, are not available to AT&T, or do not provide for a less obtrusive alternative.
8. In searching the area defined by the radio frequency expert, the following potential locations were identified, considered, and rejected for the reasons stated below:
 - a. **(G4-197) 70 Hosmer Street--** The property is located within the ARC zoning district and is a 13 acre (+/-) site situated at the corner of Hosmer Street and Route 2. A certified letter, along with the requisite property request form, was sent to the Commonwealth of Massachusetts, which owns the property. I have not received a direct response from the Commonwealth, and no Request for Proposals, a necessary step to make publically-owned land available, has been issued in response to my request. Therefore, I have determined that this site is not available to SBA as an alternative location.
 - b. **(H4-9) 19 Craig Road--** The property is located within a LI zoning district and is a 2.15 acre (+/-) site situated at the end of Craig Road.

There is a commercial building on the parcel. A certified letter was sent to the owner of the property. The Owner expressed some interest in potentially leasing to SBA. However, upon full investigation, the property was too small based on the 350-foot residential structure setback and the fact that a significant portion of the turf had a septic system and its leaching field underneath, rendering it unsuitable for the installation of a tower. Accordingly, I determined that this property was not feasible for SBA's proposed wireless communications facility.

- c. **(H4-10) 20 Craig Road--** The property is located within a LI zoning district and is a 4.4 acre (+/-) site situated at the end of Craig Road. There is a commercial building on the parcel. A certified letter was sent to the owner of the property. The owner called and stated that they were not interested in leasing this site. Therefore, this site is not available as an alternative location.
- d. **(H4-14) 18 Craig Road--** The property is located within a LI zoning district and is a 3 acre (+/-) site situated on the southern side of Craig Road. There is a commercial building on the parcel. A certified letter was sent to the owner of the property and the return receipt was received. However, the owner did not express an interest in leasing the property. Therefore, I determined that the site is not available as an alternative location.
- e. **(H4-25) 2 Craig Road--** The property is located within a LI zoning district and is a 4.28 acre (+/-) site situated on the southern side of Craig Road. There is a commercial building on the parcel. A certified letter was sent to the owner of the property and the return receipt was received.

However, the owner did not express an interest in leasing the property.

Therefore, I determined that the site is not available as an alternative location.

- f. **(H4-66) 312 School Street--** The property is located within a LI zoning district and is a 1.83 acre (+/-) site situated on the Northern side of Craig Road. There is a commercial building on the parcel. A certified letter was sent to the owner of the property and the return receipt was received.

However, the owner did not express an interest in leasing the property.

Therefore, I determined that the site is not available as an alternative location.

- g. **(H4-76) 315 School Street-** This is the property of the Acton Water Department, on the Western side of School Street but behind some homes. It is located in an ARC zoning district and is a 29.1 acre (+/-) site. The long and narrow lot shows to be wetland on its western half, and is well-within 350-feet of homes on its eastern half. Based upon these factors, I determined that this site not suitable under the Bylaw and is therefore not a feasible alternative.

- h. **(H4-109) 271 School Street--** This is a property on the south side of School Street, at the intersection of Lawsbrook Road. It is located in the R-8/4 zoning district and is a 6.2 acre (+/-) site. According to zoning maps, over half the Parcel is wetland, and the remaining portion does not have a distance that is further than the required 350-foot distance from homes. Based upon these factors, I determined that this site not suitable under the Bylaw and is therefore not a feasible alternative.

- i. **(H4-113, 119, 130) 44 Lawsbrook, 56 Lawsbrook Rear--** This is the property of the Acton Water Department, on the Western side of School Street and the Northern side of Lawsbrook Road. It is located in an ARC zoning district and is a 30 acre (+/-) site. Some of these parcels are entirely comprised of wetlands. In addition for parcels that are not wetlands, there are wetland concerns from the East, and homes surround the Southern and Western borders of the Water Department Property. Finally, there are concerns with contamination plumes that have been documented in these parcels. Based upon these factors, I determined that this site not suitable under the Bylaw and is therefore not a feasible alternative.
- j. **(H4-128-2) 5-11 Lexington Drive--** This is a property on the south side of School Street, at the intersection of Lawsbrook Road. It is located in the R-8/4 zoning district and is a 6.0 acre (+/-) site. The Property has a ball field and a pond on it, and according to Assessing records, is owned by the Lawsbrook Village Homeowners Association. A portion of the western boundary is wetlands, and no part of this long, narrow parcel is 350-feet from a home. Based upon these factors, I determined that this site not suitable under the Bylaw and is therefore not a feasible alternative.
- k. **(H4- 143 & 152) 37 Lawsbrook Rd. --** This property is adjacent to the old WR Grace site, a property with known contamination issues. This site is unbuildable due to environmental concerns. It is located in the TD zoning district and is a 5.7 acre (+/-) site. Based upon these factors, I determined that this site is not a feasible alternative.
- l. **(I4-2, I4-5) Independence Rd. --** This property is the old WR Grace site, a property with known contamination issues and is thus unbuildable

due to environmental concerns. It is located in the TD zoning district and is a 150 acre (+/-) site. Based upon these factors, I determined that this site is not a feasible alternative.

9. Based on my review of the Town of Acton Zoning Bylaw (the “Bylaw”), my knowledge of the area, the proposed site is the only reasonably feasible location. The entire area is generally characterized by open space and recreational uses. The large lots adjacent to Route 2 are open space, used for recreation and conservation, and would not offer any opportunity to minimize the visual impact. As you travel south of Route 2, the area quickly turns residential, and these residential lots, such as those on Russell Road, Foster Street, Heritage Road, Lexington Drive and significant portions of School Street, would not be able to support the Town’s requirement for a 175-foot setback from the property lines (Bylaw Section 3.10.6.6) and/or a 350-foot setback from residential buildings not on the same lot (Section 3.10.6.7). This further concentrates the search for viable candidates to Craig Road. North of Route 2 is mixed development, some commercial and some residential, but all sites, other than the open space sites, are outside the search area and are insufficient to close the coverage gap, or are too close to residences to construct a site outside of setbacks. The proposed site is one of the few commercially occupied lots in the area where the owners indicated interest in leasing a portion of their land for the project, and also with sufficient area to accommodate the facility, allow for visual mitigation through design and location, and to be reasonably distant from homes. However, the Site is the only property that was not excluded based on other considerations.

10. For the foregoing reasons, including my review of the Bylaw, my personal knowledge of the area, the location of AT&T's existing facilities, and analysis provided by AT&T's radio frequency expert, none of the potential alternative candidates located within allowed zoning districts are reasonably feasible alternatives to the proposed Site. In addition, based on my experience and in my professional opinion, the Site is the least intrusive and only available and reasonably feasible alternative to provide adequate coverage to this significant gap in AT&T's network coverage.
11. Accordingly, the proposal currently before the Board provides the only feasible alternative for AT&T to provide adequate coverage to its significant gap in reliable network coverage.

Executed this 27th day of June, 2013



Stephen P. McGovern,
Manager of Real Estate Analysis
Airosmith Development Inc.

8

**APPLICATION for SPECIAL PERMIT
for a
WIRELESS COMMUNICATION FACILITY**

SBA TOWERS II, LLC
33 Boston Post Road West
Suite 320
Marlborough, MA 01752
Applicant

Property Location:

**5 Craig Road
Acton, Massachusetts
Assessor's Map H4 Lot 45**

EXHIBIT 8

**TO BE PROVIDED AFTER
PERFORMANCE OF
VISUAL DEMONSTRATION**

9



Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 2601 Meacham Boulevard
 Fort Worth, TX 76137

Aeronautical Study No.
 2013-ANE-539-OE

Issued Date: 04/29/2013

Clinton Papenfuss
 SBA Towers
 5900 Broken Sound Parkway NW
 Boca Raton, FL 33487

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Antenna Tower (MA 11845-S)
 Location: Acton, MA
 Latitude: 42-28-02.50N NAD 83
 Longitude: 71-25-08.10W
 Heights: 142 feet site elevation (SE)
 115 feet above ground level (AGL)
 257 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)
- Within 5 days after the construction reaches its greatest height (7460-2, Part II)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 10/29/2014 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (781) 238-7522. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2013-ANE-539-OE.

Signature Control No: 186942149-188528040

(DNE)

Suzanne Dempsey
Technician

Attachment(s)
Frequency Data

cc: FCC

Frequency Data for ASN 2013-ANE-539-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

10



Tower Engineering Professionals, Inc.
3703 Junction Blvd.
Raleigh, NC 27603
(919) 661-6351

Date: June 10, 2013

To: SBA Towers II, LLC.
5900 Broken Sound Parkway NW
Boca Raton, FL 33487-2797

Subject: Water Balance Calculations

Site Name: Acton
SBA Site #: MA11845-S
TEP Site #: 29864-5657

Site Location: 5 Craig Road, Acton, MA 01720
North 42° 28' 2.71", West 71° 25' 7.82"

Background

SBA Towers is proposing a new telecommunications facility located at 5 Craig Road, Acton, MA. Section 3.8 of *RULES AND REGULATIONS for a WIRELESS COMMUNICATIONS FACILITY SPECIAL PERMIT* requires that water balance calculations be submitted for the proposed tower.

Summary

Tower Engineering completed "Drainage Calculations" on June 10, 2013 per section 3.9 of *RULES AND REGULATIONS for a WIRELESS COMMUNICATIONS FACILITY SPECIAL PERMIT*. The result of this analysis was that the proposed tower facility will not increase the peak runoff discharge from pre to post-development. Since there is no net increase in runoff from the proposed tower facility there will be no change in storage for the watershed. Water balance calculations would result in pre-development and post-development conditions being equal. Please inform us if further analysis is needed.

We at *Tower Engineering Professionals, Inc.* appreciate the opportunity of providing our continuing professional services to you and SBA Towers. If you have any questions or need further assistance on this or any other projects please give us a call.

Sincerely,

J. Russell Hill, P.E.

Senior Engineer

Tower Engineering Professionals, Inc.



11



Tower Engineering Professionals, Inc.
3703 Junction Blvd.
Raleigh, NC 27603
(919) 661-6351

Date: June 10, 2013

To: SBA Towers II, LLC.
5900 Broken Sound Parkway NW
Boca Raton, FL 33487-2797

Subject: Earth Removal Calculations

Site Name: Acton
SBA Site #: MA11845-S
TEP Site #: 29864-5657

Site Location: 5 Craig Road, Acton, MA 01720
North 42° 28' 2.71", West 71° 25' 7.82"

Background

SBA Towers is proposing a new telecommunications facility located at 5 Craig Road, Acton, MA. Section 3.10 of *RULES AND REGULATIONS for a WIRELESS COMMUNICATIONS FACILITY SPECIAL PERMIT* requires that earth removal calculations be submitted for the proposed tower.

Summary

The proposed location of the tower facility is currently a gravel covered lot. Additional material brought to the site will consist of concrete for equipment foundations and mulch for landscaping. The earth displaced by these foundations will be removed from the site.

Cut:

Earth:

(100 cubic yards for tower foundation) + (14 cubic yards for equipment foundation for each carrier) x (4 carriers) = 156 ± cubic yards

Fill (Including surface cover):

Concrete:

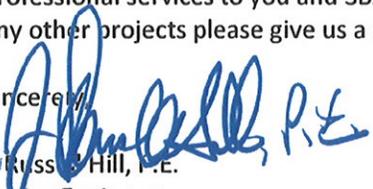
(100 cubic yards for tower foundation) + (16 cubic yards per carrier) x (4 carriers) = 164 ± cubic yards

Landscaping mulch:

(1000 sq.ft) x (2 inches of cover) = 6.2 ± cubic yards

We at *Tower Engineering Professionals, Inc.* appreciate the opportunity of providing our continuing professional services to you and SBA Towers. If you have any questions or need further assistance on this or any other projects please give us a call.

Sincerely,


J. Russell Hill, P.E.
Senior Engineer
Tower Engineering Professionals, Inc.



12



Tower Engineering Professionals, Inc.
3703 Junction Blvd.
Raleigh, NC 27603
(919) 661-6351

Date: June 10, 2013

To: SBA Towers II, LLC.
5900 Broken Sound Parkway NW
Boca Raton, FL 33487-2797

Subject: Drainage Calculations

Site Name: Acton
SBA Site #: MA11845-S
TEP Site #: 29864-5657

Site Location: 5 Craig Road, Acton, MA 01720
North 42° 28' 2.71", West 71° 25' 7.82"

Background

SBA Towers is proposing a new telecommunications facility located at 5 Craig Road, Acton, MA. Section 3.9 of *RULES AND REGULATIONS for a WIRELESS COMMUNICATIONS FACILITY SPECIAL PERMIT (RRSP)* requires that drainage calculations be submitted for the proposed tower.

Results

The requirement that the post-development peak stormwater runoff does not exceed the pre-development peak runoff can be met if at least 1,000 sq.ft of new landscaping is used at the proposed site.

Calculations

The town of Acton's *RRSP* document and the *Massachusetts Stormwater Handbook Standard 2* require that the post-development peak discharge rate is equal to or less than the pre-development rate from the 2-year and the 10-year 24-hour storms. Measurement of peak discharge rates is calculated at a design point, typically the lowest point of discharge at the down-gradient property boundary.

The rational method was used to determine the pre and post development peak discharge rates.

$$Q_{post} \leq Q_{pre}$$

Where;

$$Q_{post} = C_{post} I_{post} A_{post}$$

$$Q_{pre} = C_{pre} I_{pre} A_{pre}$$

Q = peak runoff rate [cfs]

C = runoff coefficient

I = average rainfall intensity [in/hr]

The equation above can be rewritten as;

$$C_{pre} I_{pre} A_{pre} \leq C_{post} I_{post} A_{post}$$

Where;

$$I_{pre} = I_{post}$$

$$A_{pre} = A_{post}$$

Therefore; $C_{pre} \leq C_{post}$

The proposed location of the tower facility is currently a gravel lot. The new tower facility will contain gravel and concrete areas as well as a mulched landscaped buffer. The increased peak runoff rate 'Q' due to the increased runoff coefficient 'C' from the addition of concrete equipment areas will be offset by the decrease in 'C' from the addition of mulch landscaping buffer. That is, the additional runoff from the concrete will be canceled by the decrease in runoff from the mulch.

Table 1 calculates the weighted 'C' value for pre and post development conditions. For this calculation, the area of required landscaping was determined so that pre and post weighted 'C' values are equal. This results in a minimum of 1,000 sq.ft of new landscaping required to have post-development runoffs less than pre-development runoffs.

Table 1

Land use	C	Area _{Pre}	Area _{Post}	Weighted C _{pre}	Weighted C _{post}
Gravel	0.80	33804	31304	0.68	0.630
Concrete	0.95	0	1500	0	0.036
Landscaping	0.50	0	1000	0	0.013
Other	0.60	5966	5966	0.09	0.090
Total:		39770	39770	0.77	0.768

The following values of 'C' were chosen:

0.80 – gravel area

0.95 – concrete area

0.50 – landscaped area

0.60 – other

See Appendix B for reference document.

The current condition of the parcel is assumed to be 85% gravel and 15% other, where "other" consists of a portion of a paved entrance, a row of trees, and compacted soil. This assumption is based on site survey. A conservative area of proposed concrete was used at 1500 sq.ft. The expected area is approximately 1000 sq.ft.

We at Tower Engineering Professionals, Inc. appreciate the opportunity of providing our continuing professional services to you and SBA Towers. If you have any questions or need further assistance on this or any other projects please give us a call.

Sincerely,

J. Russell Hill, P.E.

Senior Engineer

Tower Engineering Professionals, Inc.



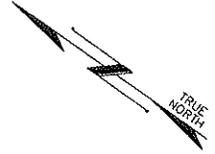
Appendix A
Site Sketch

SITE SKETCH

SCALE: 1" = 40'

LOCATION OF PEAK
RUNOFF DISCHARGE AT
PROPERTY BOUNDARY.

PARCEL AREA:
39770 SQ.FT.



PROPOSED SBA
TOWER FACILITY.

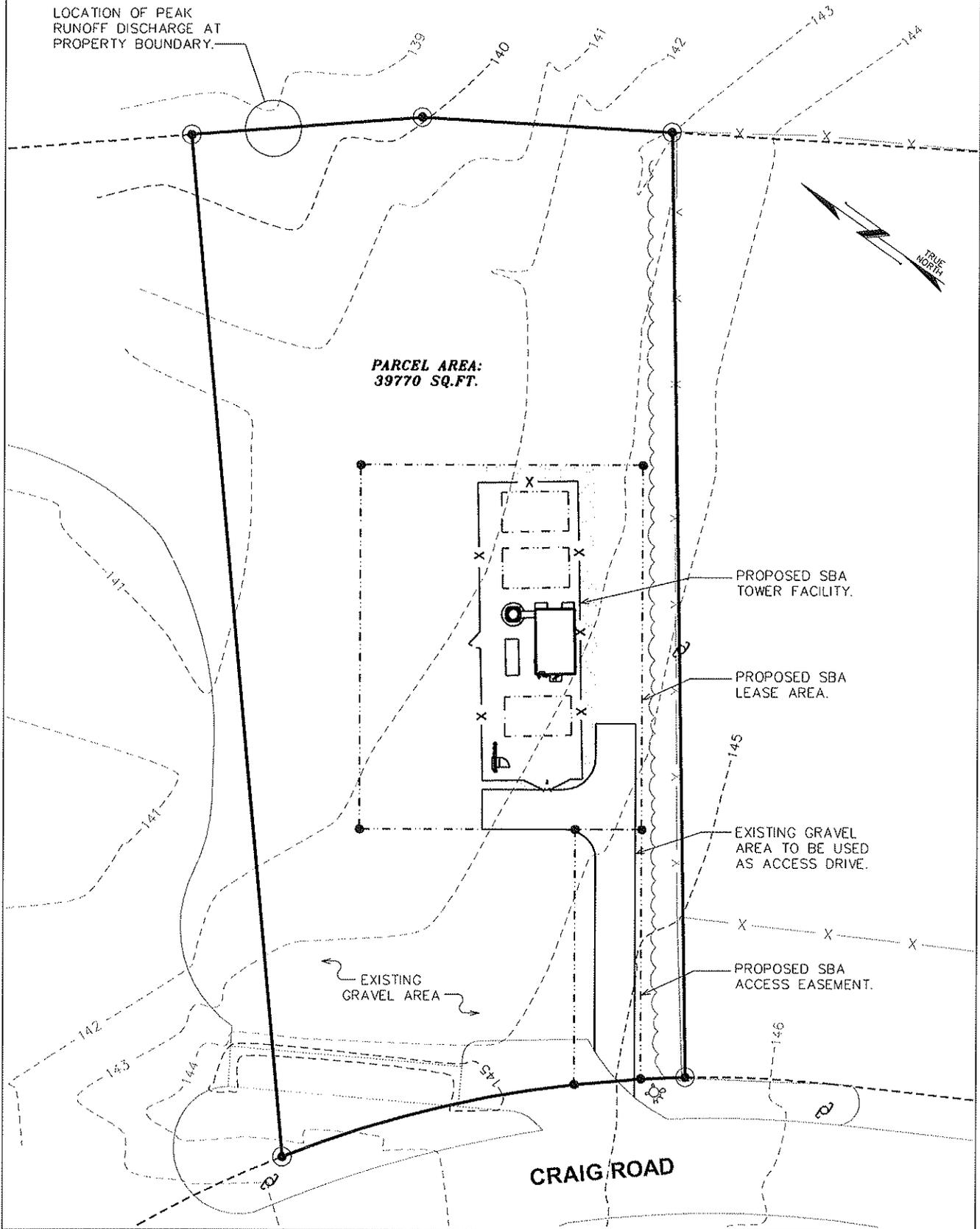
PROPOSED SBA
LEASE AREA.

EXISTING GRAVEL
AREA TO BE USED
AS ACCESS DRIVE.

PROPOSED SBA
ACCESS EASEMENT.

EXISTING
GRAVEL AREA

CRAIG ROAD



Appendix B
Runoff Coefficients

TABLE 6.6 TYPICAL RUNOFF COEFFICIENTS FOR 2-YR TO 10-YR FREQUENCY DESIGN

DESCRIPTION OF AREA	RUNOFF COEFFICIENTS
Business	
Downtown areas	0.70-0.95
Neighborhood areas	0.50-0.70
Residential	
Single-family areas	0.30-0.50
Multi-units, detached	0.40-0.60
Multi-units, attached	0.60-0.75
Residential (suburban)	0.25-0.40
Apartment dwelling areas	0.50-0.70
Industrial	
Light areas	0.50-0.80
Heavy areas	0.60-0.90
Parks, cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets	
Asphalt	0.70-0.95
Concrete	0.80-0.95
Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95
Lawns, Sandy Soil	
Flat, 2%	0.05-0.10
Average, 2-7%	0.10-0.15
Steep, 7%	0.15-0.20
Lawns, Heavy Soil	
Flat, 2%	0.13-0.17
Average, 2-7%	0.18-0.22
Steep, 7%	0.25-0.35

These runoff coefficients are typical values for return periods of 2-10 yrs. Higher values are appropriate for higher return periods.
Source: ASCE and WPCF (1969)

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8 2 2 6 8 3 P 0 8 2

MASSACHUSETTS QUITCLAIM DEED SHORT FORM INDIVIDUAL 1981

I, Peter Shribman, Trustee of Dan Nikk Realty Trust u/d/t dated December 16, 1986, recorded with Middlesex South District Registry of Deeds at Book 17683, Page 508

of Swampscott, Essex

County, Massachusetts,

~~being purchased~~ for consideration paid, and in full consideration of (\$60,000.00)

-----Sixty thousand and No/100 Dollars-----

grant to Leonard N. Palmer and Craig D. Palmer, d/b/a Palmer Realty Company *

of Craig Road, Acton, Middlesex County, with quitclaim covenants

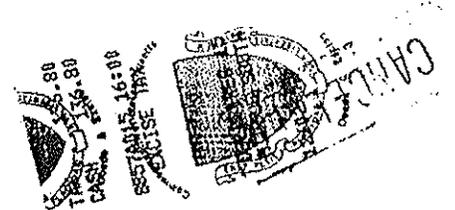
~~whereby~~

[Description and encumbrances, if any]

See description attached.

PROPERTY ADDRESS: Lot 4A, Craig Road, Acton, MA

MSD 12/29/92 02:33:16 507 25.00
1992 MASS. EDDISE TAX 156.00 ***



Witness my hand and seal this 27th day of December, 1992

Dan Nikk Realty Trust
By: [Signature]
Peter Shribman, Trustee

The Commonwealth of Massachusetts

ss.

December 2, 1992

Then personally appeared the above named Peter Shribman, Trustee of Dan Nikk Realty Trust, as aforesaid and acknowledged the foregoing instrument to be his free act and deed before me

[Signature]
Notary Public - Justice of the Peace

My commission expires 7-29 1999

(* Individual - Joint Tenants - Tenants in Common.)

CHAPTER 183 SEC. 6A5 AMENDED BY CHAPTER 497 OF 1969
Every deed presented for record shall contain or have endorsed upon it the full name, residence and post office address of the grantee and a recital of the amount of the full consideration thereof in dollars or the nature of the other consideration therefor, if not delivered for a specific monetary sum. The full consideration shall mean the total price for the conveyance without deduction for any liens or encumbrances assumed by the grantee or remaining thereon. All such endorsements and recitals shall be recorded as part of the deed. Failure to comply with this section shall not affect the validity of any deed. No registrar of deeds shall accept a deed for recording unless it is in compliance with the requirements of this section.

A certain parcel of land situated in Acton, Middlesex County, Massachusetts, being shown as Lot 4A on a plan entitled, "Plan of Land in Acton, Mass. (Williamsburg Park)" owned by: Merwin H. Craig, Scale: 1" = 60 feet, September 7, 1965, Everett M. Brooks Co., Civil Engineers, Newtonville, Wayland, W. Acton, Massachusetts, recorded with the Middlesex South District Registry of Deeds in Book 10966, Page End, being bounded and described as follows:

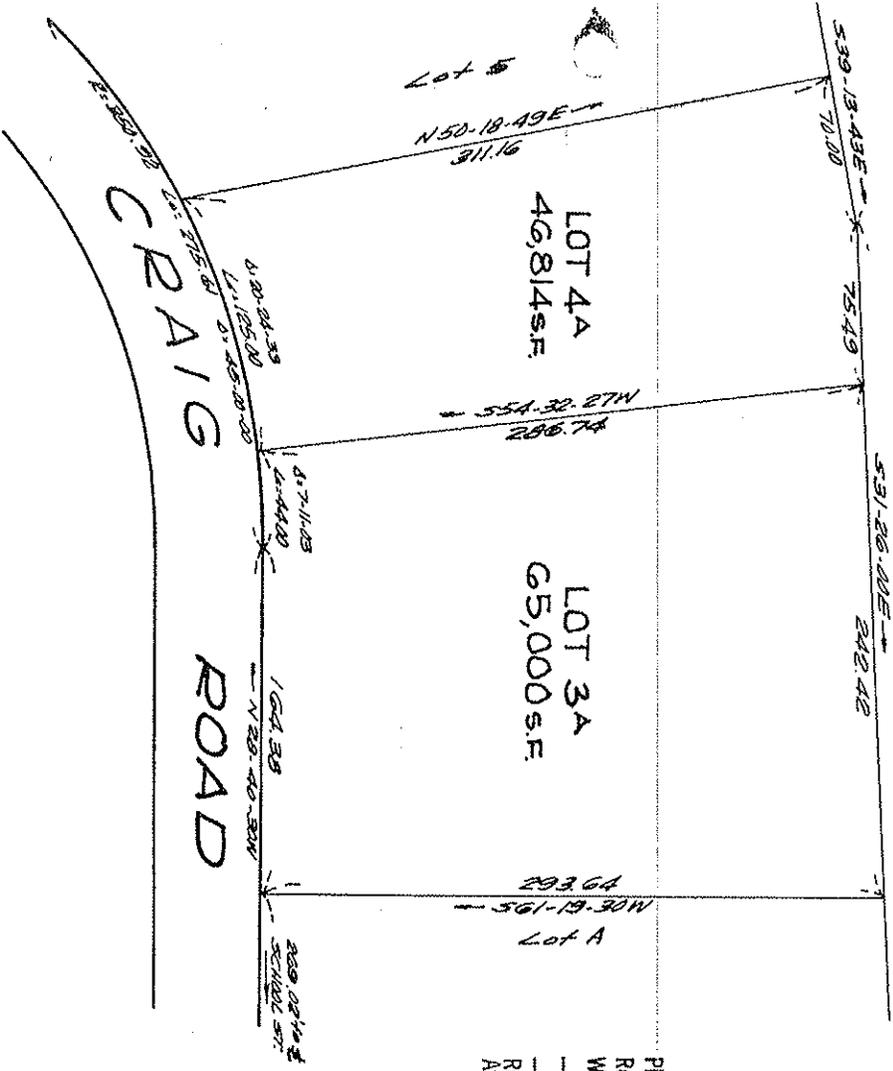
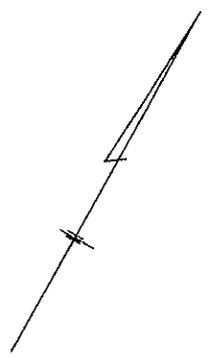
- SOUTHWESTERLY by Craig Road, as shown on said plan, one hundred twenty-five and 00/100 (125.00) feet;
- NORTHWESTERLY by Lot 5, as shown on said plan, three hundred eleven and 16/100 (311.16) feet;
- NORTHEASTERLY by land of The Commonwealth of Massachusetts, as shown on said plan, by two courses measuring respectively, seventy and 00/100 (70.00) feet and seventy-five and 49/100 (75.49) feet; and
- SOUTHEASTERLY by Lot 3A, as shown on said plan, two hundred eighty-six and 74/100 (286.74) feet.

Said Lot 4A containing 46,814 square feet of land, according to said plan.

Said premises are conveyed subject to and with the benefit of easements, rights, restrictions and agreements of record, if any there be, insofar as the same are now in force and applicable.

For title reference see deed from Merwin H. Craig to the grantor dated December 17, 1986, recorded with said Deeds at Book 17683, Page 514.

145 1933



PLAN OF LAND
IN
ACTON • MASS.
(WILLIAMS BURG PARK)

OWNED BY: MERWIN H. CRAIG
SCALE: 1 INCH = 60 FEET
EVERETT M. BROOKS CO.
NEWTONVILLE • WAYLAND • WACTON • MASSACHUSETTS.



Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.

Plan Number 361 of 1965
Rec'd OCT 27 1965 at 2 15 P.M.
With ALONE Doc. No. _____

Recorded, Book 10966, Page END
Attest: _____ REGISTER



ACTON PLANNING BOARD
"APPROVAL UNDER THE SUBDIVISION CONTROL
LAW NOT REQUIRED."

DATE: September 13, 1965

David P. [Signature]
Everett M. Brooks
Charles E. [Signature]

14

OWNER AUTHORIZATION AGREEMENT

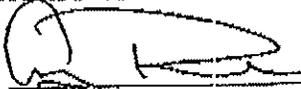
Site Parcel: 5 Craig Road, Acton, MA
Site Number: MA11845
Site Name: Acton 2 MA

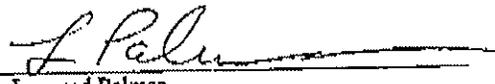
RE: Property described as 5 Craig Road, Acton MA.

Craig Palmer, Leonard Palmer (Doing Business as Palmer Realty Trust, are the owners of the Property (the "Owner") and has the authority to enter into a lease agreement with SBA Towers II, LLC concerning the portion of the Property that SBA Towers II, LLC seeks to occupy.

Owner hereby authorizes SBA Towers II, LLC to file applications in his/her/its name to obtain, at SBA Towers II, LLC's expense, all licenses and permits or authorizations required for SBA Towers II, LLC to use the Property from all applicable government and/or regulatory entities (including, without limitation, zoning and land use authorities, Federal Communications Commission and the Federal Aviation Administration) including appointing Brian Grossman, Esq./Prince Lobel Tye LLP as agent for all land use and zoning permit applications, and Owner agrees to cooperate with and to allow SBA Towers II, LLC, at no cost to Owner, to obtain a title report, zoning approvals, variances, land-use permits and building permits.

ABSENT AN ALREADY EXISTING FULLY EXECUTED LEASE AGREEMENT, EACH PARTY ACKNOWLEDGES THAT THE OTHER HAS MADE NO REPRESENTATIONS OR COMMITMENTS THAT A LEASE AGREEMENT CONCERNING THE PROPERTY WILL BE ENTERED INTO IN THE FUTURE.

By: 
Name: Craig Palmer
Its: Owner

By: 
Name: Leonard Palmer
Its: Owner

15



Town of Acton
 472 Main Street
 Acton, MA 01720
 Telephone (978) 929-6621
 Fax (978) 929-6340

Brian McMullen
 Assessor

Locus: 5 Craig Road
Parcel: H4 - 45

Parcel ID	LOCATION	Owner	Co-Owner	Mailing Address	City	ST	Zip
G4-198	96 MASS AV	COMMONWEALTH OF MASS		DEPT OF PUBLIC WORKS	BOSTON, MA 2108		
H4-10	20 CRAIG RD	HAARTZ CORPORATION		87 HAYWARD ROAD	ACTON, MA 01720		
H4-100	286 SCHOOL ST	PENNEY DAN S	PENNEY LAURIE A	286 SCHOOL ST	ACTON, MA 01720		
H4-100-1	284 SCHOOL ST	LIN SHU-FANG	LIN FREEMAN CHEN-SHI	284 SCHOOL ST	ACTON, MA 01720		
H4-102-1	280 SCHOOL ST	FRENCH THOMAS	FRENCH LYNNE	280 SCHOOL STREET	ACTON, MA 01720		
H4-103	295 SCHOOL ST	ROSE SCOTT D	C/O WARD MEREDITH N	295 SCHOOL ST	ACTON, MA 01720		
H4-106	287 SCHOOL ST	SNYER MARJORIE M		287 SCHOOL ST	ACTON, MA 01720		
H4-107	291 SCHOOL ST	SALZ NORBERT J	C/O HEITMAN JEFFREY + NATASHA	291 SCHOOL ST	ACTON, MA 01720		
H4-11	17 CRAIG RD	BRESLOUF JOHN		17 CRAIG ROAD	ACTON, MA 01720		
H4-113	28 LAWSBROOK RD	ACTON WATER DISTRICT		PO BOX 953	ACTON, MA 01720		
H4-12	15 CRAIG RD	15 CRAIG RD LLC	C/O PARSONS COMMERCIAL GROUP INC	1881 WORCESTER RD, SUITE 200	FRAMINGHAM, MA 01701		
H4-13	7 CRAIG RD	PALMER REALTY TR	PALMER C+L	7 CRAIG RD	ACTON, MA 01720		
H4-14	18 CRAIG RD	MURPHY STEVEN P TRUSTEE	JELRIC TRUSTE OF 2001	OBRIEN INVESTMENT PARTNERS,PO BOX 1250	W CONCORD, MA 01742		
H4-25	2 CRAIG RD	MURPHY STEVEN P TRUSTEE	JELRIC TRUST OF 2001	OBRIEN INVESTMENT PARTNERS,PO BOX 1250	W CONCORD, MA 01742		
H4-46	3 CRAIG RD	3 CRAIG RD LLC		3 CRAIG RD	ACTON, MA 01720		
H4-5	316 SCHOOL ST	COMMONWEALTH OF MASS	STATE FARM	DEPT OF PUBLIC WORKS	BOSTON, MA 02108		
H4-55	300 SCHOOL ST	PAQUETTE GEORGE A		300 SCHOOL ST	ACTON, MA 01720		
H4-6	323 SCHOOL ST	COMMONWEALTH OF MASS	STATE FARM	DEPT OF PUBLIC WORKS	BOSTON, MA 02108		
H4-63	298 SCHOOL ST	BERGIN THOMAS F	BERGIN RUTH A	91 AUTUMN LANE	WELLS, ME 04090		
H4-66	312 SCHOOL ST	MURPHY STEVEN P TRUSTEE	JELRIC TRUST OF 2001	OBRIEN INVESTMENT PARTNERS,PO BOX 1250	W CONCORD, MA 01742		
H4-76	315 SCHOOL ST	ACTON WATER DISTRICT	WEST & SOUTH WATER SUPPLY	472 MAIN STREET	ACTON, MA 01720		
H4-76-1	307 SCHOOL ST	DODGE JOHN	DODGE JUDITH A	307 SCHOOL ST	ACTON, MA 01720		
H4-76-2	303 SCHOOL ST REAR	SHEA CHRISTOPHER T	SHEA MARYANN V	303 SCHOOL STREET	ACTON, MA 01720		
H4-76-3	287 SCHOOL ST REAR	SNYER MARJORIE M		287 SCHOOL STREET	ACTON, MA 01720		
H4-76-4	309 SCHOOL ST	COOPER KENNETH A	THANAE F	309 SCHOOL ST	ACTON, MA 01720		
H4-76-5	311 SCHOOL ST	TIPTON FREDERICK J		311 SCHOOL ST	ACTON, MA 01720		
H4-79	292 SCHOOL ST	BERGIN THOMAS F	BERGIN RUTH A	91 AUTUMN LANE	WELLS, ME 04090		
H4-80	300 SCHOOL ST	PAQUETTE GEORGE A		300 SCHOOL ST	ACTON, MA 01720		
H4-86	288 SCHOOL ST	MAGLOTHIN MICHAEL J	MAGLOTHIN HILARY E	288 SCHOOL ST	ACTON, MA 01720		
H4-87	290 SCHOOL ST	HAO TIAN	FENG JIAMIN	290 SCHOOL ST	ACTON, MA 01720		
H4-88	296 SCHOOL ST	HARLEY GARY D	HARLEY CHERYL P	296 SCHOOL ST	ACTON, MA 01720		
H4-89	303 SCHOOL ST	SHEA CHRISTOPHER T	SHEA MARYANN V	303 SCHOOL STREET	ACTON, MA 01720		
H4-9	19 CRAIG RD	CRAIG ROAD ASSOCIATES LLC		19 CRAIG RD	ACTON, MA 01720		
H4-90	305 SCHOOL ST	WEIR JUSTIN W	WEIR JULIE A	305 SCHOOL ST	ACTON, MA 01720		
H4-97	282 SCHOOL ST	PERINI CRAIG E	PERINI VALERIE L	282 SCHOOL ST	ACTON, MA 01720		
H4-98	299 SCHOOL ST	QUINN JAMES F	QUINN KATHLEEN A	299 SCHOOL ST	ACTON, MA 01720		

Abutters and owners of land directly opposite on any public or private street or way and abutters to the abutters within one thousand feet of the property line all as they appear on the most recent applicable tax list.

Brian McMullen
Assessor

Locus: 5 Craig Road
Parcel: H4 - 45

Parcel ID	LOCATION	Owner	Co-Owner	Mailing Address	City	ST	Zip
-----------	----------	-------	----------	-----------------	------	----	-----

**HEARING NOTICES FOR ALL SPECIAL PERMITS MUST BE SENT TO THE
PLANNING BOARD, TOWN HALL IN THE FOLLOWING TOWNS:**

Boxborough, MA 01729	Maynard, MA 01754	Concord, MA 01742	Littleton, MA 01460
Carlisle, MA 01741	Stow, MA 01775	Westford, MA 01886	Sudbury, MA 01776

Kelly Schorr
Acton Assessors Office

6/13/2012