



CITY OF CAMBRIDGE

BOARD OF ZONING APPEAL

831 Massachusetts Avenue, Cambridge MA 02139

617-349-6100

BZA Application Form

BZA Number: 221274

General Information

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit: X

Variance:

Appeal:

2023 MAY -8 PM 3:18
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

PETITIONER: T-Mobile Northeast LLC for the President and Fellows of Harvard College C/O Adam F. Brailard of Prince Lobel Tye LLP

PETITIONER'S ADDRESS: One Internatioanal Place, Boston, MA 02110

LOCATION OF PROPERTY: 51 Brattle St., Cambridge, MA

TYPE OF OCCUPANCY: Education, Business,
Telecommunications

ZONING DISTRICT: Business A Zone

REASON FOR PETITION:

/Telecommunication Facility (antenna)/

DESCRIPTION OF PETITIONER'S PROPOSAL:

The Applicant proposes to modify its existing wireless facility currently operating on the rooftop of the Building by replacing the existing nine (9) panel antennas with nine (9) new panel antennas and replacing three (3) existing RRUs with six (6) new RRUs, together with supporting equipment. All new and proposed antennas will be façade mounted to the penthouse on the roof of the penthouse of the existing Building, installed in similar locations as the existing antennas and painted to match the Building. The Applicant also proposes to replace an existing radio cabinet with one (1) new similar sized cabinet, which will be installed in the same location of the existing cabinet.

SECTIONS OF ZONING ORDINANCE CITED:

Article: 4.000	Section: 4.32.G.1 and 4.40 (Footnote 49 - Telecommunications Facilities)
Article: 10.000	Section: 10.40 (Special Permit)
Article: 6409	Section: Federal Middle Class Tax Relief Act (Spectrum Act)

Original
Signature(s):

(Petitioner (s) / Owner)

Adam F. Brailard of Prince Lobel Tye LLP, for the
Applicant, T-Mobile Northeast LLC

(Print Name)

Address:
Tel. No.

One International Place, Suite 3700, Boston, MA 02110

617-456-8153

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We President and Fellows of Harvard College
(OWNER)

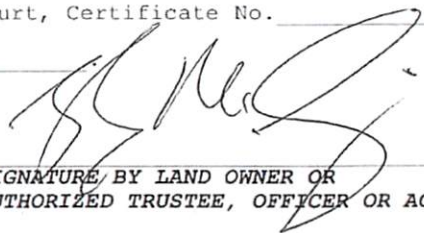
Address: c/o Harvard Real Estate, Inc., Holyoke Center, Room 1000, Cambridge, MA 02138-3895

State that I/We own the property located at 51 Brattle Street,
which is the subject of this zoning application.

The record title of this property is in the name of President and Fellows of Harvard College

*Pursuant to a deed of duly recorded in the date 10/1/1986, Middlesex South
County Registry of Deeds at Book 17450, Page 310; or

Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____

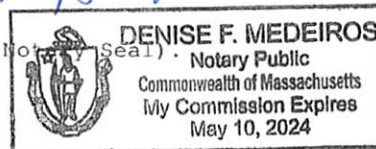

SIGNATURE BY LAND OWNER OR
AUTHORIZED TRUSTEE, OFFICER OR AGENT*

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Zak Ringo personally appeared before me,
this 19 of April, 2023, and made oath that the above statement is true.

My commission expires 5/10/2024 (Notary Seal) _____ Notary



- If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

May 3, 2023

City of Cambridge
Board of Zoning Appeals
831 Massachusetts Avenue
Cambridge, MA 02139

Re: Eligible Facilities Request pursuant to Section 6409 of the
Spectrum Act and an Application for Special Permit, in the
Alternative
Property Address: 51 Brattle Street, Cambridge, MA 02139
Assessor's Map 169, Lot 14 (the "**Property**")
Applicant: T-Mobile Northeast, LLC ("**Applicant**")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents T-Mobile Northeast LLC in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals (the "**Board**"), to modify an existing wireless communications facility on the Property. The Property is located in the Business A Zoning District (the "**BA**"). To the extent that the Board determines that the requirements of Article 4 Section 4.32G.1 of the City of Cambridge Zoning Ordinance (the "**Ordinance**") apply, the use of the Property for a wireless telecommunications facility is permitted by special permit from the Board¹. The Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Section 10-43 of the Ordinance.

The Applicant's Proposed Facility (as defined herein) is subject to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, more commonly known as the "Spectrum Act" (47 U.S.C. § 1455). As such, we respectfully submit that in the event that the Board determines that the application does not comply with the Spectrum Act, the Applicant hereby states that the special permit requirements set forth in the Ordinance are hereby met by the Applicant, and that relief must be granted to the Applicant. Compliance with the Spectrum Act is shown on the Eligible Facilities Request permit application form attached hereto and incorporated herein by reference (the "**EFR**").

¹ Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

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The Applicant seeks to modify its existing wireless communications facility by, removing and replacing the existing antennas, and Remote Radio Units (“RRUs”) on the rooftop of the existing building (the “**Building**”) on the Property (the “**Proposed Facility**”). The Applicant’s Proposed Facility is described in more detail below and is shown on the Plans attached hereto and incorporated herein by reference (the “**Plans**”).

I. Background

The Applicant is licensed by the Federal Communications Commission (the “**FCC**”) to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant’s FCC license is attached hereto. The Applicant 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 in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. Project Description

The Applicant’s existing facility consists of three (3) sectors (Alpha, Beta, and Gamma) with each sector having three (3) panel antennas and two (2) RRUs, which are all on the facade of the Building’s penthouse. The Applicant proposes to modify its existing facility by replacing nine (9) of its existing panel antennas with nine (9) new like-kind panel antennas, relocating, and replacing six (6) RRUs with six (6) new like kind RRUs. All new panel antennas and RRUs will be located in the similar locations as the current antennas. Moreover, similar to the existing facility, all of the visible antenna associated with the Proposed Facility will be painted to match the facade of the Building penthouse. Consequently, the visual change to the Applicant’s existing facility will be de minimus.

The Applicant’s proposal is consistent with the previous decisions of the Board for this facility, the last of which is dated January 12, 2017 (Case NO.BZA-011993-2016) (the “**Decisions**”).

After installation, the Proposed Facility will be unmanned and will only require twice a month maintenance visits per carrier. The only utilities required to operate this Proposed Facility are standard 120-volt electrical power as well as

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telephone service. These are presently in place at the Property. The traffic generated by the Proposed Facility will be approximately two vehicle trips per month by maintenance personnel who will inspect the Proposed Facility to ensure it remains in good working order. The Proposed Facility will comply with all applicable local, state and federal safety codes.

III. Legal Arguments

A. The Applicant complies with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance

Pursuant to Section 4.32(g) of the Ordinance, the Applicant's proposed use for a wireless communications facility in the BA District is permitted by special permit. The Applicant's Proposed Facility further complies with the provisions set forth in Section 4.32(g), footnote 49 of the Ordinance:

1. **The Board of Zoning Appeal shall consider the scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.**

Enclosed herewith is the Applicant's FCC license. The Applicant meets all requirements imposed by governmental authorities having jurisdiction over the Proposed Facility, including by the FCC, to provide wireless communications in this market area.

The intent of the U.S. Congress, when it enacted the Telecommunications Act of 1996 ("TCA") was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, T-Mobile is obligated to provide a reliable "product" (i.e. wireless communications service) to the population of the City of Cambridge. Likewise, consumer expectations for increasingly robust and reliable service requires competing service providers (including T-Mobile) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. The Proposed Facility and corresponding relief requested are necessary to remedy a gap in reliable service coverage within T-Mobile's existing network infrastructure.

T-Mobile investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within its network of existing and

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planned facilities. This is an existing location that is being upgraded with new technology to provide the necessary coverage to the subject area of the City of Cambridge. Therefore, the Proposed Facility in the BA District is necessary to close the coverage gap that is illustrated on the propagation maps submitted herewith. Consequently, T-Mobile is unable to close a gap in its wireless network without obtaining the requested relief under Section 6409 of the Spectrum act or a Special Permit to modify its existing wireless facility in the BA District.

Furthermore, Section 6409(a) of the Spectrum Act mandates that state and local governments “*may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.*” Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves “collocations of new Transmission Equipment,” “removal,” or “replacement” of Transmission Equipment.

Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an Applicant, we have provided, on the attached EFR, only the information that federal law allows this jurisdiction to consider when reviewing an EFR. As such, we submit that the Wireless Communications set forth in Section 4.32(g), footnote 49 of the Ordinance, provisions are not applicable to Proposed Facility and relief must be granted pursuant to Section 6409(a) of the Spectrum Act.

- 2. The Board of Zoning Appeal shall consider the extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building’s roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility on the site.**

The Applicant’s Proposed Facility will have no additional visual impact on the existing facility and Building. The new antennas of the Proposed Facility will be installed in the same locations as the existing Facility antennas on the facade of the Building, painted to match the color of the building, and in conformity with the Decisions.

As stated above, federal law now preempts many of the permit applications requirements that the Ordinance sets forth. To the extent that this Board determines that the Applicants’ proposed wireless facility must comply with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the

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Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

3. **Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.**

The Proposed Facility is located in a nonresidential district. As such, the Applicant submits that nonresidential uses predominate in the area, and in keeping with the Decisions, respectfully requests that the Board find the same.

B. The Applicant complies with the Special Permit Criteria set forth in Section 10-43 of the Ordinance²:

1. The requirements of the Ordinance can be met:

As provided above, the Applicant has met the requirements set forth in Section 4.32(g), footnote 49 of the Ordinance.

2. Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The proposed installation will not obstruct existing rights-of-way or pedestrian access and will not change the daily conditions of access, egress, traffic, congestion hazard, or character

² Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

of the neighborhood. The installation will not require the addition of any new parking or loading spaces. The use is passive and will not change the current conditions or appearance surrounding the Building. The facility will not produce any odors, fumes, noise or waste. There will be no need for water, sewer, or other municipal services.

As mentioned above, once modified, the facility will be unmanned and will only require infrequent visits by a technician, typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency. These infrequent visits will not result in any material increase in traffic or disruption to patterns of access or egress that will cause congestion hazards or cause a substantial change in the established neighborhood character. The Applicant's maintenance personnel will make use of the existing access roads and parking at the Building.

3. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

As described above and illustrated on the attached photograph simulations, the modification of the existing facility will produce a minimal change in the appearance of the Building. The modification of the existing facility will blend with the existing characteristics of the Building and the surrounding neighborhood. Moreover, the proposed installation will not generate any traffic, smoke, dust, heat, glare, discharge of noxious substances, nor will it pollute waterways or groundwater. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communication.

4. Nuisance or hazard would not be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

The operations of the proposed telecommunications facility will not adversely impact the health, safety, and the welfare of the residents of the City of Cambridge. On the contrary, the proposed use will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services. Further, the site will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations.

The Proposed Facility will comply with all federal, state and local safety requirements including the standards established by the FCC, Federal Aviation Administration (FAA), the American Standards Institute (ANSI), and the Massachusetts Department of Public Health (MDPH).

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Accordingly, the Proposed Facility will not adversely impact the health, safety and/or welfare of the neighborhood or the residents of the City of Cambridge.

5. For other reasons, the proposed installation will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The Proposed Facility is designed to blend with the existing characteristics of the Property, reducing any visual impacts to the surrounding area. Accordingly, the Proposed Facility's design results in a minimal impact on the underlying and adjacent zoning district and is consistent with the Ordinance's intention to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space), including the BA District.

As mentioned above, the proposed modifications to the existing installation will not generate any traffic, smoke, dust, heat, glare, discharge, or noxious substances, nor will it pollute waterways or groundwater.

6. The new use of the building construction is consistent with the Urban Design Objective set forth in Section 19.30 of the Ordinance:

Not Applicable. The Applicant is not proposing to construct a new building or structure.

IV. Summary

The Applicant hereby requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit, pursuant to Section 6409(a) of the Spectrum Act. Or, in the alternative, its proposed modifications to the existing telecommunications facility will not have any adverse effect on the neighborhood within which the Property is located in particular, and the City of Cambridge as a whole. The findings are made in view of the particular characteristics of the Property and of the Applicant's proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

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For the foregoing reasons the Applicant respectfully requests that the Board grant the foregoing relief pursuant to Section 6409(a) of the Spectrum Act or, in the alternative, zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's Proposed Facility.

Sincerely,

Adam F. Braillard
Direct: 617-456-8153
Email: abraillard@princelobel.com

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E-Mail Address: abraillard@princetonobel.com

Date: _____

BZA Application Form**DIMENSIONAL INFORMATION****Applicant:** T-Mobile Northeast LLC for the President and Fellows of Harvard College**Present Use/Occupancy:** Education, Business, Telecommunications**Location:** 51 Brattle St., Cambridge, MA**Zone:** Business A Zone**Phone:** 617-456-8153**Requested Use/Occupancy:** Telecommunications

		<u>Existing Conditions</u>	<u>Requested Conditions</u>	<u>Ordinance Requirements</u>	
<u>TOTAL GROSS FLOOR AREA:</u>		N/A	No Change	N/A	(max.)
<u>LOT AREA:</u>		N/A	No Change	N/A	(min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA: ²</u>		N/A	No Change	N/A	
<u>LOT AREA OF EACH DWELLING UNIT</u>		N/A	No Change	N/A	
<u>SIZE OF LOT:</u>	WIDTH	N/A	No Change	N/A	
	DEPTH	N/A	No Change	N/A	
<u>SETBACKS IN FEET:</u>	FRONT	N/A	No Change	N/A	
	REAR	N/A	No Change	N/A	
	LEFT SIDE	N/A	No Change	N/A	
	RIGHT SIDE	N/A	No Change	N/A	
<u>SIZE OF BUILDING:</u>	HEIGHT	N/A	No Change	N/A	
	WIDTH	N/A	No Change	N/A	
	LENGTH	N/A	No Change	N/A	
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:</u>		N/A	No Change	N/A	
<u>NO. OF DWELLING UNITS:</u>		N/A	No Change	N/A	
<u>NO. OF PARKING SPACES:</u>		N/A	N/A	N/A	
<u>NO. OF LOADING AREAS:</u>		N/A	No Change	N/A	
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT</u>		N/A	No Change	N/A	

Describe where applicable, other occupancies on the same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; wood frame, concrete, brick, steel, etc.:

The proposed installation involves a modification of an existing Wireless Telecommunications Facility, more commonly referred to as a "collocation".

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.

REVIEWED
By Michael Granese at 5:26 pm, May 10, 2022



T-MOBILE NORTHEAST LLC ANCHOR

SITE #: 4DE7040A
SITE NAME: B0040 / 51 BRATTLE
51 BRATTLE STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

CONSTRUCTION DRAWINGS
ALL SCALES RELATIVE TO 24"X36" PAGE SIZE

APPROVED
By Ryan Monte de Ramos at 4:17 pm, May 10, 2022



EFI GLOBAL, INC.
1117 PERIMETER CENTER WEST
SUITE E500
ATLANTA, GA 30338
TEL NO: 770-693-0835
TELECOM@EFIGLOBAL.COM



115 ROUTE 46
SUITE E39
MOUNTAIN LAKES, NJ 07046
PHONE: 862.209.4300
FAX: 862.209.4301



T-MOBILE NORTHEAST LLC

15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

SCHEDULE OF REVISIONS

7		
6		
5		
4		
3		
2	01/04/22	REVISED PER NEW RFDS
1	12/10/20	ISSUED AS FINAL
0	06/26/20	INITIAL SUBMISSION
REV NO.	DATE	DESCRIPTION OF CHANGES

DRAWN BY: PD

CHECKED BY: SDF

SCALE: AS NOTED

JOB NO: 20003-TRN

INFORMATION ON THIS SET OF DRAWINGS IS
NOT FOR OFFICIAL USE UNLESS
ACCOMPANIED BY THE STAMPED SEAL &
SIGNATURE OF A PROFESSIONAL ENGINEER

AHMET COLAKOGLU
PROFESSIONAL ENGINEER, MA LIC. No. 48288

SITE #: 4DE7040A
B0040/51 BRATTLE
51 BRATTLE STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

DRAWING TITLE:

TITLE SHEET

DRAWING SHEET: 1 OF 7

T-1

GENERAL NOTES

THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY, AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

THE FACILITY IS AN UNMANNED, PRIVATE, AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND, THEREFORE, DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT COVERED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SPECIAL STRUCTURAL NOTES

STRUCTURE OWNER SHALL BE RESPONSIBLE FOR GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE-BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.

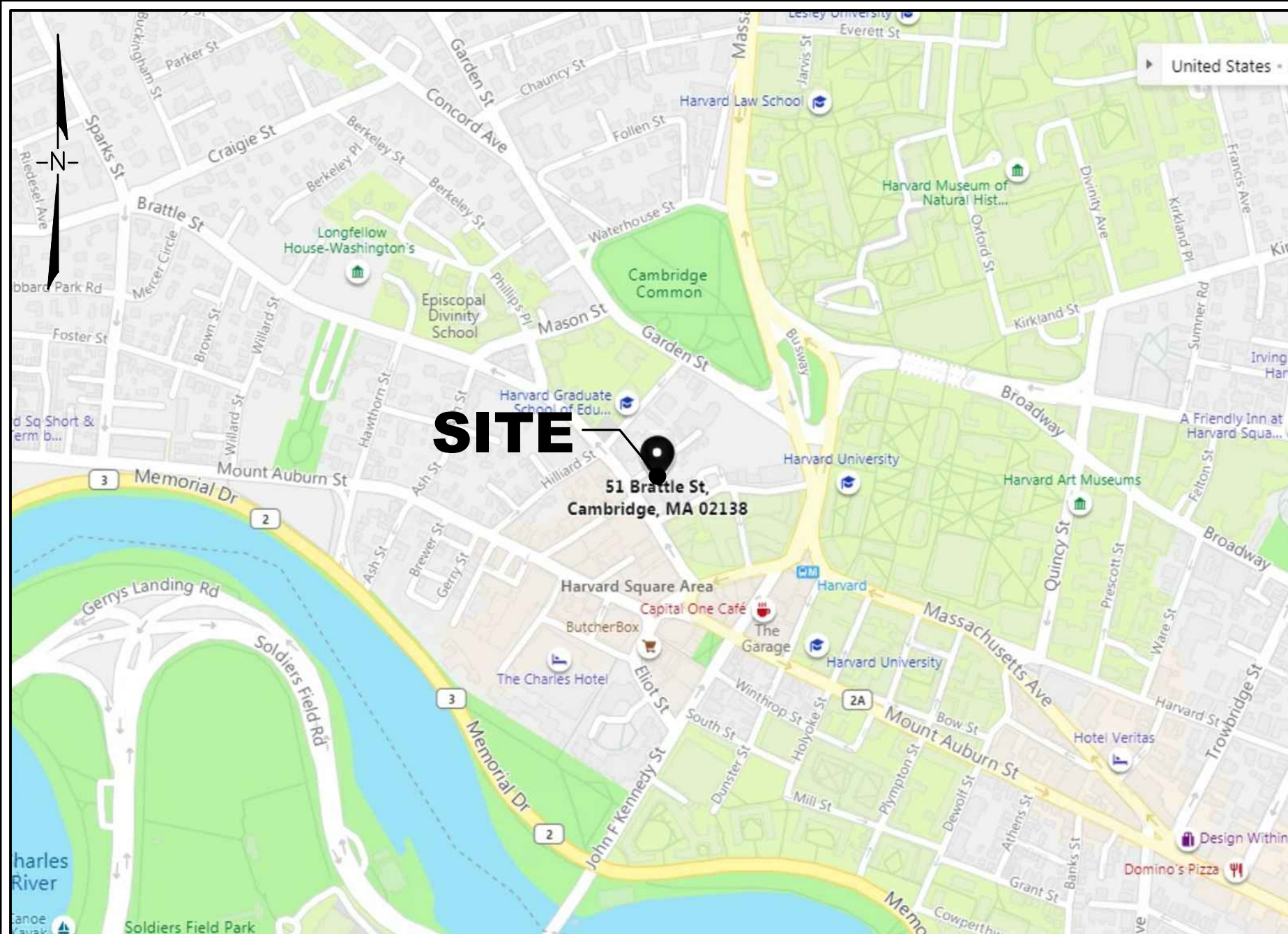
STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY COM-EX CONSULTANTS, LLC ON BEHALF OF T-MOBILE ARE INCLUSIVE OF THE ENTIRE ANTENNA SUPPORT STRUCTURE (GLOBAL STRUCTURAL STABILITY ANALYSIS BY OTHERS), EXISTING PLATFORM, EXISTING ANTENNA MOUNTS, AND ALL OTHER ASPECTS OF THE STRUCTURE THAT WILL SUPPORT THE T-MOBILE EQUIPMENT DEPLOYMENT AS DEPICTED HEREIN.

COM-EX CONSULTANTS, LLC ASSUMES THAT THE STRUCTURE IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTIONS ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NOT DETERIORATION TO IT'S MEMBER CAPACITIES.

APPROVALS

PROJECT MANAGER	DATE
CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING / SITE ACQUISITION	DATE
OPERATIONS	DATE

SITE CONFIGURATION: 67E5A998E OUTDOOR



KEY MAP

SCALE = N.T.S.

UNDERGROUND SERVICE ALERT



Know what's below.
Call before you dig.

CALL TOLL FREE: 888-DIG-SAFE
(888-344-7233)

SITE LOCATION INFORMATION

SITE NUMBER: 4DE7040A
SITE ADDRESS: 51 BRATTLE STREET
CAMBRIDGE, MA 02138

JURISDICTION: CITY OF CAMBRIDGE
COUNTY: MIDDLESEX COUNTY
PARCEL ID: 169 14
PROPERTY OWNER: PRESIDENT & FELLOWS OF HARVARD COLLEGE
1350 MASSACHUSETTS AVE.
CAMBRIDGE, MA 02138

APPLICANT: T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766

SITE CHARACTERISTICS

LATITUDE: 42.37473918
LONGITUDE: -71.12129730
STRUCTURE TYPE: BUILDING
LOCATION OF PROPOSED EQUIPMENT: ROOFTOP
STRUCTURE HEIGHT: ±85'-0" AGL (UPPER BULKHEAD)
ANTENNA (RAD CENTER) ALPHA - ±73'-0" AGL (*)
BETA - ±86'-0" AGL
GAMMA - ±75'-0" AGL

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
T-1	TITLE SHEET
GN-1	GROUNDING & GENERAL NOTES
A-1	ROOF PLAN & ELEVATION
A-2	FINAL EQUIPMENT PLAN & ANTENNA PLANS
A-3	DETAILS
E-1	ELECTRICAL DETAILS & NOTES
S-1	PLATFORM DETAILS & NOTES

GENERAL NOTES

1. FOR THE PURPOSE OF THE CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTORS – TO BE DETERMINED
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – T–MOBILE
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE PROVIDED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSED AND ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY . SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT THE EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTORS EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIAL SUCH AS COAXIAL CABLE AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNERS DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR–ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHED AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T–MOBILE SITES."
17. SUBCONTRACTORS SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

19. APPLICABLE BUILDING CODES:

SUBCONTRACTORS WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

- BUILDING CODE: MA STATE BUILDING CODE 780 CMR 9TH EDITION
- ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
- LIGHTNING CODE: REFER TO ELECTRICAL DRAWINGS

SUBCONTRACTORS WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE
- AMERICAN INSTITUTE FOR STEEL CONSTRUCTION (AISC); MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION

- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222–G, STRUCTURAL STANDARDS FOR STEEL

- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS A CONFLICT BETWEEN A GENERAL REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ELECTRICAL & GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO LIGHTNING PROTECTION AND AS POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO THE BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATING (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURE WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50.
13. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
14. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
15. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
16. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
17. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
18. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
19. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN OR THIN INSULATION.
20. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
21. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A–1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
22. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.

23. GROUNDING SHALL COMPLY WITH NEW ART. 250.
24. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
25. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON DRAWING.
26. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
27. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
28. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON–SURGING OBJECTS (EGB GROUND IN BTS UNIT)
29. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
30. BOND ANTENNA MOUNTING BRACKETS. COAXIAL CABLE GROUND KITS AND ALNA TO EGB PLACES NEAR THE ANTENNA LOCATION.
31. BOND ANTENNA EGB’S AND MGB TO WATER MAIN.
32. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE–OUT DOCUMENTATION.
33. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
34. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE		
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL



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SCHEDULE OF REVISIONS

7		
6		
5		
4		
3		
2	01/04/22	REVISED PER NEW RFDS
1	12/10/20	ISSUED AS FINAL
0	06/26/20	INITIAL SUBMISSION
REV NO.	DATE	DESCRIPTION OF CHANGES

DRAWN BY:	PD
CHECKED BY:	SDF
SCALE:	AS NOTED
JOB NO:	20003-TRN

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AHMET COLAKOGLU
PROFESSIONAL ENGINEER, MA LIC. No. 49288

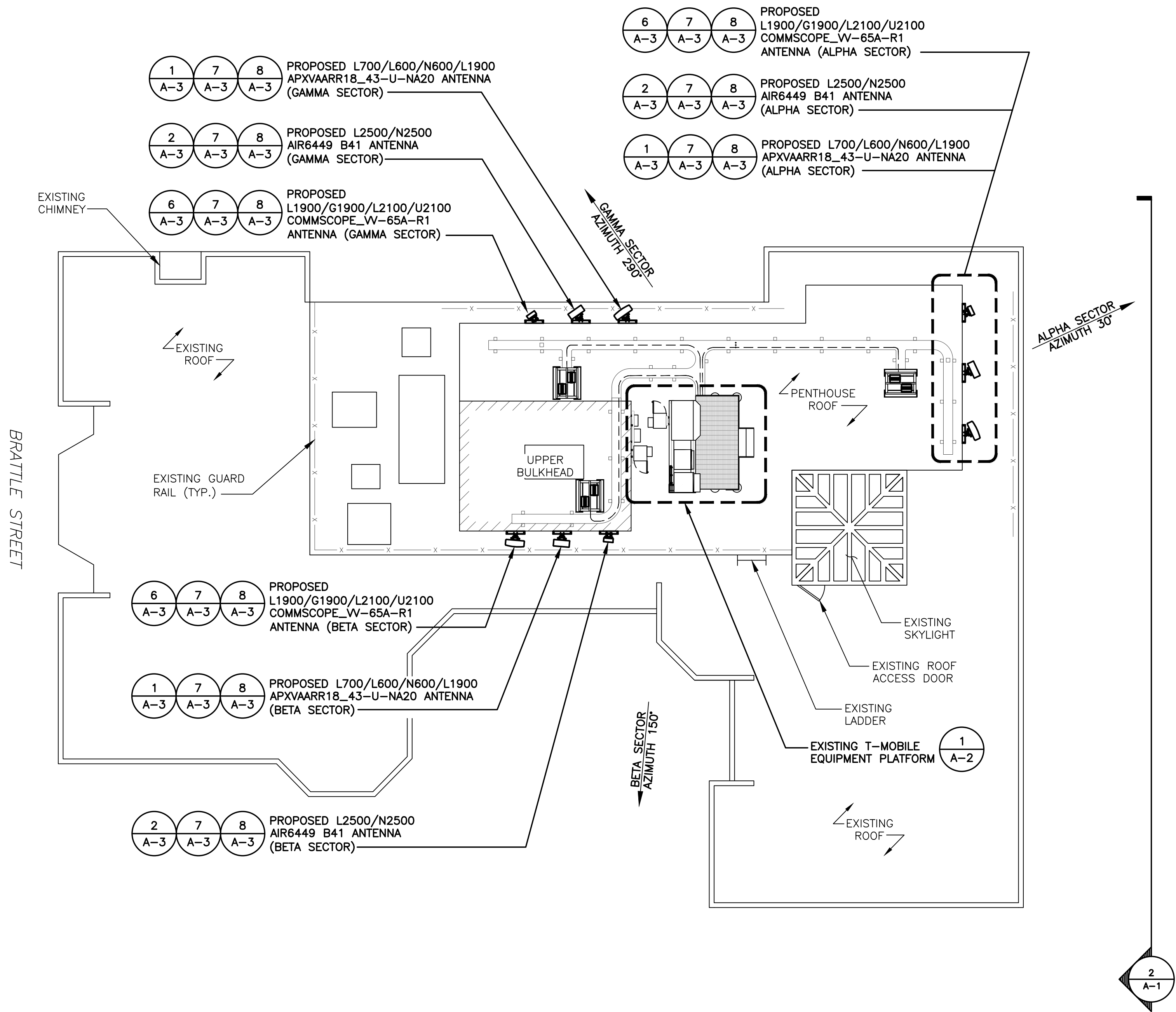
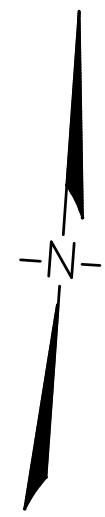
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CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

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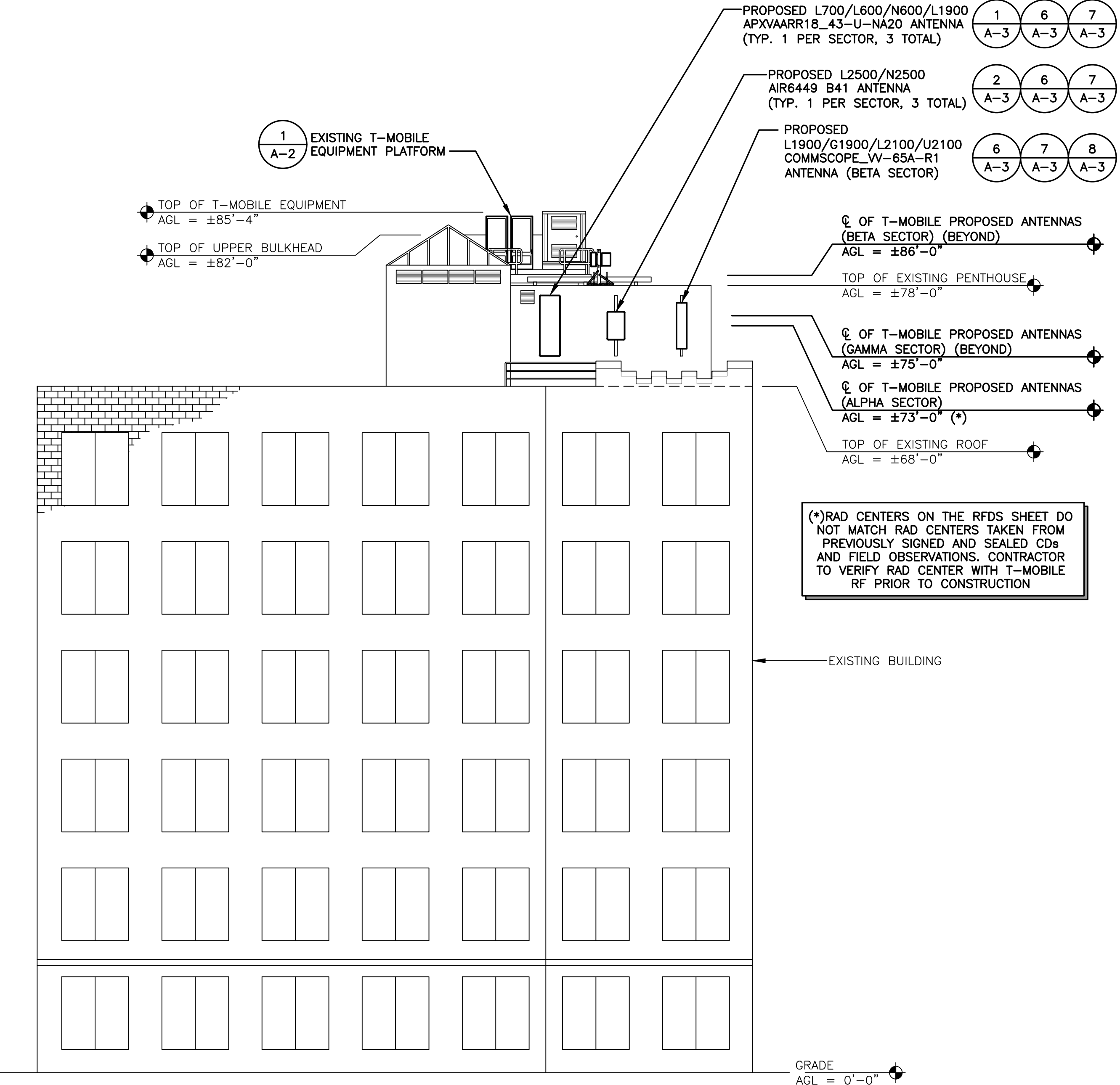
GROUNDING &
GENERAL NOTES

DRAWING SHEET: 2 OF 7

GN-1



1 ROOF PLAN
SCALE: 1/8"=1'-0"
GRAPHIC SCALE: 3/32"=1'-0"



2 ELEVATION
SCALE: 1/8"=1'-0"
GRAPHIC SCALE: 3/32"=1'-0"

ALL LOADING ASSOCIATED WITH PROPOSED EQUIPMENT CABINETS, ANTENNAS, AND CABLE ROUTING SHALL BE VERIFIED BY A PASSING STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION

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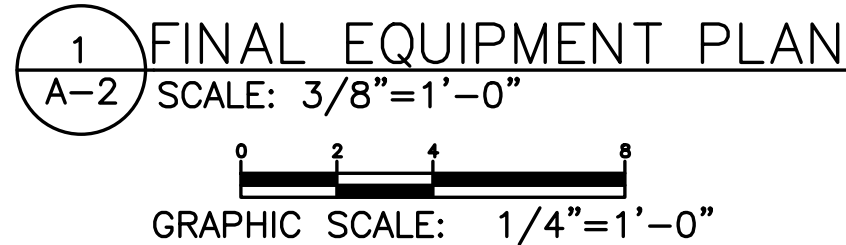
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DRAWING TITLE:

ROOF PLAN
& ELEVATION

DRAWING SHEET: 3 OF 7

A-1



AT TIME OF CONSTRUCTION, CONTRACTOR TO VERIFY AZIMUTHS OF EXISTING ANTENNAS. IF DIFFERENT FROM RFDS, PLEASE NOTIFY THE RF ENGINEER AND CONSTRUCTION MANAGER WITH ACTUAL AZIMUTH TO ENSURE T-MOBILE'S DATABASE IS ACCURATE AND UP-TO-DATE.

INFORMATION SHOWN PROVIDED ON T-MOBILE RFDS
DATE 12/28/21

NOTE:
EXISTING SITE CONDITIONS SHOW ON THIS SET OF
PLANS BASED ON A VISIT BY COM-EX ON 06/16/20.
EXISTING ANTENNA LAYOUT BASED ON RFDS PROVIDED
BY T-MOBILE ON 12/28/21.

COM ∇ EX
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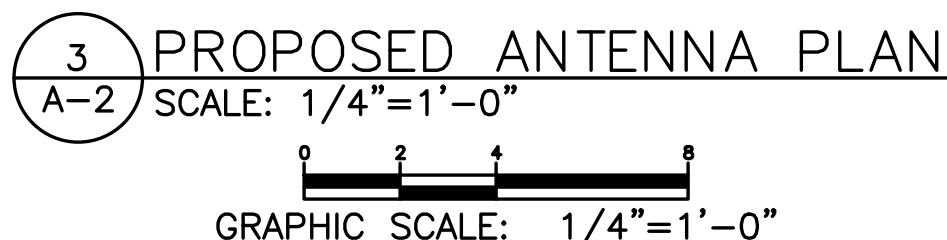
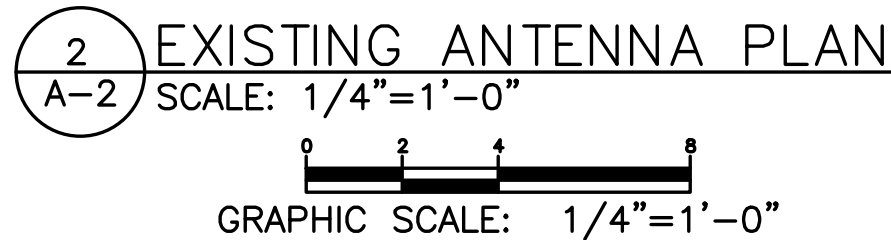
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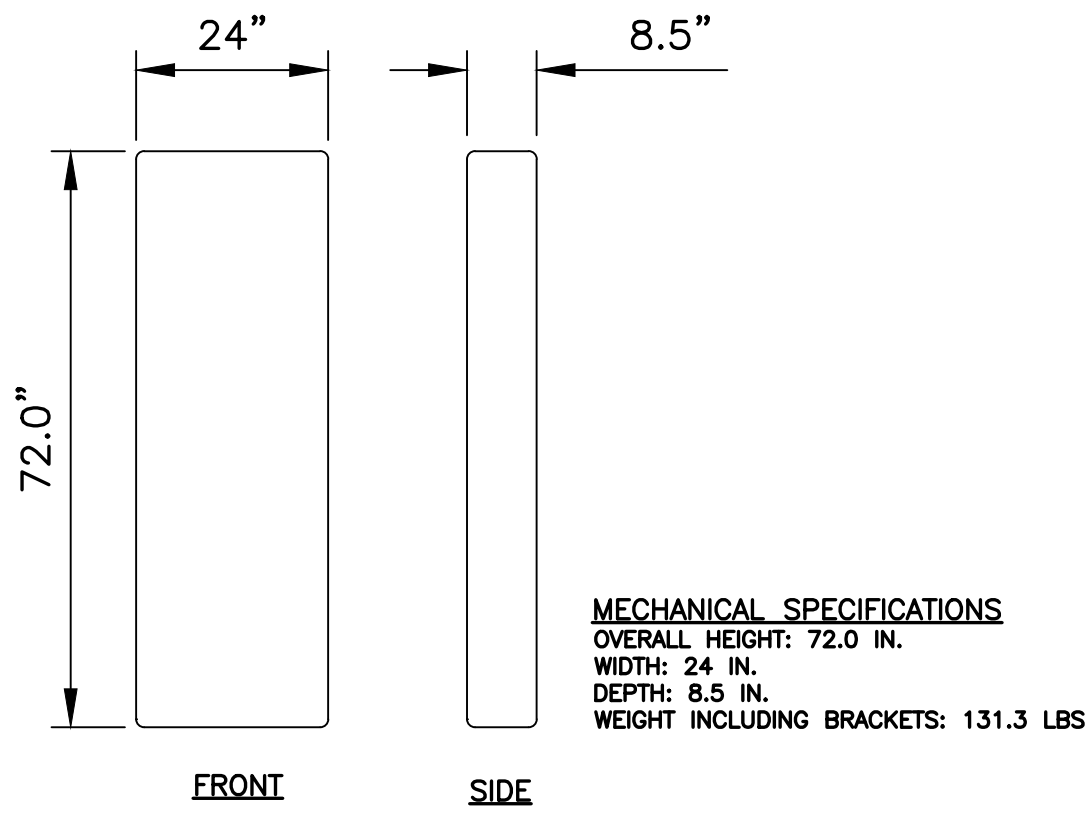
FINAL EQUIPMENT PLAN & ANTENNA PLANS

DRAWING SHEET: 4 OF 7

A-2

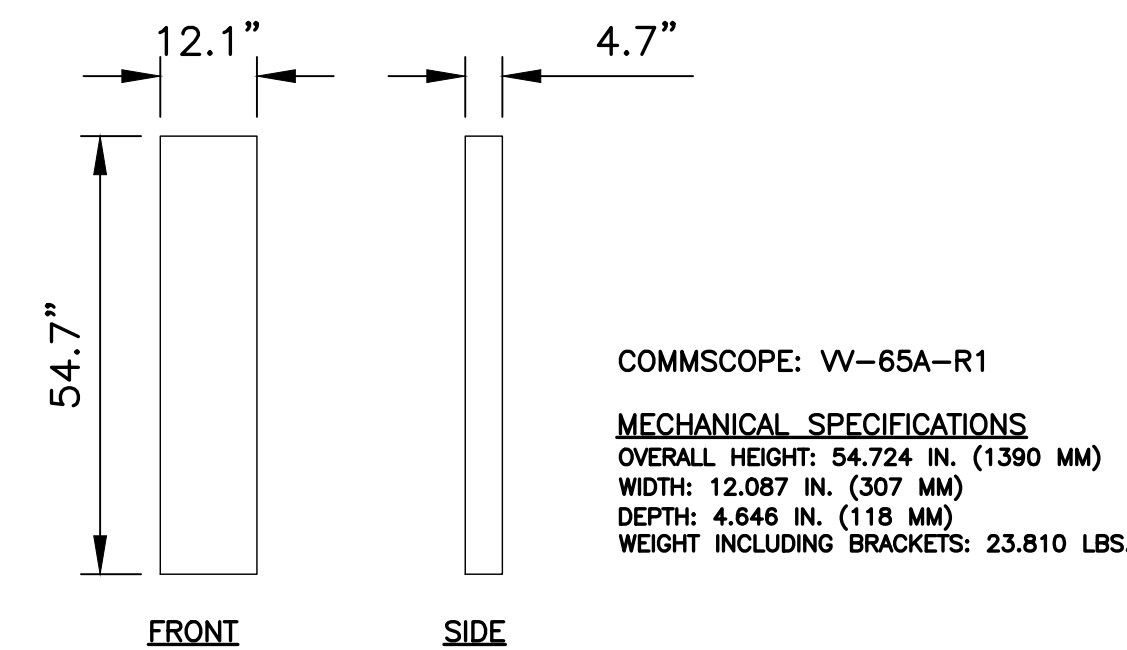


ALL LOADING ASSOCIATED WITH PROPOSED EQUIPMENT CABINETS, ANTENNAS, AND CABLE ROUTING SHALL BE VERIFIED BY A PASSING STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION

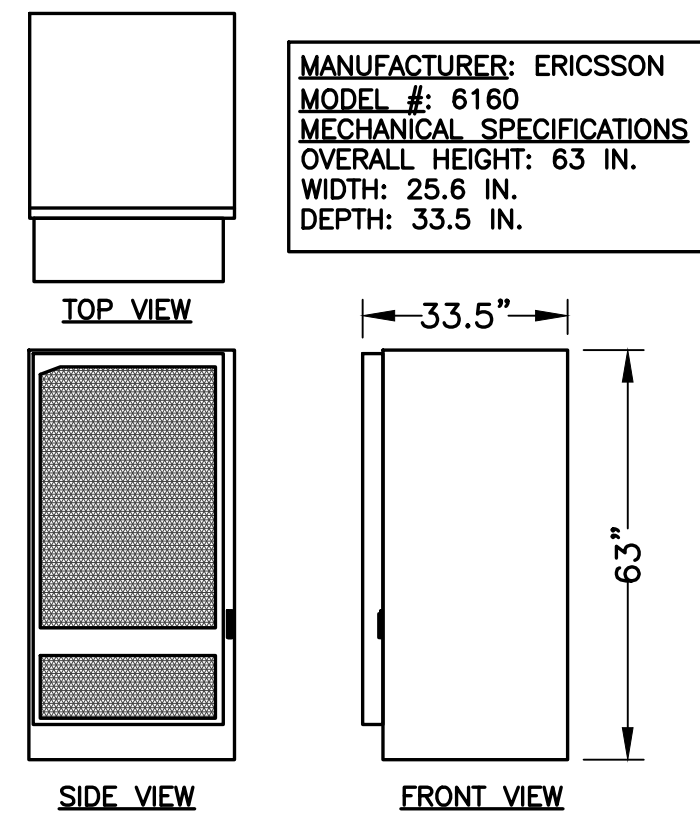


1 RFS - APXVAARR18-43-U-NA20
A-3 SCALE: 1/2"=1'

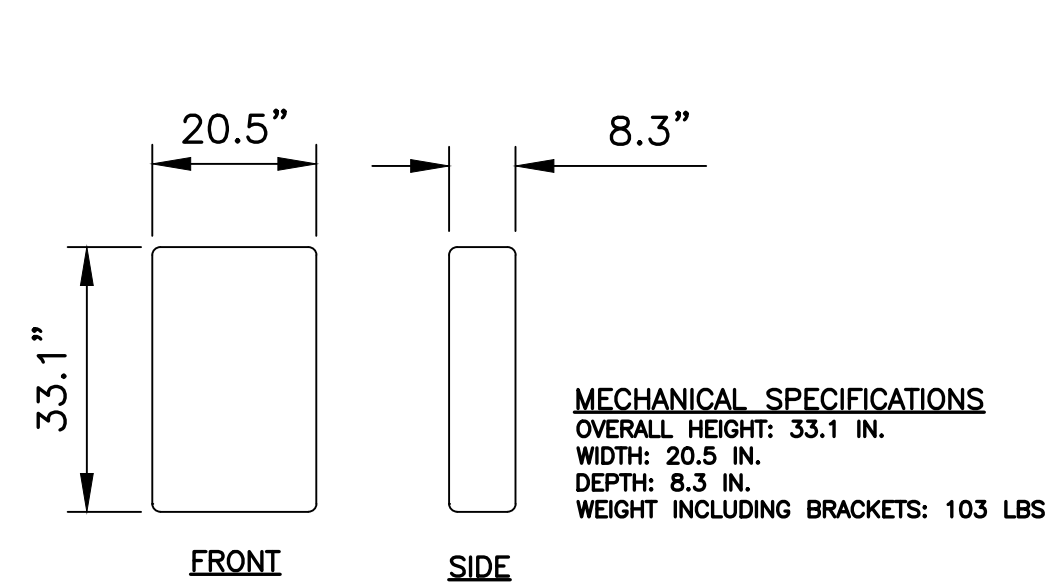
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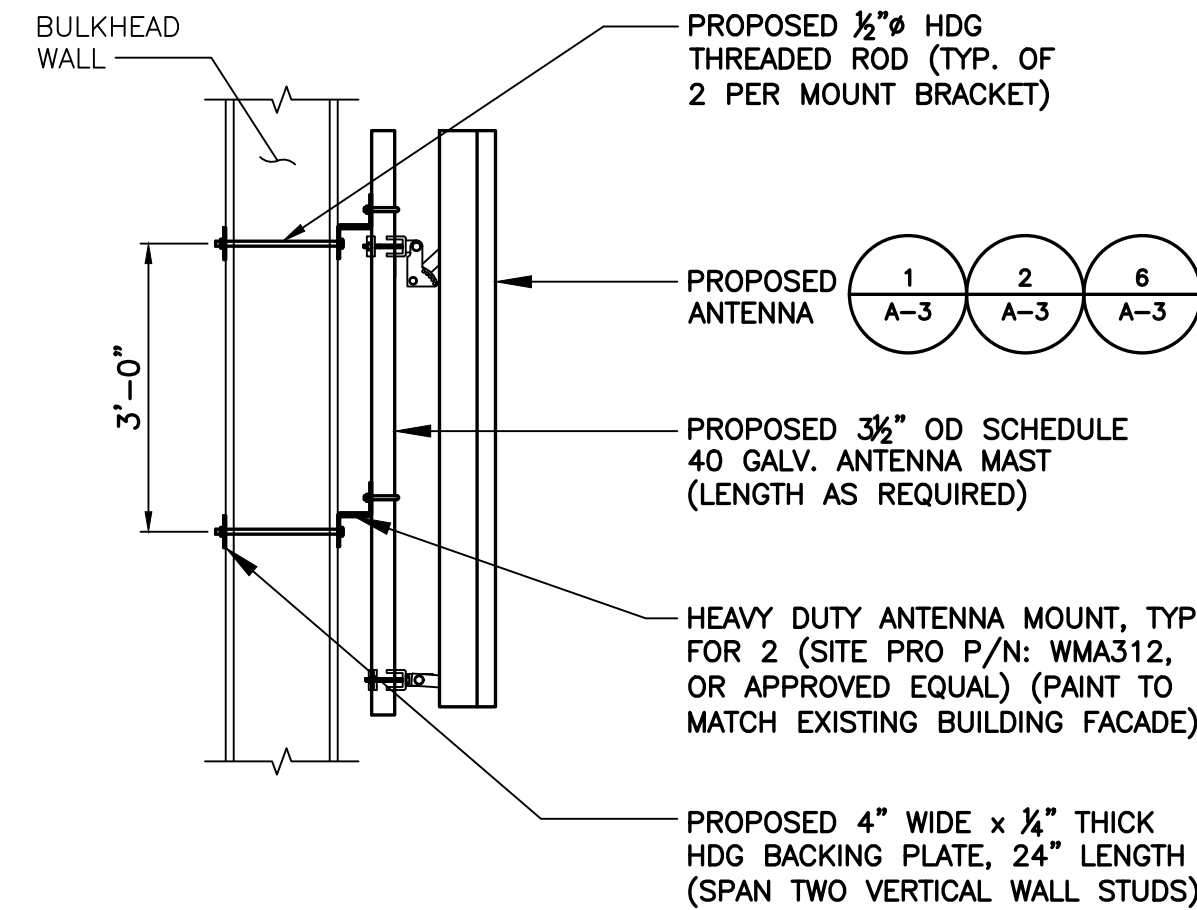
6 COMMSCOPE - VV-65A-R1
A-3 SCALE: N.T.S.



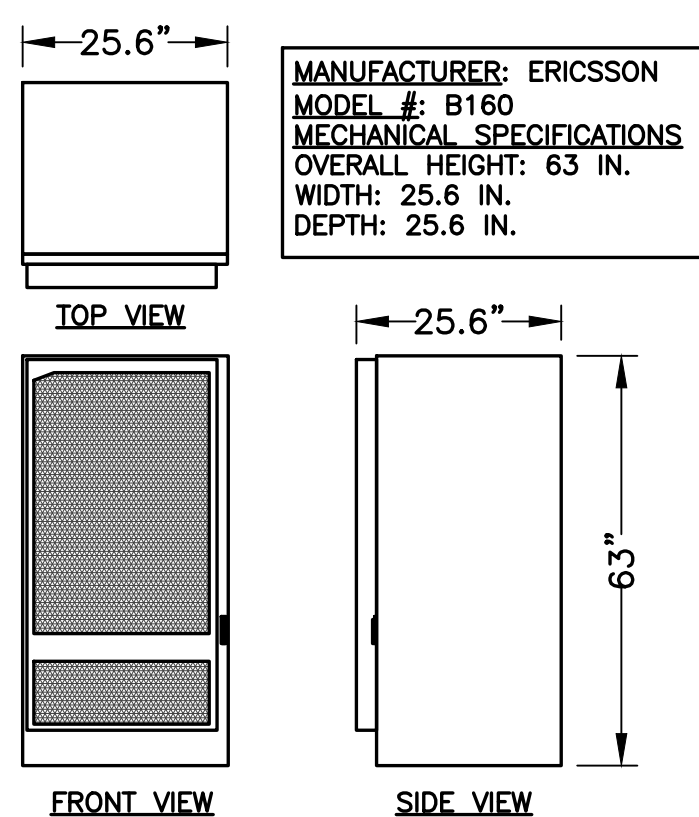
10 6160 CABINET DETAIL
A-3 SCALE: N.T.S.



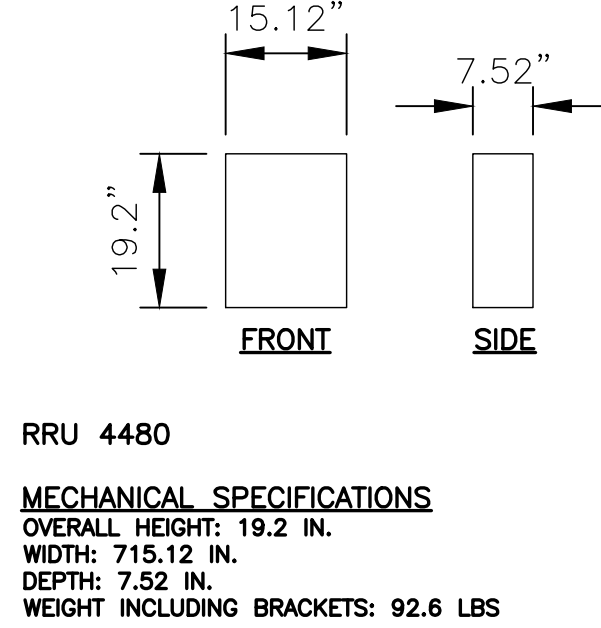
2 ERICSSON - AIR6449 B41
A-3 SCALE: 1/2"=1'



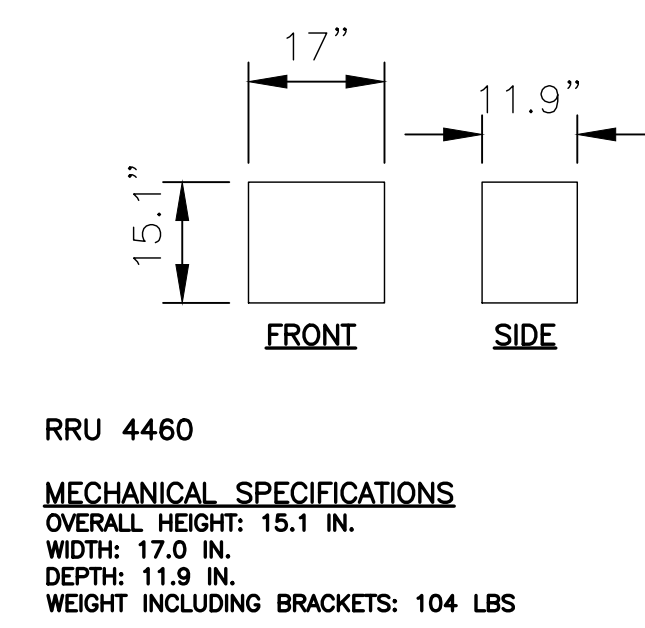
7 PROPOSED ANTENNA MOUNT
A-3 SCALE: N.T.S.



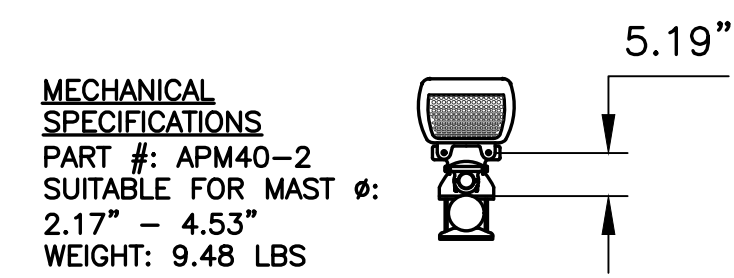
11 B160 CABINET DETAIL
A-3 SCALE: N.T.S.



3 RRU - 4480 B71+B85
A-3 SCALE: 3/8"=1'



4 RRU - 4460 B25+B66
A-3 SCALE: 3/8"=1'

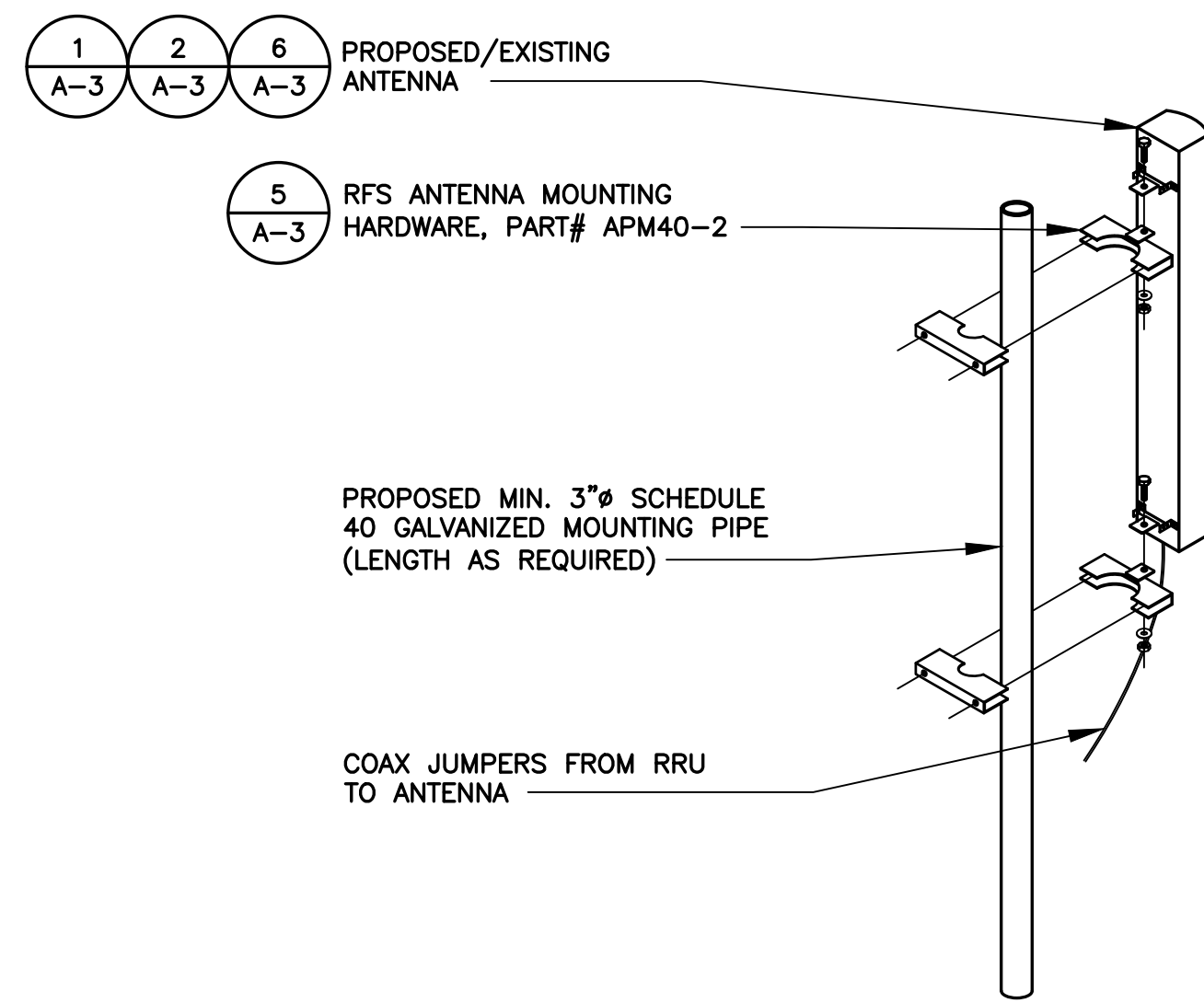


5 TYPICAL ANTENNA MOUNTING DETAIL
A-3 SCALE: 1/2"=1'

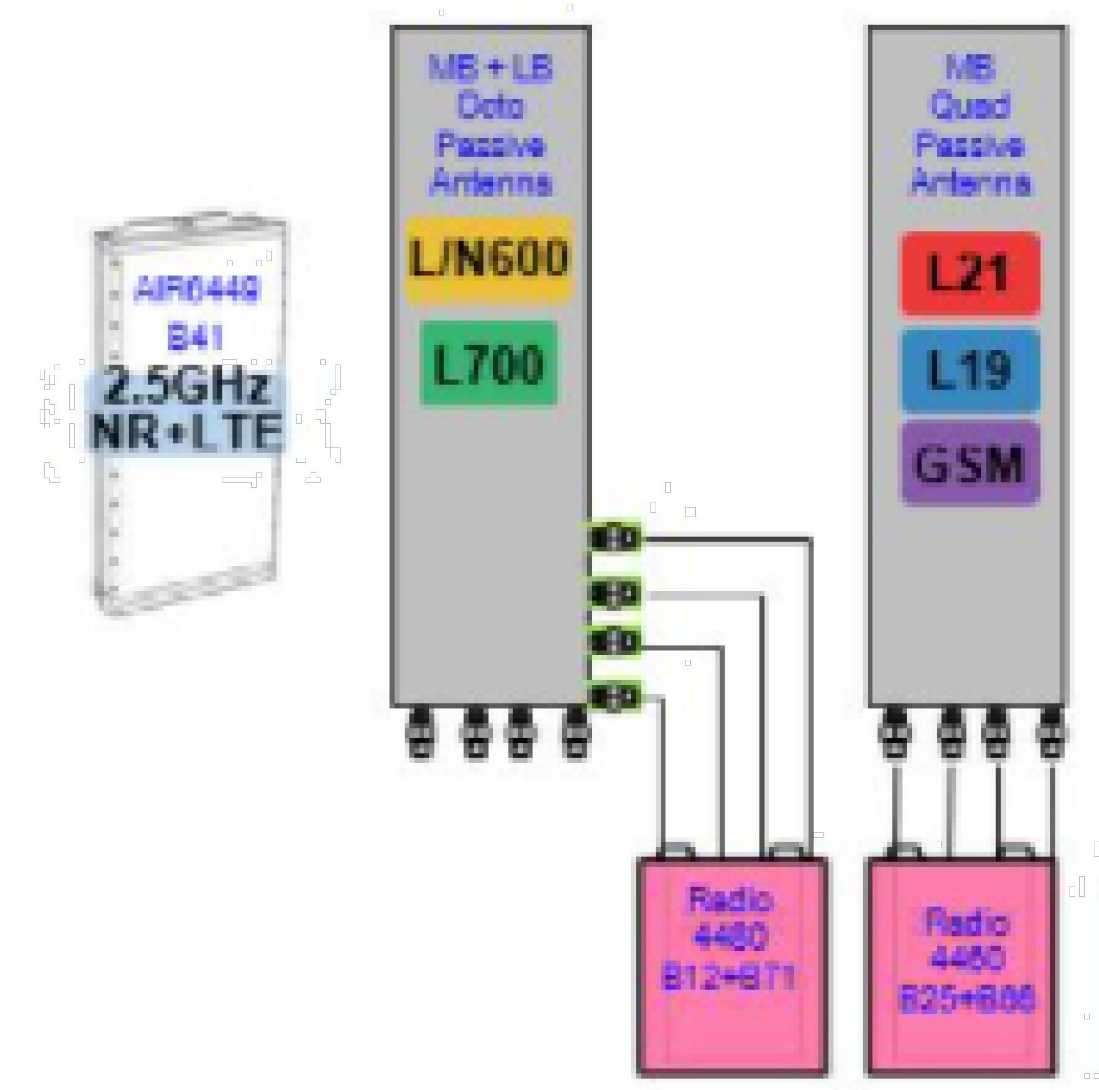
SITE CONFIGURATION

RAN: 67E5A998E OUTDOOR

A&L: 67E5A998E_1xAIR+10P+1QP



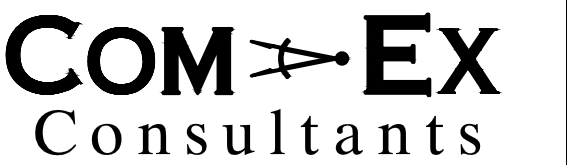
8 TYPICAL ANTENNA INSTALLATION DETAIL
A-3 SCALE: N.T.S.



9 ANTENNA & COAX CABLE SCHEMATIC
A-3 SCALE: N.T.S.



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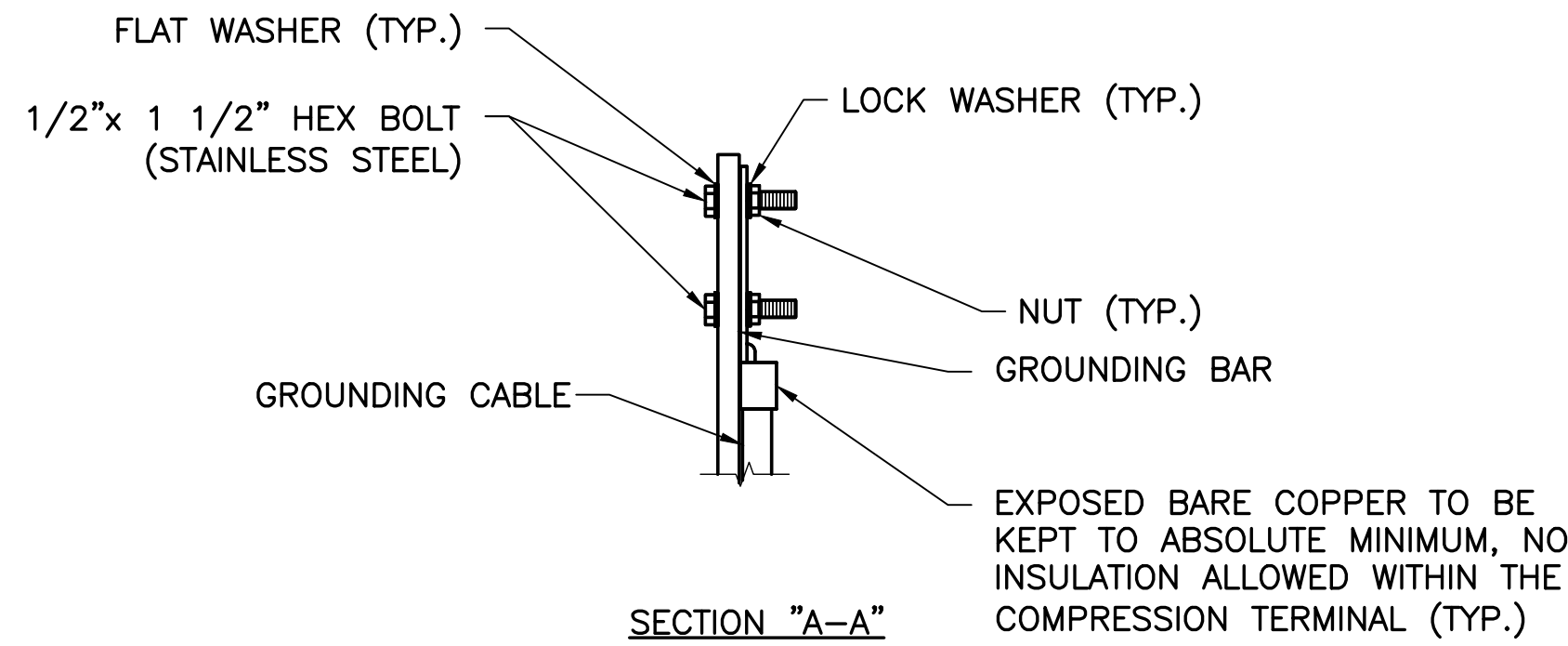
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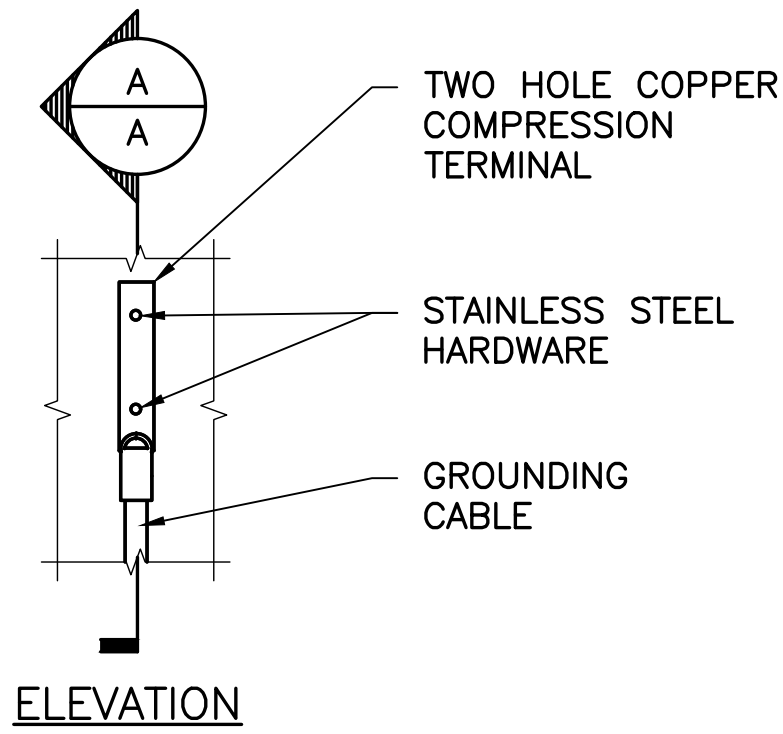
DETAILS

DRAWING SHEET: 5 OF 7

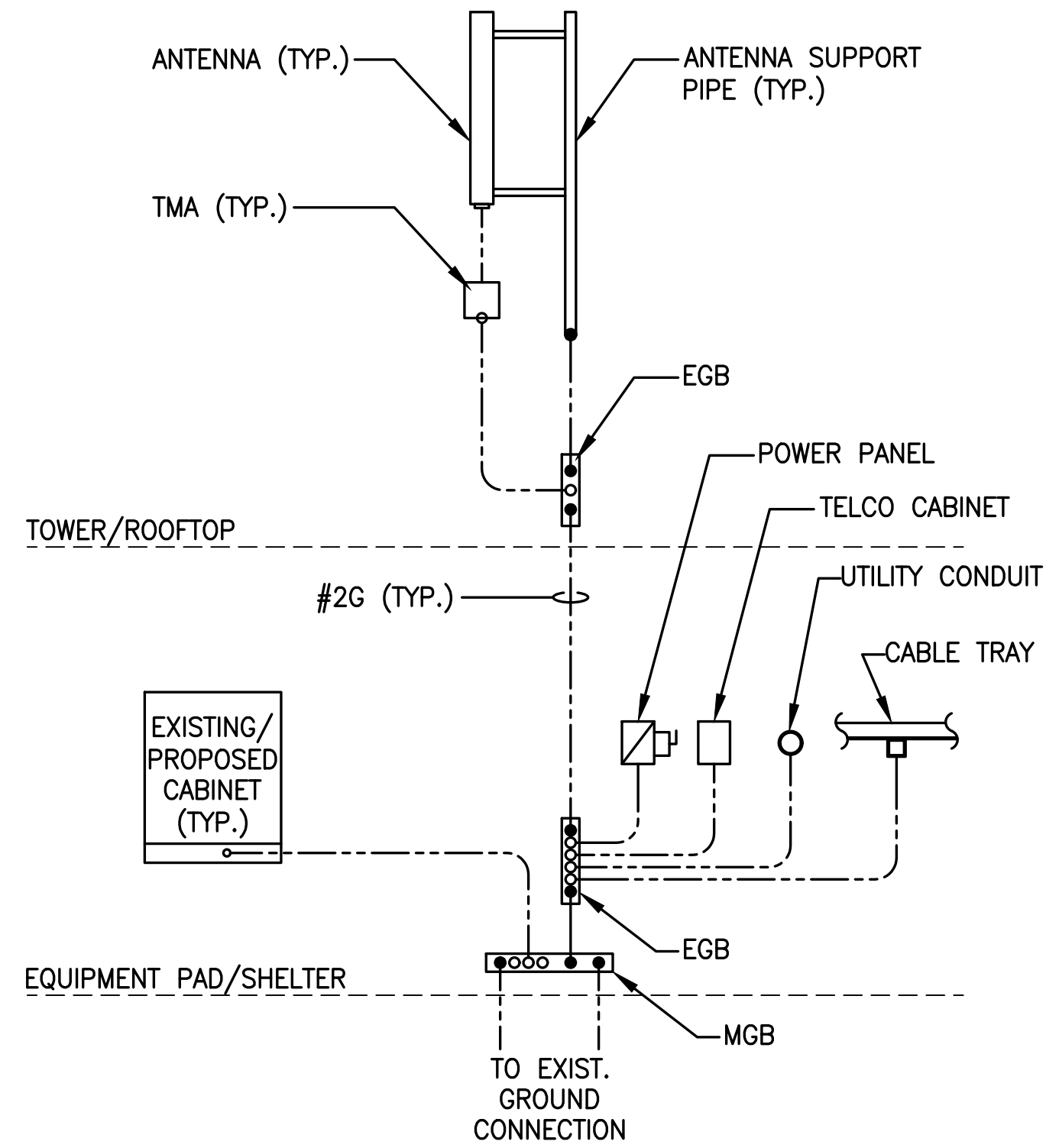
A-3



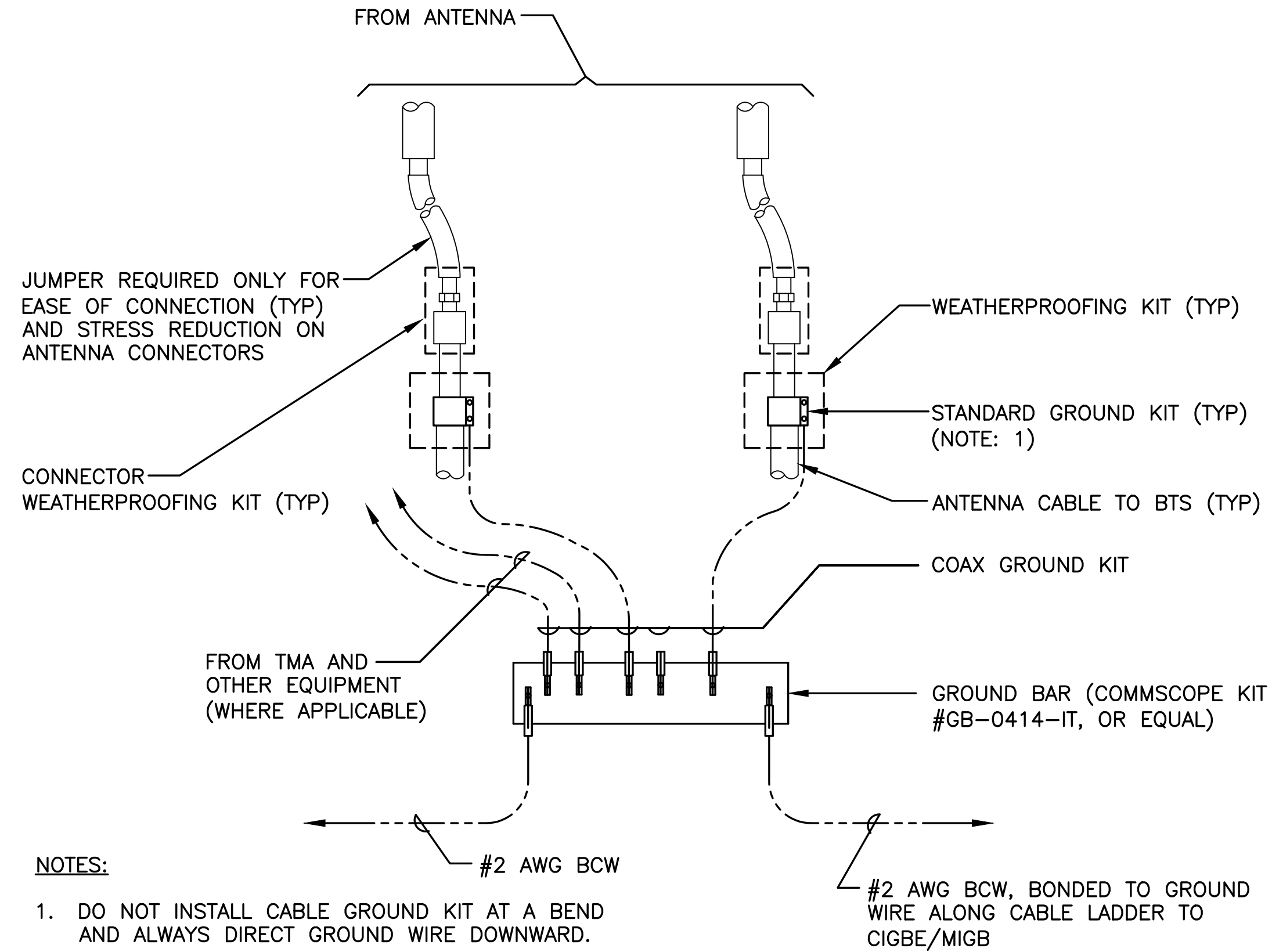
- NOTE:
- "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.



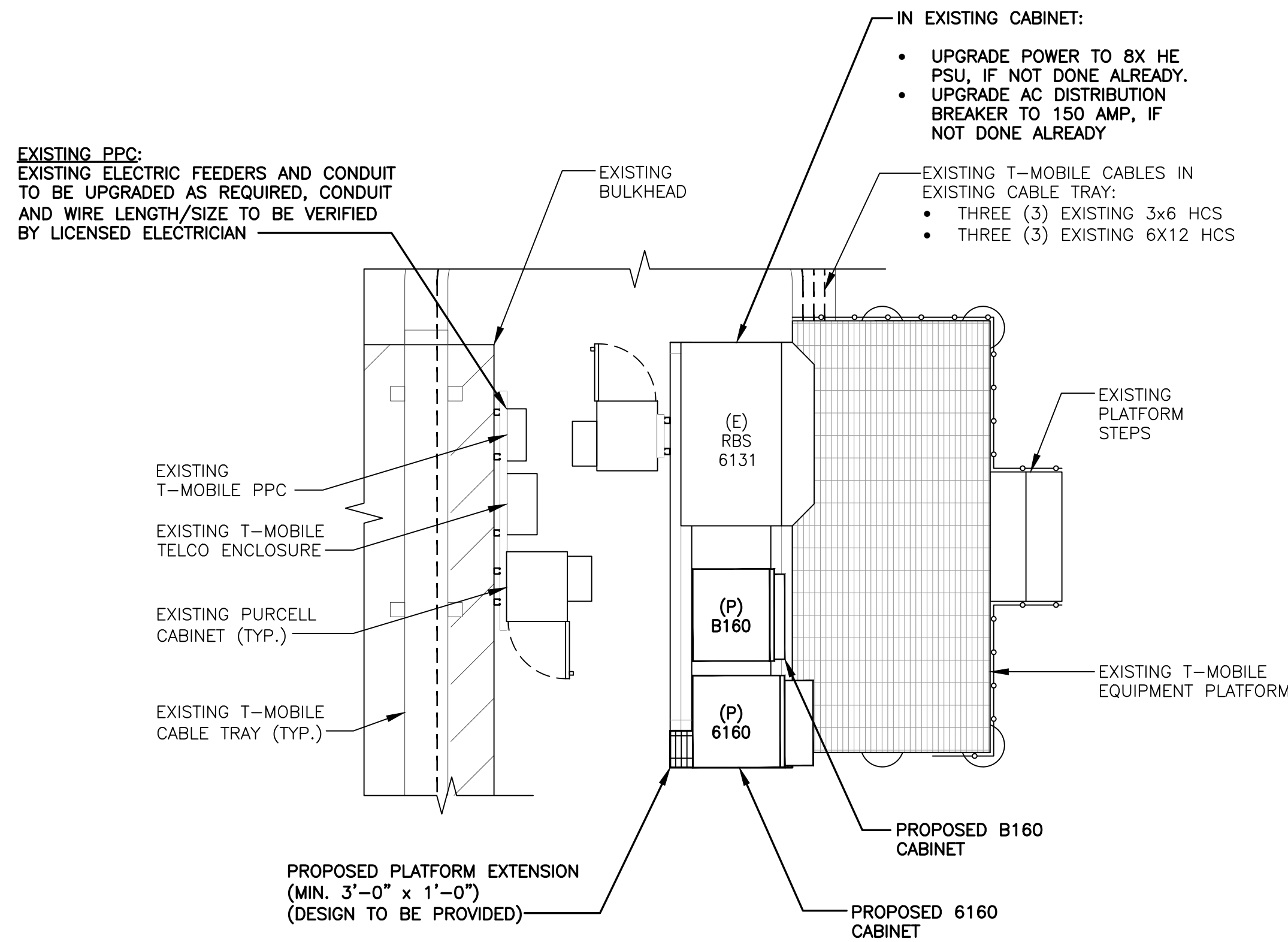
1
E-1 TYPICAL GROUND BAR CONNECTION DETAIL
SCALE: N.T.S.



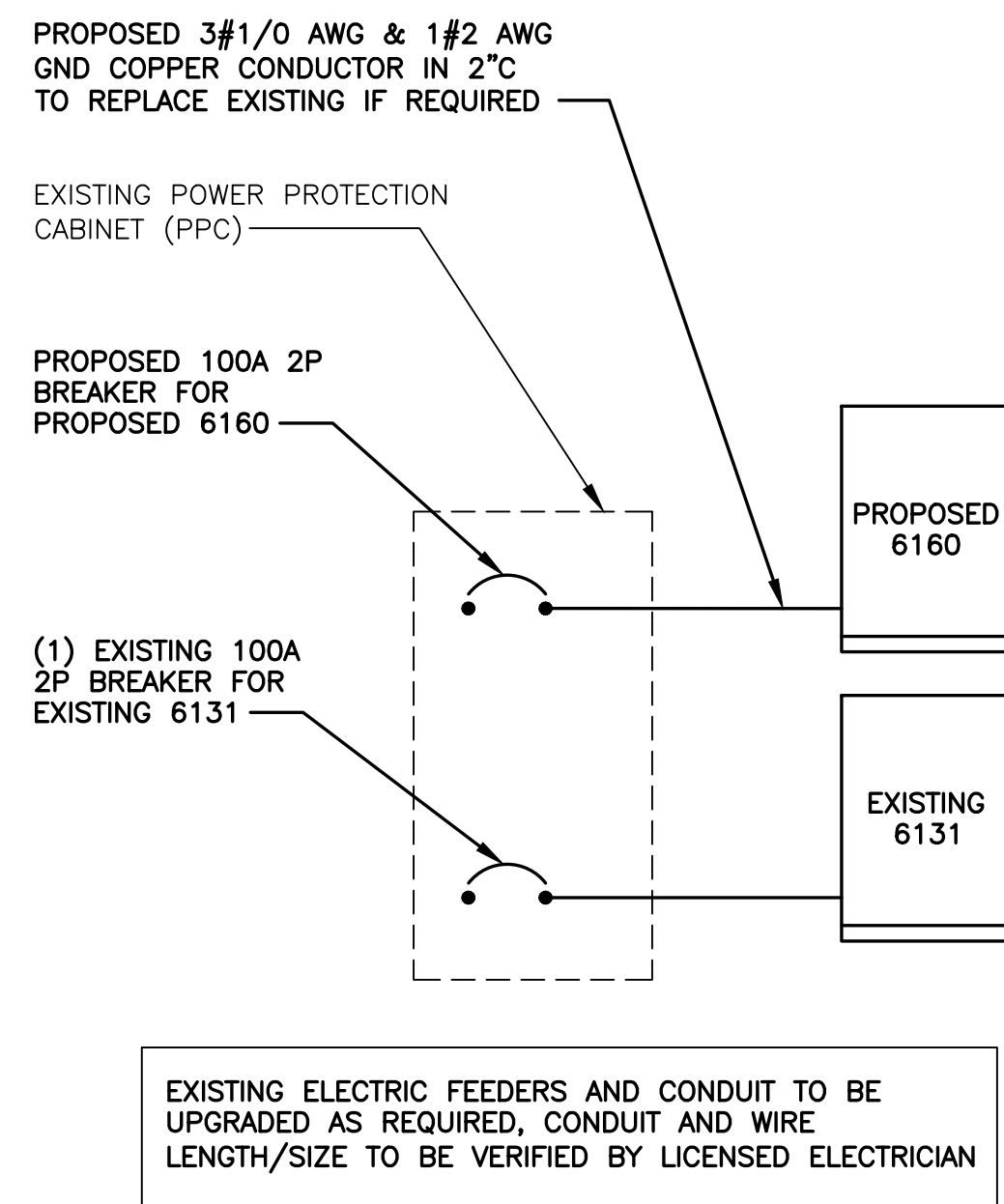
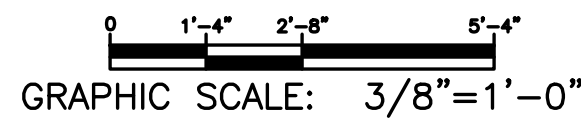
2
E-1 GROUNDING RISER DIAGRAM
SCALE: N.T.S.



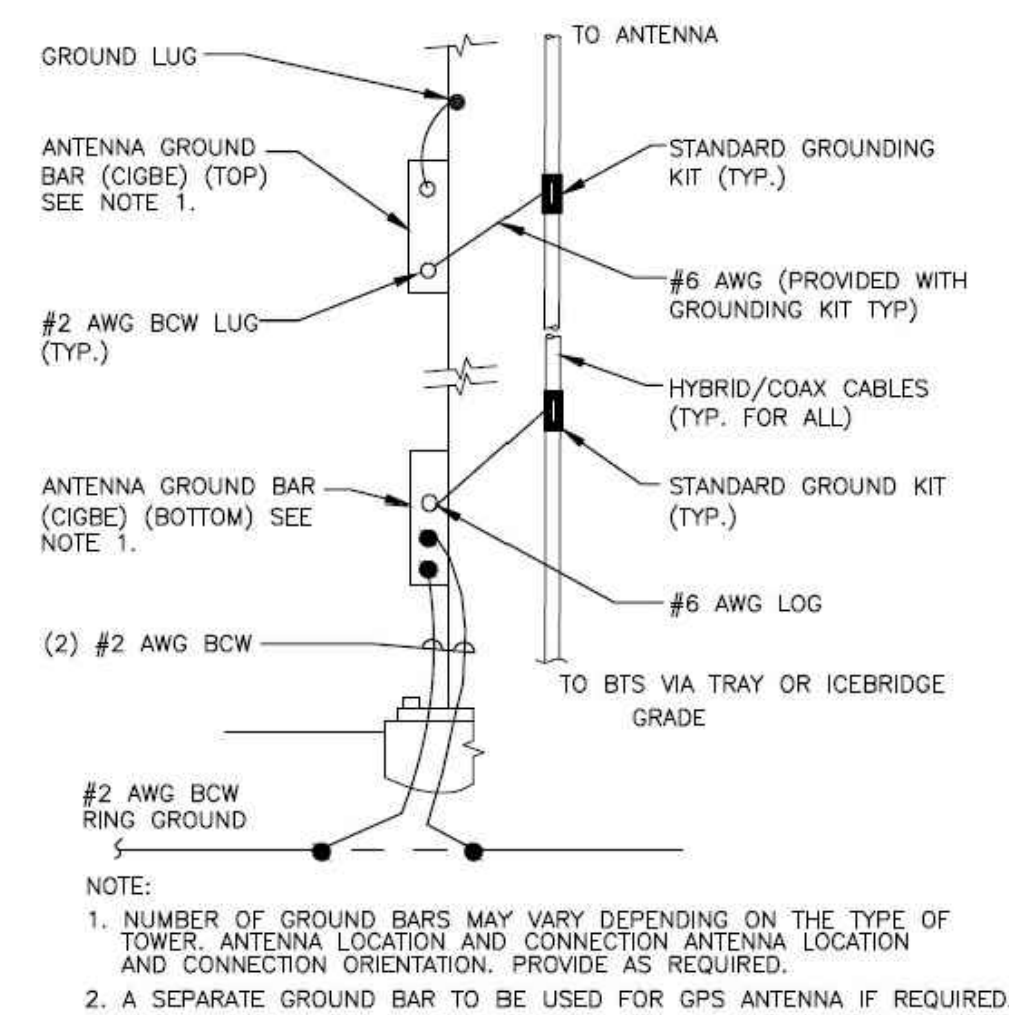
3
E-1 GROUND WIRE TO GROUND BAR CONNECTION DETAIL
SCALE: N.T.S.



4
E-1 ELECTRICAL SERVICE DIAGRAM
SCALE: 3/8"=1'-0"



5
E-1 ONE LINE DIAGRAM
SCALE: 1/4"=1'-0"



6
E-1 ANTENNA CABLE GROUNDING
SCALE: N.T.S.

ELECTRICAL LEGEND	
A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
G	GROUND
MGB	GROUND
○	MECHANICAL CONNECTION
●	CADWELD CONNECTION
○	MASTER GROUND BAR
○	EQUIPMENT GROUND BAR
—	GROUND COPPER WIRE, SIZE AS NOTED
—	EXPOSED WIRING
—	COAXIAL CABLE
○	5/8"x8" COPPER CLAD STAINLESS STEEL GROUND ROD
●	EXOTHERMIC (CAD WELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET
⊗	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL



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SCHEDULE OF REVISIONS

7		
6		
5		
4		
3		
2	01/04/22	REVISED PER NEW RFDS
1	12/10/20	ISSUED AS FINAL
0	06/26/20	INITIAL SUBMISSION
REV NO.	DATE	DESCRIPTION OF CHANGES

DRAWN BY:	PD
CHECKED BY:	SDF
SCALE:	AS NOTED
JOB NO:	20003-TRN

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AHMET COLAKOGLU
PROFESSIONAL ENGINEER, MA LIC. No. 48288

SITE #: 4DE7040A
BO040/51 BRATTLE
51 BRATTLE STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

DRAWING TITLE:

ELECTRICAL
DETAILS
& NOTES

DRAWING SHEET: 6 OF 7

E-1

May 3, 2023

City of Cambridge
Board of Zoning Appeals
831 Massachusetts Avenue
Cambridge, MA 02139

Re: Eligible Facilities Request pursuant to Section 6409 of the
Spectrum Act and an Application for Special Permit, in the
Alternative
Property Address: 51 Brattle Street, Cambridge, MA 02139
Assessor's Map 169, Lot 14 (the "**Property**")
Applicant: T-Mobile Northeast, LLC ("**Applicant**")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents T-Mobile Northeast LLC in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals (the "**Board**"), to modify an existing wireless communications facility on the Property. The Property is located in the Business A Zoning District (the "**BA**"). To the extent that the Board determines that the requirements of Article 4 Section 4.32G.1 of the City of Cambridge Zoning Ordinance (the "**Ordinance**") apply, the use of the Property for a wireless telecommunications facility is permitted by special permit from the Board¹. The Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Section 10-43 of the Ordinance.

The Applicant's Proposed Facility (as defined herein) is subject to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, more commonly known as the "Spectrum Act" (47 U.S.C. § 1455). As such, we respectfully submit that in the event that the Board determines that the application does not comply with the Spectrum Act, the Applicant hereby states that the special permit requirements set forth in the Ordinance are hereby met by the Applicant, and that relief must be granted to the Applicant. Compliance with the Spectrum Act is shown on the Eligible Facilities Request permit application form attached hereto and incorporated herein by reference (the "**EFR**").

¹ Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

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The Applicant seeks to modify its existing wireless communications facility by, removing and replacing the existing antennas, and Remote Radio Units (“**RRUs**”) on the rooftop of the existing building (the “**Building**”) on the Property (the “**Proposed Facility**”). The Applicant’s Proposed Facility is described in more detail below and is shown on the Plans attached hereto and incorporated herein by reference (the “**Plans**”).

I. Background

The Applicant is licensed by the Federal Communications Commission (the “**FCC**”) to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant’s FCC license is attached hereto. The Applicant 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 in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. Project Description

The Applicant’s existing facility consists of three (3) sectors (Alpha, Beta, and Gamma) with each sector having three (3) panel antennas and two (2) RRUs, which are all on the facade of the Building’s penthouse. The Applicant proposes to modify its existing facility by replacing nine (9) of its existing panel antennas with nine (9) new like-kind panel antennas, relocating, and replacing six (6) RRUs with six (6) new like kind RRUs. All new panel antennas and RRUs will be located in the similar locations as the current antennas. Moreover, similar to the existing facility, all of the visible antenna associated with the Proposed Facility will be painted to match the façade of the Building penthouse. Consequently, the visual change to the Applicant’s existing facility will be de minimus.

The Applicant’s proposal is consistent with the previous decisions of the Board for this facility, the last of which is dated January 12, 2017 (Case NO.BZA-011993-2016) (the “**Decisions**”).

After installation, the Proposed Facility will be unmanned and will only require twice a month maintenance visits per carrier. The only utilities required to operate this Proposed Facility are standard 120-volt electrical power as well as

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telephone service. These are presently in place at the Property. The traffic generated by the Proposed Facility will be approximately two vehicle trips per month by maintenance personnel who will inspect the Proposed Facility to ensure it remains in good working order. The Proposed Facility will comply with all applicable local, state and federal safety codes.

III. Legal Arguments

A. The Applicant complies with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance

Pursuant to Section 4.32(g) of the Ordinance, the Applicant's proposed use for a wireless communications facility in the BA District is permitted by special permit. The Applicant's Proposed Facility further complies with the provisions set forth in Section 4.32(g), footnote 49 of the Ordinance:

1. The Board of Zoning Appeal shall consider the scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.

Enclosed herewith is the Applicant's FCC license. The Applicant meets all requirements imposed by governmental authorities having jurisdiction over the Proposed Facility, including by the FCC, to provide wireless communications in this market area.

The intent of the U.S. Congress, when it enacted the Telecommunications Act of 1996 ("TCA") was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, T-Mobile is obligated to provide a reliable "product" (i.e. wireless communications service) to the population of the City of Cambridge. Likewise, consumer expectations for increasingly robust and reliable service requires competing service providers (including T-Mobile) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. The Proposed Facility and corresponding relief requested are necessary to remedy a gap in reliable service coverage within T-Mobile's existing network infrastructure.

T-Mobile investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within its network of existing and

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planned facilities. This is an existing location that is being upgraded with new technology to provide the necessary coverage to the subject area of the City of Cambridge. Therefore, the Proposed Facility in the BA District is necessary to close the coverage gap that is illustrated on the propagation maps submitted herewith. Consequently, T-Mobile is unable to close a gap in its wireless network without obtaining the requested relief under Section 6409 of the Spectrum act or a Special Permit to modify its existing wireless facility in the BA District.

Furthermore, Section 6409(a) of the Spectrum Act mandates that state and local governments “*may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.*” Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves “collocations of new Transmission Equipment,” “removal,” or “replacement” of Transmission Equipment.

Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an Applicant, we have provided, on the attached EFR, only the information that federal law allows this jurisdiction to consider when reviewing an EFR. As such, we submit that the Wireless Communications set forth in Section 4.32(g), footnote 49 of the Ordinance, provisions are not applicable to Proposed Facility and relief must be granted pursuant to Section 6409(a) of the Spectrum Act.

- 2. The Board of Zoning Appeal shall consider the extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building’s roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility on the site.**

The Applicant’s Proposed Facility will have no additional visual impact on the existing facility and Building. The new antennas of the Proposed Facility will be installed in the same locations as the existing Facility antennas on the facade of the Building, painted to match the color of the building, and in conformity with the Decisions.

As stated above, federal law now preempts many of the permit applications requirements that the Ordinance sets forth. To the extent that this Board determines that the Applicants’ proposed wireless facility must comply with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the

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Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

- 3. Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.**

The Proposed Facility is located in a nonresidential district. As such, the Applicant submits that nonresidential uses predominate in the area, and in keeping with the Decisions, respectfully requests that the Board find the same.

B. The Applicant complies with the Special Permit Criteria set forth in Section 10-43 of the Ordinance²:

1. The requirements of the Ordinance can be met:

As provided above, the Applicant has met the requirements set forth in Section 4.32(g), footnote 49 of the Ordinance.

2. Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The proposed installation will not obstruct existing rights-of-way or pedestrian access and will not change the daily conditions of access, egress, traffic, congestion hazard, or character

² Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

of the neighborhood. The installation will not require the addition of any new parking or loading spaces. The use is passive and will not change the current conditions or appearance surrounding the Building. The facility will not produce any odors, fumes, noise or waste. There will be no need for water, sewer, or other municipal services.

As mentioned above, once modified, the facility will be unmanned and will only require infrequent visits by a technician, typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency. These infrequent visits will not result in any material increase in traffic or disruption to patterns of access or egress that will cause congestion hazards or cause a substantial change in the established neighborhood character. The Applicant's maintenance personnel will make use of the existing access roads and parking at the Building.

3. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

As described above and illustrated on the attached photograph simulations, the modification of the existing facility will produce a minimal change in the appearance of the Building. The modification of the existing facility will blend with the existing characteristics of the Building and the surrounding neighborhood. Moreover, the proposed installation will not generate any traffic, smoke, dust, heat, glare, discharge of noxious substances, nor will it pollute waterways or groundwater. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communication.

4. Nuisance or hazard would not be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

The operations of the proposed telecommunications facility will not adversely impact the health, safety, and the welfare of the residents of the City of Cambridge. On the contrary, the proposed use will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services. Further, the site will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations.

The Proposed Facility will comply with all federal, state and local safety requirements including the standards established by the FCC, Federal Aviation Administration (FAA), the American Standards Institute (ANSI), and the Massachusetts Department of Public Health (MDPH).

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Accordingly, the Proposed Facility will not adversely impact the health, safety and/or welfare of the neighborhood or the residents of the City of Cambridge.

5. For other reasons, the proposed installation will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The Proposed Facility is designed to blend with the existing characteristics of the Property, reducing any visual impacts to the surrounding area. Accordingly, the Proposed Facility's design results in a minimal impact on the underlying and adjacent zoning district and is consistent with the Ordinance's intention to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space), including the BA District.

As mentioned above, the proposed modifications to the existing installation will not generate any traffic, smoke, dust, heat, glare, discharge, or noxious substances, nor will it pollute waterways or groundwater.

6. The new use of the building construction is consistent with the Urban Design Objective set forth in Section 19.30 of the Ordinance:

Not Applicable. The Applicant is not proposing to construct a new building or structure.

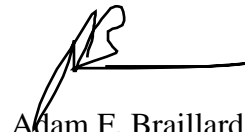
IV. Summary

The Applicant hereby requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit, pursuant to Section 6409(a) of the Spectrum Act. Or, in the alternative, its proposed modifications to the existing telecommunications facility will not have any adverse effect on the neighborhood within which the Property is located in particular, and the City of Cambridge as a whole. The findings are made in view of the particular characteristics of the Property and of the Applicant's proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

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For the foregoing reasons the Applicant respectfully requests that the Board grant the foregoing relief pursuant to Section 6409(a) of the Spectrum Act or, in the alternative, zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's Proposed Facility.

Sincerely,

A handwritten signature in black ink, appearing to read 'AB', followed by a horizontal line extending to the right.


Adam F. Braillard

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Email: abraillard@princelobel.com

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CAMBRIDGE, MA 02138

VIEW #2
EXISTING VIEW FROM
BRATTLE SQUARE

PAGE: V-2E

DATE: 05/03/2023

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VIEW #2
PROPOSED VIEW FROM
BRATTLE SQUARE

PAGE: V-2P

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VIEW #3
EXISTING VIEW FROM
CHURCH STREET

PAGE: V-3E

DATE: 05/03/2023

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SITE NAME: 51 BRATTLE

ADDRESS: 51 BRATTLE STREET
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VIEW #3
PROPOSED VIEW FROM
CHURCH STREET

PAGE: V-3P


DATE: 05/03/2023

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REVISION: 0




PROPOSED ANTENNAS WILL NOT BE VISIBLE FROM THIS VANTAGE POINT

<p>PREPARED FOR:</p> <p>T-MOBILE NORTHEAST LLC</p> <p>15 COMMERCE WAY, SUITE B NORTON, MA 02766</p> <p>OFFICE: (508) 286-2700</p> <p>FAX: (508) 286-2893</p>	<p>PREPARED BY:</p> <p> ADVANCED ENGINEERING GROUP, P.C. Civil Engineering - Site Development Surveying - Telecommunications</p> <p>500 NORTH BRIDGWAY EAST PROVIDENCE, 02914 PH: (401) 354-2403 FAX: (401) 633-6384</p>	<p>SITE NUMBER: 4DE7040A</p> <p>SITE NAME: 51 BRATTLE</p> <p>ADDRESS: 51 BRATTLE STREET CAMBRIDGE, MA 02138</p>	<p>VIEW #4 EXISTING VIEW FROM STORY STREET</p>	<p>PAGE: V-4E</p> <p>DATE: 05/03/2023</p> <p>DRAWN BY: MR</p> <p>REVISION: 0</p>
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PROPOSED ANTENNAS WILL BE OBSCURED BY TREES FROM THIS VANTAGE POINT

<p>PREPARED FOR:</p> <p>T-MOBILE NORTHEAST LLC</p> <p>15 COMMERCE WAY, SUITE B NORTON, MA 02766</p> <p>OFFICE: (508) 286-2700</p> <p>FAX: (508) 286-2893</p>	<p>PREPARED BY:</p>  <p>ADVANCED ENGINEERING GROUP, P.C.</p> <p>Civil Engineering - Site Development Surveying - Telecommunications</p> <p>500 NORTH BROADWAY EAST PROVIDENCE, 02914</p> <p>PH: (401) 354-2403</p> <p>FAX: (401) 633-6384</p>	<p>SITE NUMBER: 4DE7040A</p> <p>SITE NAME: 51 BRATTLE</p> <p>ADDRESS: 51 BRATTLE STREET CAMBRIDGE, MA 02138</p>	<p>VIEW #5</p> <p>EXISTING VIEW FROM APPIAN WAY</p>	<p>PAGE: V-5E</p> <p>DATE: 05/03/2023</p> <p>DRAWN BY: MR</p> <p>REVISION: 0</p>
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May 3, 2023

VIA HAND DELIVERY

Ranjit Singanayagam
Commissioner of Inspectional Services/Building Commissioner
City of Cambridge
831 Massachusetts Avenue
Cambridge, MA 02139

Re: Eligible Facilities Request to Modify Transmission Equipment at an Existing Base Station located at **51 Brattle Street, Cambridge, MA 02141.**

Dear Mr. Singanayagam:

A. T-Mobile is Filing an Eligible Facilities Request

Prince Lobel Tye LLP, on behalf of T-Mobile Northeast LLC is submitting the attached Eligible Facilities Request application to add, remove, modify, or replace Transmission Equipment at an Existing Base Station located at 10 Canal Park, Cambridge, MA 02141.

Because this jurisdiction has not yet developed an Eligible Facilities Request permit application form that complies with Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, commonly known as the “Spectrum Act” (Pub. Law No. 112-96, 126 Stat 156) (codified at 47 U.S.C. § 1455), this Eligible Facilities Request is attached to the Building Permit Application form which was customarily used by this jurisdiction when reviewing requests to collocate or modify wireless telecommunications facilities. Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an applicant, this Eligible Facilities Request application provides only the information that federal law allows this jurisdiction to consider when reviewing an Eligible Facilities Request.

Section 6409(a) of the Spectrum Act mandates that state and local governments “*may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.*” Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves “collocations of new Transmission Equipment,” “removal,” or “replacement” of Transmission Equipment.

B. Why this Eligible Facilities Request Must Be Granted

This Eligible Facilities Request involves an effort to collocate, remove, modify, or replace Transmission Equipment at an existing Base Station operated by a Federal Communications Commission (“FCC”) licensed wireless carrier. The FCC has defined Base Station as “the equipment and non-tower supporting structure at a fixed location that enable Commission-licensed or authorized wireless communications between user equipment and a communications network . . . the term includes equipment associated with wireless communications service including, but not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supply, and comparable equipment.” The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a Base Station at the time the application is filed even if the structure was not built solely or primarily to provide such support. The existing Base Station in this application is approximately eighty-six feet (86’) high and presently contains wireless facilities. The existing Base Station meets the FCC definition of a Base Station.

The list of equipment identified in the Eligible Facilities Request application that will be collocated, removed, or replaced at the Base Station also is Transmission Equipment as determined by the FCC. The FCC has defined Transmission Equipment as “any equipment that facilitates transmission for any Commission-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband.”

The FCC, in a Report and Order adopted on October 17, 2014, determined that any modification to an existing telecommunications Base Station that meets the following six criteria does not substantially change the physical dimensions of the existing Base Station and therefore is an Eligible Facilities Request which must be granted:

1. *The modifications to the Transmission Equipment do not increase the height of the Base Station by more than 10 percent (10%) or ten (10) feet, whichever is greater.*
 - a. The height of the Base Station is approximately eighty-six feet (86’) high. The proposed replacement of nine (9) existing antennas with nine (9) new antennas and the replacing three (3) Remote Radio Heads (RRHs) with six (6) new RRHs will not affect the height of the Base Station.
2. *The modifications to the Transmission Equipment do not protrude from the edge of the support structure by more than six (6) feet.*
 - a. The nine (9) replacement antennas are façade mounted to the existing penthouse on the roof of the building and will not protrude from the edge of

the building. Similarly, the six (6) replaced RRH's will be façade mounted to the interior of the existing penthouse on the roof of the building. As such, the proposed modification will not protrude from the edge of the building by more than six (6) feet.

3. *The modifications to the Transmission Equipment do not involve the installation of more than the standard number of equipment cabinets for the technology involved, not to exceed four.*
 - a. There is currently two (2) equipment cabinets existing at the Base Station. The Applicant propose to replace one (1) cabinet with one (1) new like-kind radio cabinets.
4. *The modifications to the Transmission Equipment do not entail any excavation or deployment outside of the Base Station site.*
 - a. There will be no excavation or deployment outside of the Base Station site.
5. *The modifications to the Transmission Equipment do not defeat any existing concealed or stealth-design.*
 - a. Pursuant to the previous decisions by the Board of Zoning Appeal for the City of Cambridge (the “**Board**”) for this site, the last of which is dated January 12, 2017 (Case No. BZA-011993-2016) (the “**Decisions**”), the existing panel antennas are located in the preferred location on the building. The replacement of nine (9) existing antennas with nine (9) new antennas and replacing three (3) RRHs with six (6) new RRHs will not defeat the existing stealth design as all the antennas will be installed on low profile mounts painted to match the existing building. Furthermore, all proposed antennas will be integrated into the building to the extent possible. As such, the proposal will be in conformity with the Decision and do not defeat the existing stealth design. The proposed installations will not substantially increase the facility and as such the proposed visual impact will be de minimus for many of the same reasons stated in the Decision attached hereto.
6. *The modifications to the Transmission Equipment comply with prior conditions of approval of the Base Station, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, or new excavation that does not exceed the corresponding “substantial change” thresholds in numbers 1-4.*
 - a. Based on the foregoing, the proposed modifications to the Base Station fully conform to Section 6409(a) of the Spectrum Act and comply with the prior conditions of approval of the Base Station.

There is a certification attached to the accompanying Eligible Facilities Request that identifies how each of the six review criteria identified by the FCC is met. The modifications to the

Transmission Equipment at the Base Station located at 10 Canal Park, Cambridge, MA 02141 contained in this Eligible Facilities Request fully conform to Section 6409(a) as enacted by Congress and as interpreted by the FCC. Accordingly, this Eligible Facilities Request must be approved within 60 days, as required by federal law and FCC implementing regulations.

C. Notice of Federal Law Expedited Permit Processing and Deemed Granted

Under federal law, an Eligible Facilities Request is deemed granted sixty (60) days after a complete application is filed with a local jurisdiction. If sixty days pass after the submission of T-Mobile's accompanying Eligible Facilities Request and the City of Cambridge has not acted to grant or deny the request, it will be deemed granted. At that time, the applicant may advise the City of Cambridge that the application has been deemed granted. If the City of Cambridge wishes to contest whether the Eligible Facilities Request has been deemed granted, the burden is on the City of Cambridge to file a lawsuit in a court of competent jurisdiction within 30 days after receipt of a written communication notifying it that the Eligible Facilities Request has been deemed granted. Failure to file a lawsuit in a timely manner may forever bar this jurisdiction from contesting that this Eligible Facilities Request has been deemed granted.

T-Mobile is committed to working cooperatively with you, and all jurisdictions around the country, to secure expeditious approval of requests to modify existing personal wireless service facilities. Please do not hesitate to contact me if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adam F. Braillard', with a long horizontal stroke extending to the right.

Adam F. Braillard

Direct: 617-456-8153

Email: abraillard@princelobel.com

ELIGIBLE FACILITIES REQUEST CERTIFICATION FOR NON-SUBSTANTIAL CHANGES TO AN EXISTING BASE STATION

“Base Station” means the equipment and non-tower supporting structure at a fixed location that allow Commission-licensed or authorized wireless communications between user equipment and a communications network. The term base station includes any equipment associated with wireless communications services including but not limited to radio transceivers, antennas, coaxial or fiber-optic cables, regular or back up power supply, and comparable equipment. The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a base station at the time the application is filed even if the structure was not built solely or primarily to provide such support. “Base Station” includes the relevant equipment in any technological configuration, including small cells and DAS. Remember “Base Station” has two separate meanings: (1) the supporting structure that houses FCC licensed or authorized wireless equipment and (2) the wireless equipment itself. Keep this distinction in mind when calculating a substantial change in physical dimensions.

“Transmission Equipment” means any equipment that facilitates transmission for any FCC licensed or authorized wireless communication service, including but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband.

“Collocation” means the addition, removal or replacement of Transmission Equipment to an existing tower or a base station. This means that the existing support structure, be it a tower or a building or some other structure, must presently support FCC licensed or authorized wireless facilities. The FCC further requires that the site (tower, building, or other structure) was previously approved by the appropriate agency of government to house wireless facilities. Illegal wireless installations cannot be the basis for an eligible facilities request. However, if a communications Tower was erected at a time when it was exempt from zoning, the Tower can be modified through the Eligible Facilities Request process even if the Tower is no longer exempt from zoning.

Site Address: 51 Brattle Street

Existing Facilities

The Existing Facility is comprised of nine (9) panel antennas all mounted to the façade of the existing penthouse on the roof of the building, together with supporting equipment.

Height of Base Station

Height above ground level of the tallest point on the existing base station: 85' (feet)

Height above ground level of the tallest point of the existing base station after the installation of the *proposed* equipment: 85'(feet)

- 1) Does the height above ground level of the proposed equipment exceed the height of the tallest point on the existing base station by more than 10 percent (10%) or ten (10) feet, whichever is greater?

☐ Yes ☒ No

Width of Base Station

- 2) Will any of the proposed equipment protrude from the edge of the support structure by more than six (6) feet?

☐ Yes ☒ No

Excavation or Equipment Placement

- 3) Will the proposed changes in Transmission Equipment involve excavation or placement of new equipment outside the existing Base Station site or outside any access or utility easements currently related to the site?

☐ Yes ☒ No

Equipment Cabinets

- 4) Will the proposed modification in Transmission Equipment involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four?

☐ Yes ☒ No

Concealed or Stealth-Designed Wireless Facilities

5)

- a) Is the existing wireless facility concealed or stealth- designed?

☒ Yes ☐ No

- b) If the answer to 5a) is “Yes,” will the proposed modification in Transmission Equipment defeat the existing concealed or stealth-design?

☐ Yes ☒ No

Compliance with Preexisting Conditions of Approval for the Base Station

6)

- a) Were there any conditions of approval stated in the original government approval of the Base Station?

☒ Yes ☐ No

- b) Will the proposed modification in Transmission Equipment comply with conditions of approval imposed on the Base Station prior to February 22, 2012?

☒ Yes ☐ No

- c) If the answer to 6b) is "No," is the non-compliance due solely to any of the conditions addressed in Questions 1-5 above? N/A

☐ Yes ☐ No

If the answers to questions 1-4 are "No," the answer to either 5a) or b) is "No," and the answers to 6a) is "No" or the answers to either 6b) or 6c) are "Yes," then the proposed modifications do not substantially change the physical dimensions of the existing Base Station.

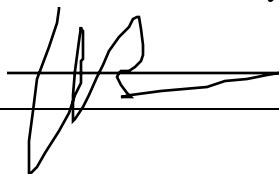
Explanatory Comments:

Question No.5 (b)

Comment: Pursuant to the previous decisions by the Board of Zoning Appeal for the City of Cambridge (the "Board") for this site, the latest dated January 12, 2017 (Case No. BZA-011993-2016) (the "Decision"), the existing panel antennas are located in the preferred location on the building. The replacement of the nine (9) existing panel antennas with nine (9) new antennas and the replacement of six (6) RRHs with six (6) new RRHs, will not defeat the existing stealth design as all the antennas will be installed at the same locations as the existing antennas and painted to match the existing building. Furthermore, all proposed antennas will be integrated into the building to the extent possible. As such, the proposed modifications to the existing telecommunications facility will be in conformity with the Decision and do not defeat the existing stealth design. The proposed installations will not substantially increase the facility and as such the proposed visual impact will be de minimus for many of the same reasons stated in the Decision attached hereto.

This certification is dated this 3st day of May, 2023.

Signature



Adam F. Braillard, Attorney for Applicant
Name & Title

Eligible Facilities Request (EFR) Application Form

Date of Submittal: _____

Submitted by:

Name: _____

Title: _____

Contact information: _____

Name of Jurisdiction: _____

Address of Jurisdiction: _____

Contact Name for Jurisdiction: _____

Name of Local Government Permit Application: _____

Local Government File #: _____

Street Address of Site: _____

Tax Parcel # of Site: _____

Latitude/Longitude of Site: _____

List Each Piece of Transmission Equipment that will be Collocated or Added:

List Each Piece of Transmission Equipment that will be Removed:

List Cabinets that will be Collocated or Added at the Site:

List Cabinets that will be Removed at the Site:

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Call Sign WQIZ578	File Number 0008577570
Radio Service WY - 700 MHz Lower Band (Blocks A, B & E)	

FCC Registration Number (FRN): 0001565449

Grant Date 05-30-2019	Effective Date 05-30-2019	Expiration Date 06-13-2029	Print Date 05-31-2019
Market Number BEA003	Channel Block A	Sub-Market Designator 0	
Market Name Boston-Worcester-Lawrence-Lowe			
1st Build-out Date	2nd Build-out Date 06-13-2019	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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: T-MOBILE LICENSE LLC

Call Sign: WQIZ578

File Number: 0008577570

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

T-MOBILE LICENSE LLC
12920 SE 38TH STREET
BELLEVUE, WA 98006

Call Sign WQZL852	File Number
Radio Service WT - 600 MHz Band	

FCC Registration Number (FRN): 0001565449

Grant Date 06-14-2017	Effective Date 06-15-2017	Expiration Date 06-14-2029	Print Date
Market Number PEA007	Channel Block B	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 06-14-2023	2nd Build-out Date 06-14-2029	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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.

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Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WQZL852

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

T-MOBILE LICENSE LLC
 12920 SE 38TH STREET
 BELLEVUE, WA 98006

Call Sign WQZL853	File Number
Radio Service WT - 600 MHz Band	

FCC Registration Number (FRN): 0001565449

Grant Date 06-14-2017	Effective Date 06-15-2017	Expiration Date 06-14-2029	Print Date
Market Number PEA007	Channel Block C	Sub-Market Designator 0	
Market Name Boston, MA			
1st Build-out Date 06-14-2023	2nd Build-out Date 06-14-2029	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

NONE

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: T-MOBILE LICENSE LLC

Call Sign: WQZL853

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
 T-MOBILE LICENSE LLC
 12920 SE 38TH ST.
 BELLEVUE, WA 98006

Call Sign WRAM889	File Number 0008585885
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0001565449

Grant Date 05-30-2019	Effective Date 05-30-2019	Expiration Date 06-30-2029	Print Date 05-31-2019
Market Number BTA201	Channel Block C	Sub-Market Designator 4	
Market Name Hyannis, MA			
1st Build-out Date	2nd Build-out Date	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.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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: T-MOBILE LICENSE LLC

Call Sign: WRAM889

File Number: 0008585885

Print Date: 05-31-2019

Spectrum Lease associated with this license. See Spectrum Leasing Arrangement Letter dated 07/27/2004 and File No. 0001765259.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: WRAM889

File Number: 0008585885

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
T-MOBILE LICENSE LLC
12920 S.E. 38TH STREET
BELLEVUE, WA 98006

Call Sign KNLH311	File Number 0007725350
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0001565449

Grant Date 06-08-2017	Effective Date 06-08-2017	Expiration Date 06-27-2027	Print Date 06-09-2017
Market Number BTA201	Channel Block D	Sub-Market Designator 0	
Market Name Hyannis, MA			
1st Build-out Date 06-27-2002	2nd Build-out Date	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.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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: T-MOBILE LICENSE LLC

Call Sign: KNLH311

File Number: 0007725350

Print Date: 06-09-2017

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Licensee Name: T-MOBILE LICENSE LLC

Call Sign: KNLH311

File Number: 0007725350

Print Date: 06-09-2017

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: T-MOBILE LICENSE LLC

ATTN: FCC REGULATORY COMPLIANCE
 T-MOBILE LICENSE LLC
 12920 SE 38TH ST.
 BELLEVUE, WA 98006

Call Sign WPOJ753	File Number 0008585870
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0001565449

Grant Date 05-30-2019	Effective Date 05-30-2019	Expiration Date 06-30-2029	Print Date 05-31-2019
Market Number BTA229	Channel Block C	Sub-Market Designator 3	
Market Name Kingsport-Johnston City, TN-Br			
1st Build-out Date 06-30-2004	2nd Build-out Date	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.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

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: T-MOBILE LICENSE LLC

Call Sign: WPOJ753

File Number: 0008585870

Print Date: 05-31-2019

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
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27878-567



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

RECEIVED BY
OFFICE OF CITY CLERK

97 OCT 24 AM 11:03

CAMBRIDGE MA.

CASE NO: 7524

LOCATION: 51 Brattle Street
Cambridge, MA

Business A Zone

PETITIONER:

President and Fellows of Harvard College
Omnipoint Communications, Inc.
Philip S. Hammond, Agent

sk. 13746
pb. 680

PETITION:

Special Permit: To install six (6) panel wall mount
antennas for Personnel Communication System (PCS)
on the roof top and penthouse at 51 Brattle Street.

VIOLATIONS:

Art. 4.000, Sec. 4.32.G.1 (Transportation,
Communication & Utility Uses).

DATE OF PUBLIC NOTICE: August 12 & 19, 1997

DATE OF PUBLIC HEARING: August 28, 1997

MEMBERS OF THE BOARD:

Lauren Curry - Chairperson
Michael Wiggins - Vice Chair
Charles Pierce
John O'Connell
Thomas Sieniewicz

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X
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Theodore Hartry
Arch Horst
Laura Kershner
James Daniel
David Gray Hanson
Marc Truant

X
X
X
X
X
X
X

Members of the Board of Zoning Appeal heard testimony and viewed
materials submitted regarding the above request for relief from the
requirements of the Cambridge Zoning Ordinance.

The Board is familiar with the location of the petitioner's
property, the layout and other characteristics as well as the
surrounding district.

MSD 11/17/97 03:26:35 1052 13.00

Case No.: 7524
Location: 51 Brattle Street
Petitioner: Omnipoint Communications, Inc.
Philip S. Hammond, Agent

On October 2, 1997, Philip Hammond, of Omnipoint Communications, Rick Sousa and Mohamad Noor, of Omnipoint Communications Inc., appeared before the Board of Zoning Appeal seeking a special permit to install six (6) panel wall mount antennas for a Personnel Communication System (PCS) on the roof top and penthouse at 51 Brattle Street. The applicants submitted plans, drawings and photographs detailing the proposed project.

This case had been continued from August 28, 1997, so that the petitioner would be able to meet with the Massachusetts Historical Commission and also to address the concerns as noted in the Planning Board's recommendation, dated August 28, 1997.

At the August 28th hearing, the Chair read into the record a memorandum, dated August 28, 1997, from the Planning Board, stating:

"The Planning Board has concerns on this application about the color of the antenna and the Base Transmitting Station (BTS) to be installed. At his location in the Harvard Square Overlay District (that is also a National Register Historic District), it is important to minimize the visual chaos. The BTS box is free standing on the roof of this building and since there are no site line views included in the application, it is hard to evaluate the impact of the installation. Also the Planning Board would like to support the review required by the Massachusetts Historical Commission."

Mr. Hammond stated that Omnipoint Communications, Inc. is proposing to establish an antenna network in the City at 51 Brattle Street as a special permit and that this is to be a rooftop installation as 72" antennas that are approximately six inches (6") in width and attached to an existing penthouse. He stated that the dimensions of the antennas are 72" (length) x 6" (width) x 3" (depth) and that they are to be attached to the penthouse facade. The BTS unit is to be on top of the lower penthouse.

Bruce Travis, of 60 Brattle Street, indicated to the Board his concern as to the health impact or implications of this proposed installation.

The Chair read into the record a letter, dated August 7, 1997, to Paul Zimmermann, R.F., Engineer, at Omnipoint Communications, and signed by Robert M. Hallisey, Director of the Radiation Control Program, stating:

"Pursuant to your notification of August 6, 1997, this is to advise you that approval, under the provisions of 105 CMR 122.021 has been granted to maintain the personal communication services facility located at 51 Brattle Street in Cambridge, Massachusetts."

At the October 2, 1997 hearing, the Chair read into the record a memorandum, dated October 2, 1997, from the Planning Board, stating:

"The staff for the Planning Board has reviewed the revised submittal dated 9/4/97, and found that this plan addresses the concerns of the Planning Board raised in the 9/28/97 recommendation. The installation minimizes the visual impact from Brattle Street and Story Street, and the Base Transmitting Station while visible, will be finished in suitable color and materials so as to blend with the walls behind the box."

Mr. Hammond stated that the BTS equipment, located up against the existing penthouse walls and cooler ventilation equipment, will not be seen from the street and that the colors of the BTS equipment and the antennas are to blend in the surrounding background. The antennas are to be placed on the building up against the facade. He indicated that the Massachusetts Historical Commission was notified and informed about the project and after favorable approval from MHC a copy of this letter will be submitted to the file for public record.

Bruce Travis, of 60 Brattle Street, stated that he has concerns with any future increase or upgrades in the power output of the installation as well as any additional antennas and the implications of this installation at this site. He also stated his concern with any possible radio frequency transmissions at given certain energy levels.

The Chair moved that the special permit to install six (6) panel wall mount antennas for a Personnel Communication System (PCS) on the roof top and penthouse at 51 Brattle Street be granted on the following conditions: 1) that the work proceed in conformance with the plans which are dated September 4, 1997; 2) that the colors of the antennas and BTS are to match exactly the background colors; 3) that there be no physical changes to the BTS which is to abut the HVAC system and the antennas which is to be affixed to the walls; 4) that there can be internal upgrades or replacements by precisely, similar antennas of the same exact size; 5) that there be no power increase in terms of output with respect to any of these without returning to the Board and demonstrating that the appropriate licenses have been obtained; and 6) that the variance would automatically expire and that there would have to be a petition for a further special permit in the event that it could be demonstrated that the output from this system is audible within the vicinity of the equipment. Five members of the Board voted to grant the special permit.

The Board based the decision upon the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed use;
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and/or welfare of the occupants of the proposed use, and;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the Ordinance, and in fact be a significant improvement to the structure and benefit the neighborhood.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulation of other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

Michael Wiggins
Michael Wiggins, Vice-Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on Oct 24, 97 by

Maria Pacheco, Clerk.

Twenty days have elapsed since the filing of this decision.

No appeal has been filed ☒

Appeal has been filed and dismissed or denied ☐

Date 11/14/97

M. Margaret Drury
M. Margaret Drury



City Clerk.



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

2001 MAR -7 P 2:40

831 Mass Avenue, Cambridge, MA.
(617) 349-6100CITY CLERK
CITY OF CAMBRIDGE, MASSACHUSETTS

CASE NO: 8258

LOCATION: 51 Brattle Street Business A Zone
Cambridge, MA

PETITIONER: Omnipoint Holdings, Inc. - Thomas J. Fields

PETITION: Special Permit: To install another radio equipment cabinet on the roof at
51 Brattle Street to an existing wireless communication facility.

VIOLATIONS: Art. 4.000, Sec. 4.32.G.1 (Telecommunication Uses).

DATE OF PUBLIC NOTICE: January 5 & 12, 2001

DATE OF PUBLIC HEARING: January 25, 2001

MEMBERS OF THE BOARD:	THOMAS SIENIEWICZ - CHAIR	<input checked="" type="checkbox"/>
	ARCH HORST	<input type="checkbox"/>
	CHARLES PIERCE	<input checked="" type="checkbox"/>
	JOHN O'CONNELL	<input type="checkbox"/>
	SUSAN SPURLOCK	<input type="checkbox"/>

ASSOCIATE MEMBERS:	JENNIFER PINCK - VICE-CHAIR	<input checked="" type="checkbox"/>
	MARC TRUANT	<input checked="" type="checkbox"/>
	SUSAN CONNELLY	<input type="checkbox"/>
	REBECCA TEPPER	<input type="checkbox"/>
	KEEFE B. CLEMONS	<input type="checkbox"/>

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance.

The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

19450-310
property owners: President and Fellows
of Harvard University

Case No. 8258
Location: 51 Brattle Street
Petitioner: Omnipoint Holdings Inc. Thomas Fields

On January 25, 2001, Petitioner Thomas Fields and RF Engineer Mirela Marku appeared before the Board of Zoning Appeal requesting a special permit to install another radio cabinet at an existing wireless communication facility on the roof at 51 Brattle Street. The Petitioner submitted plans and photos.

Board member Rebecca Tepper recused herself due to a potential conflict of interest regarding her legal representation of the Petitioner's competitors. She offered the Petitioner the choice of proceeding with a Board of four, requiring a unanimous vote, or a continuance. The Petitioner chose to proceed with a Board of four.

Mr. Fields stated that there is currently an existing telecommunications facility, one radio cabinet and 6 antenna, on the roof of the subject property, and that the proposal is to add another radio cabinet. The reason for the new cabinet is to increase capacity in Harvard Square where they are currently dropping peak time calls. He further stated that the new cabinet would be hardly noticeable from the public way.

Mr. Fields stated that the installation would not increase traffic at the site, would not affect adjacent uses, would not cause detriment to the health or safety of the building's occupants or the public, and would not impair the integrity of the district or adjoining districts.

Ms. Marku stated that the site was properly licensed and that the equipment would not make noise.

The Chair read a Planning Board memo dated December 14, 2000 as follows: The Planning Board reviewed the application for 51 Brattle Street at the 12/12/2000 meeting and finds that the additional equipment does not raise any issues, and leaves the case to the Board of Zoning Appeal without comment or recommendation. The Chair then read a letter from the Historical Commission as follows: The property is located within the Harvard Square Neighborhood Conservation District. On January 4th, 2001, the Cambridge Historical Commission in its capacity as the Neighborhood Conservation District for the Harvard Square Neighborhood Conservation District Commission voted to approve the antenna installation in the context of the existing radio equipment on the roof.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board find, that under Ordinance Section 10.43, the criteria for a special permit had been met. The four member Board voted unanimously in favor of the findings (Sieniewicz, Pinck, Pierce, and Truant).

The Chair then moved that on the basis of the finding the Board grant the special permit for a new radio antenna equipment cabinet at 51 Brattle Street, and that the special permit be conditioned on the following:

1. that if any noise is emitted from the equipment the Petitioner will have to return to the Board to seek a renewal of the special permit;
2. that should the equipment become obsolete and not in use, that it be removed from the locus;
3. that the equipment be camouflaged or painted to blend in with the existing equipment on the rooftop as shown in photosimulations, BS04001C at 51 Brattle Street, consisting of three sheets submitted in support of the application; and,
4. that the work be in conformance with drawings submitted in support of the application, created by URS Corporation at 500 Enterprise Drive, Rocky Hill, Conn, stamped Richard Sanbor, structural registered engineer in the Commonwealth of MA, No. 3426, consisting of T1, C1, A1, and A2.

The four member Board voted unanimously in favor of granting a special permit (Sieniewicz, Pinck, Pierce, and Truant), with the above conditions. Therefore, the special permit is granted.

The Board based its decision upon the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed uses;
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and /or welfare of the occupants of the proposed use, and;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate for the Ordinance, and in fact be a significant improvement to the structure and benefit the neighborhood.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulation of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

Tom Sieniewicz

Tom Sieniewicz, Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 3/7/01 by Maia Pacheco, Clerk.

Twenty days have elapsed since the filing of this decision.

No appeal has been filed ☒ _____.

Appeal has been filed and dismissed or denied.

Date: 4/3/2001 D. Margaret Dwyer City Clerk.



BK 17450
P 310 *

City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.
(617) 349-6100



2013 00000845

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Page: 1 of 4 01/02/2013 01:14 PM

2012 DEC 5 PM 3 12
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

CASE NO: 10336

LOCATION: 51 Brattle Street Business A Zone
Cambridge, MA

PETITIONER: T-Mobile Northeast, LLC
C/o Jackie Slaga, Agent

PETITION: Special Permit: In-kind replacement of existing 6 antennas with new antennas; in-kind replacement of 1 existing cabinet with smaller cabinet in same equipment area on roof. All antennas will be mounted in the same location and painted to match faced of building.

VIOLATION: Art. 4.000, Sec. 4.32.G.1 & 4.10 (Footnote 49) (Telecommunication Facility). Art. 10.000, Sec. 10.40 (Special Permit).

DATE OF PUBLIC NOTICE: September 27, 2012 & October 4, 2012

DATE OF PUBLIC HEARING: October 11, 2012

MEMBERS OF THE BOARD:

BRENDAN SULLIVAN - CHAIR
CONSTANTINE ALEXANDER - VICE-CHAIR
TIMOTHY HUGHES
THOMAS SCOTT
JANET GREEN

☒
☒
☒
☒
☒

ASSOCIATE MEMBERS:

MAHMOOD R. FIROUZBAKHT
DOUGLAS MYERS
SLATER W. ANDERSON
TAD HEUER
ANDREA A. HICKEY
KEVIN C. McAVEY

☒
☐
☐
☐
☐
☐

*at President and
Deans of Harvard
College*

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Jackie Slaga 95 Indian Tr. Saundertown, RI 02874

Case No. 10336
Location: 51 Brattle Street
Petitioner: T-Mobile Northeast, LLC c/o Jackie Slaga, Agent

On October 11, 2012, Petitioner's attorney Ricardo Sousa appeared before the Board of Zoning Appeal requesting a special permit in order to permit the in-kind replacement of six existing antennas with new antennas mounted in the same location and painted to match the façade of the building and the in-kind replacement of one existing cabinet with a smaller cabinet. The Petitioner requested relief from Article 4, Sec. 4.32.G.1 of the Cambridge Zoning Ordinance ("Ordinance"). The Petitioner submitted application materials including information about the project, plans, and photographs.

Mr. Sousa stated that the Petitioner wished to upgrade its existing specially permitted wireless facility as part of a system wide upgrade. He stated that new antennas and a cabinet would replace existing ones. He stated that everything would be painted and placed so as to reduce visual impacts. He also agreed to replace the proposed pole mounts with low profile mounts and would maintain a gap of one foot from the top of the antenna to the top of the penthouse. He stated that there was an increasing need for more coverage.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board grant the special permit for relief in order to permit the in-kind replacement of six existing antennas with new antennas mounted in the same location and painted to match the façade of the building and the in-kind replacement of one existing cabinet with a smaller cabinet and that no limitations have been exceeded for any license secured from any state or federal agency having jurisdiction. The Chair moved that the Board find that the visual impact of the various elements of the proposed facility were minimized by the painting of the equipment to simulate the background color and the reduction of the space from the facade of the building to the antenna through the use of flush mount brackets, which would reduce shadows created by the antennas. The Chair moved that the Board find that the requirements of the Ordinance were met. The Chair moved that the Board find that traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighbored character. The Chair moved that the Board find that telecommunication facilities already existed at the location and that there had been no any adverse affect from them. The Chair moved that the Board find that the continued operation of or development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed use, but rather would be enhanced by the upgraded equipment. The Chair moved that the Board find that there would not be any nuisance or hazard created to the detriment of the health, safety, or welfare of the occupants of the proposed use or the citizens of the city. The Chair moved that the Board find that the proposed use would not impair the integrity of the district or

adjoining districts or otherwise derogate from the intent and purpose of the Ordinance. The Chair moved that the Board grant the special permit on the following conditions:

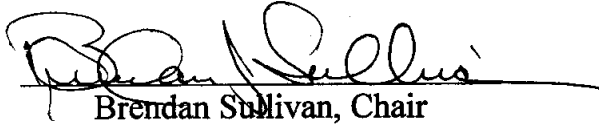
1. that should the proposed equipment become unused, it be removed within six months and the facade of the building be restored to its original condition,
2. that the antenna be maintained and not be allowed to deteriorate so as to become unsightly.

The five member Board voted unanimously in favor of granting the special permit (Sullivan, Alexander, Hughes, Green, and Myers) with the above conditions. Therefore, the special permit is granted.

The Board based its decision upon all the information presented, the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed uses;
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and /or welfare of the occupants of the proposed use;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the Ordinance, and in fact would be a significant improvement to the structure and benefit the neighborhood, and;
- 6) The new use or building construction is not inconsistent with the Urban Design Objectives set forth in Section 19.30 of the Cambridge Zoning Ordinance.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.


Brendan Sullivan, Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 12/5/12 by Maria Pacheco, Clerk.

Twenty days have elapsed since the filing of this decision.

No appeal has been filed ✓.

Appeal has been filed and dismissed or denied.

Date: January 2, 2013 Donna P. Kopy Anteroin
City Clerk.



**CITY OF CAMBRIDGE
MASSACHUSETTS
BOARD OF ZONING APPEAL
831 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02139
617 349-6100**



2017 00037446

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Page: 1 of 4 03/13/2017 09:44 AM

2017 FEB 15 AM 11:25

CASE NO: BZA-011993-2016 Business A Zone

LOCATION: 51 Brattle St
Cambridge, MA

PETITIONER: T-Mobile Northeast LLC - C/O Ricardo M. Sousa, Esq.

PETITION: Special Permit: The Applicant proposes to modify its existing Wireless Telecommunications Facility by collocating three (3) new L700 antennas on the existing building, together with supporting equipment. All three (3) proposed antennas will be facade mounted to the existing penthouse on the roof of the building, adjacent to the existing antennas and painted to match the existing building. The Applicants proposal complies with Section 6409 of the Spectrum Act as the collocation of antennas is not a substantial change to the existing base station. Moreover, the Applicants proposal complies with Section 4.32 and 10.4 of the Cambridge Zoning Ordinance.

VIOLATION :

Article 4.000	Section 4.32.G.1 (Telecommunications Facility).
Article 4.000	Section 4.40 (Footnote 49) (Telecommunications Facility).
Article 10.000	Section 10.40 (Special Permit).
Article 6409	Section (Middle Class Tax Relief Act)

17450-310

DATE OF PUBLIC NOTICE: December 29, 2016 and January 05, 2017

DATE OF PUBLIC HEARING: January 12, 2017;

MEMBERS OF THE BOARD:

CONSTANTINE ALEXANDER - CHAIR
BRENDAN SULLIVAN - VICE-CHAIR
JANET O. GREEN
PATRICK TEDESCO
ANDREA A. HICKEY

✓
✓
✓
✓
✓

ASSOCIATE MEMBERS:

DOUGLAS MYERS
SLATER W. ANDERSON
ALISON HAMMER
JIM MONTEVERDE
GEORGE BEST
LAURA WERNICK

*Eric Kallio
62A West St.
Swansey NH
03446*

Owner: Harvard University

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Case No. BZA-011993-2016
 Location: 51 Brattle Street
 Petitioner: T-Mobile Northeast LLC – c/o Ricardo Sousa, Esq.

On January 12, 2017, Petitioner's attorney Daniel Glissman appeared before the Board of Zoning Appeal requesting a special permit in order to modify its existing wireless telecommunications facility by collocating three new L700 antennas on the building together with supporting equipment, where all three antennas will be mounted to the penthouse, adjacent to existing antennas and painted to match the building. The Petitioner requested relief under Article 4, Section 4.32.G.1 and Article 10, Section 10.40 of the Cambridge Zoning Ordinance ("Ordinance") and Section 6409 of the Middle Class Tax Relief & Job Creation Act. The Petitioner submitted materials in support of their application including information about the project, plans, and photographs.

Mr. Glissman stated that the proposal was to add three new antennas to a six antenna array. He stated that they would be façade mounted adjacent to the existing antennas on low profile mounts and painted to match the building and other antennas. He stated that the petitioner was FCC licensed. He stated that the proposed work did not constitute a substantial change under Section 6409, because the height and protrusions were not changing, there would be no new cabinets or excavation, and the existing concealment efforts would not be defeated.

The Chair asked if anyone wished to be heard on the matter, no one indicated such. The Chair read a letter of support from the Harvard Square Advisory Committee.

After discussion, the Chair moved that the Board make the following findings based upon the application materials submitted and all evidence before the Board and that based upon the findings the Board grant the requested relief as described in the Petitioner's submitted materials and the evidence before the Board: that the Board find that the requirements of the Ordinance could not be met without the requested Special Permit; that the Board find that traffic generated or patterns of access or egress resulting from the proposed work would not cause congestion, hazard, or substantial change in established neighborhood character; that the Board find that the continued operation of or development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of what was proposed; that the Board find that no nuisance or hazard would be created to the detriment of the health, safety, and welfare of the occupant of the proposed use or the citizens of the City; that the Board find that what was proposed would not impair the integrity of the district or adjoining district or otherwise derogate from the intent and purpose of the Ordinance; and that the Board find that the modification of the existing telecommunications facility at the site proposed by the petitioner did not substantially change the physical dimensions of the existing wireless tower or base station at such facility within the meaning of Section 6409(a) of The Middle Class

Tax Relief and Job Creation Act of 2012 also known as The Spectrum Act.

The Chair further moved that based upon all the information presented the Board grant the requested relief as described in the Petitioner's submitted materials and the evidence before the Board on the following conditions:


1. that the work proceed in accordance with plans submitted by the petitioner, as initialed by the Chair,
2. that upon completion of the work, the physical appearance and visual impact of the proposed work be consistent with the photo simulations submitted by the petitioner, as initialed by the Chair,
3. that the petitioner at all times maintain the proposed work so that its physical appearance and visual impact remain consistent with the photo simulations previously referred to,
4. that should the petitioner cease to utilize the equipment approved tonight for a continuous period of six months or more, it promptly thereafter remove such equipment and restore the building on which it was located to its prior condition and appearance to an extent reasonably practicable,
5. that the petitioner continue to comply with the conditions imposed by the Board with respect to previous Special Permits granted to the petitioner with regard to the site in question,
6. that inasmuch as the health effects of the transmission of electromagnetic energy waves is a matter of ongoing societal concern and scientific study, the Special Permit is also subject to the following conditions:
 - A. that the petitioner shall file with the Inspectional Services Department each report it files with the federal authorities regarding electromagnetic energy wave emissions emanating from all of the petitioner's equipment on the site. Each such report shall be filed with the Inspectional Services Department no later than ten business days after the report has been filed with the federal authorities. Failure to timely file any such report with the Inspectional Services Department shall ipso facto terminate the Special Permit granted tonight.
 - B. that in the event that at any time federal authorities notify the petitioner that its equipment on the site, including, but not limited to the special permit granted tonight, fails to comply with the requirements of law or governmental regulations, whether with regard to the emissions of electromagnetic energy waves or otherwise, the petitioner, within ten business days of receipt of such notification of such failure, shall file with the Inspectional Services Department a report disclosing in reasonable detail that such failure has occurred and the basis for such claimed failure. The special permit shall ipso facto terminate if any of the petitioner's federal licenses are suspended, revoked, or terminated.
 - C. that to the extent a special permit has terminated pursuant to the foregoing paragraphs A and B, the petitioner may apply to this Board

for a new special permit provided that the public notice containing such application discloses in reasonable detail that the application has been filed because of a termination of the special permit pursuant to paragraphs A or B above. Any such new application shall not be deemed a repetitive petition and therefore will not be subject to the two-year period during which repetitive petitions may not be filed.

- D. that within ten business days after receipt of a Building Permit for installation of equipment subject to this petition, the petitioner shall file with the Inspectional Services Department a sworn Affidavit of the person in charge of the installation of equipment by the petitioner of the geographical area that includes Cambridge. Stating that A, he or she has such responsibility, and B that the equipment being installed pursuant to the special permit will comply with all federal safety rules and will be situated and maintained in locations with appropriate barricades and other protections, such that individuals, including nearby residents and occupants of nearby structures, will be sufficiently protected from excessive radio frequency radiation under federal law.

The five member Board voted unanimously in favor of granting the special permit with the above conditions (Alexander, Sullivan, Green, Hickey, and Tedesco). Therefore, the special permit is granted as conditioned.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.


Constantine Alexander, Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 2/15/17 by Maria Pacheco, Clerk.

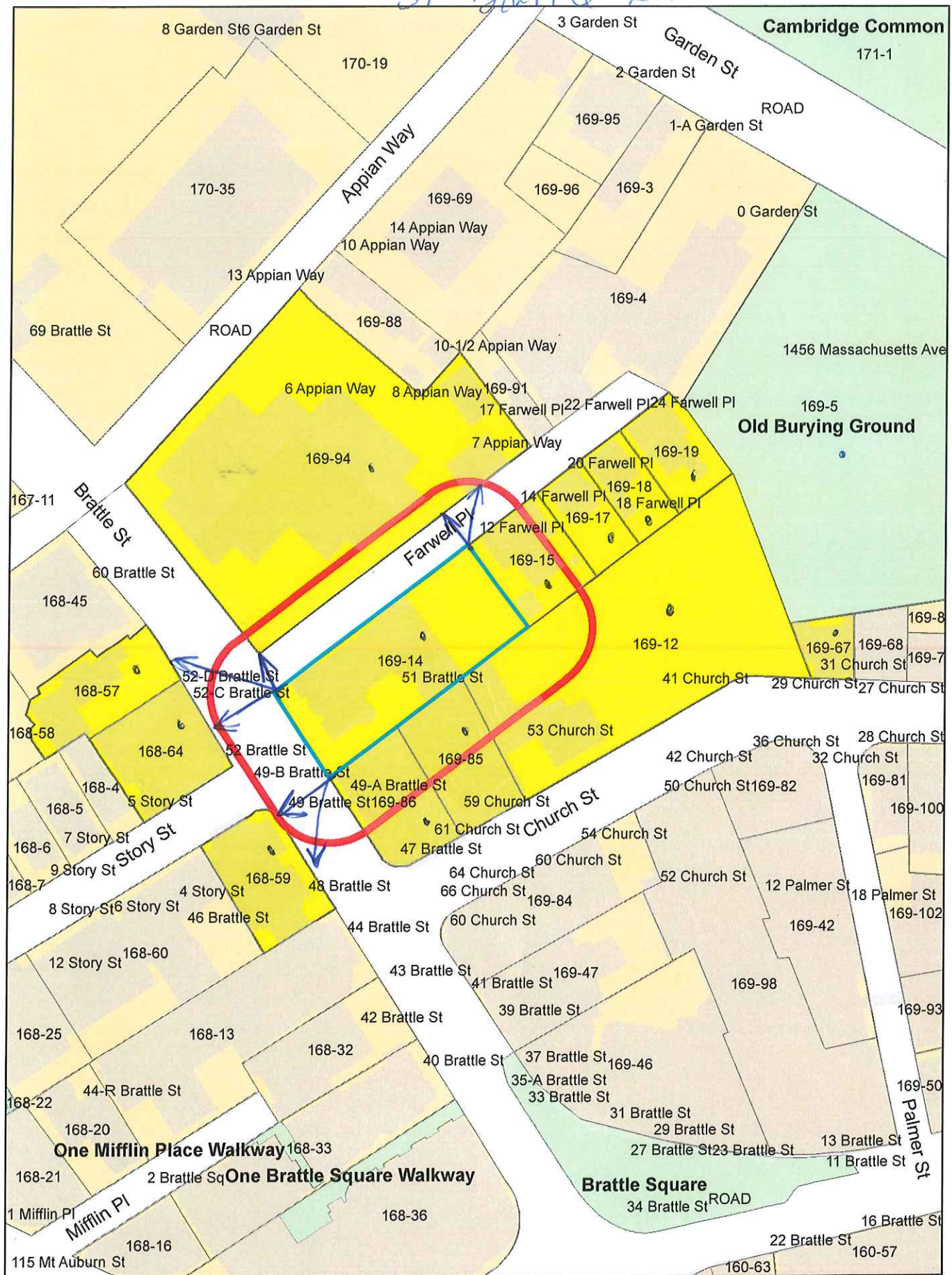
Twenty days have elapsed since the filing of this decision.

No appeal has been filed ✓.

Appeal has been filed and dismissed or denied.

Date: MARCH 13, 2017 Donna P. Lopez City Clerk.

51 Brattle St.



51 Brattle St.

Petitioner

169-15
BARTHOLET, ELIZABETH
10 FARWELL PL
CAMBRIDGE, MA 02138-3729

169-18
RIEDER, C. & GARY CHAFETZ
18-20 FARWELL PL
CAMBRIDGE, MA 02138

PRINCE LOBEL TYE LLP
C/O ADAM F. BRAILLARD, ESQ.
ONE INTERNATIONAL PLACE – SUITE 3700
BOSTON, MA 02110

168-59
BRATTLE SQUARE OFFICE BUILDING COMPANY
P.O. BOX 380828
CAMBRIDGE, MA 02238

169-17
MAGINN, ROBERT A., JR. LING CHAI, JENZABAR
101 HUNTINGTON AVE, SUITE 2205
BOSTON, MA 02199

169-19
EPISCOPAL SOCIETY IN CAMBRIDGE
TREAS. OFFICE
0 GARDEN ST.
CAMBRIDGE, MA 02138

168-57
CAMBRIDGE CENTER FOR ADULT EDUCATION
P.O. BOX 9113
CAMBRIDGE, MA 02238-9113

169-12
PRESIDENT & FELLOWS OF HARVARD COLLEGE
C/O HARVARD REAL ESTATE INC.
HOLYOKE CENTER, ROOM 1017
1350 MASS AVE
CAMBRIDGE, MA 02138-3895

169-14-94
PRESIDENT & FELLOWS OF HARVARD COLLEGE
C/O HARVARD REAL ESTATE, INC.
HOLYOKE CENTER, ROOM 1000
1350 MASSACHUSETTS AVE
CAMBRIDGE, MA 02138-3895

169-19
MOURA, JOSE M.F. & MARIA M. VELOSO
24 FARWELL PL UNIT 3
CAMBRIDGE, MA 02138

169-67
JANET A. CAHALY,
TRS. OF JAC CAMBRIDGE NOMINEE TRUST
P.O BOX 590-104
NEWTON CENTER, MA 02459

169-86
GEORGE WYNER REALTY BRATTLE STREET LLC.
C/O MYER DANA & SONS, INC
1340 CENTRE STREET #101
NEWTON, MA 02459

169-5
CAMBRIDGE CITY OF PWD
147 HAMPSHIRE ST
CAMBRIDGE, MA 02139

169-5
CITY OF CAMBRIDGE
C/O YI-AN HUANG
CITY MANAGER

169-5
CITY OF CAMBRIDGE
C/O NANCY GLOWA
CITY SOLICITOR

169-15
KELLY, RYAN P.B.,
TRUSTEE THE 12 FARWELL PLACE REALTY TR
12 FARWELL PL., #2
CAMBRIDGE, MA 02138

168-64
RENMORE, LLC
52 BRATTLE ST
CAMBRIDGE, MA 02138

169-19
MOURA, JOSE M F & MARIA MANUELA VELOSO
6645 WOODWELL ST
PITTSBURGH, PA 15217

169-85
59 CHURCH STREET, LLC
C/O BULFINCH
116 HUNTINGTON AVE #600
BOSTON, MA 02116



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.
(617) 349-6100

2 Bds

BZA

POSTING NOTICE – PICK UP SHEET

The undersigned picked up the notice board for the Board of Zoning Appeals Hearing.

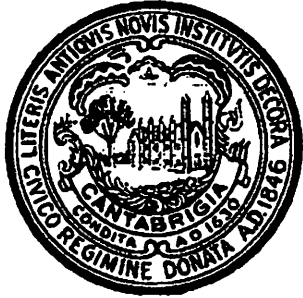
Name: Georgy Spivak Date: 6/7/23
(Print)

Address: 51 Brattle St.

Case No. BZA-221274

Hearing Date: 6/22/23

Thank you,
Bza Members



CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

June 15, 2023

To: The Board of Zoning Appeal

From: The Planning Board

RE: BZA-223702 120 Vassar Street

The Planning Board reviewed this BZA application to modify the existing wireless communications facility during a meeting on June 13, 2023 and decided to forward the following comments to BZA.

The Board decided to forward to BZA the attached memo from the Community Development Department to consider the suggestions noted in the memo to reduce the visual impacts of the installation.



CITY OF CAMBRIDGE

Community Development Department

IRAM FAROOQ
Assistant City Manager for
Community Development

SANDRA CLARKE
Deputy Director
Chief of Administration

KHALIL MOGASSABI
Deputy Director
Chief of Planning

To: Planning Board

From: Community Development Department (CDD) Staff

Date: June 8, 2023

Re: **Wireless Antenna Installations: 10 Canal Park, 51 Brattle Street and 120 Vassar St**

BZA-220600 (T-Mobile) & BZA-225273 (AT&T), 10 Canal Park

These two proposals involve modification of an existing wireless antenna installation located on the rooftop penthouse of 10 Canal Park. The T-Mobile proposal involves replacing ten (10) existing panel antennas with eight (8) new panel antennas and associated equipment. The AT&T proposal involves replacing twelve (12) existing panel antennas with nine (9) new panel antennas and associated equipment.

Since the installation is located on the rooftop penthouse, which is setback, it is reasonably well-concealed from public view. Additionally, the number of antennas and RRUs is also being reduced, which helps reduce visual clutter. However, there remains considerable existing antenna equipment in place, and the new antennas have varying dimensions, and appear to interrupt the parapet line.

Staff also note that it is difficult to ascertain the extent of changes as existing and proposed elevations of all penthouse façades are not included in the application materials. In addition, the AT&T proposal utilizes an outdated view (location 3) of the existing northwest façade for the photosimulations.

The following design improvements should be considered:

1. If feasible, the antennas should be moved down the penthouse façade to avoid visually interrupting the coping stone (top of parapet).
2. Since the new antennas all have varying sizes, if feasible, consider utilizing antenna covers/sheaths so that the new antennas have either similar dimensions, or are more symmetrically laid out.
3. Utilize the smallest mounting brackets available so that the antennas can be mounted as close as possible to the chimney surface.
4. Remove unused pipe mounts.
5. All painted and wrapped materials, including existing equipment, cabling, and mounts, should have a consistent matte finish. A darker, reddish-brown finish would better blend with the existing brickwork than the existing color finishes and the proposed color depicted in the photosimulations.

BZA-221274, 51 Brattle Street

The proposal involves modification of an existing wireless antenna installation on top of Washington Court in Harvard Square. Nine (9) existing panel antennas will be replaced with 9 new panel antennas and associated equipment. All antennas will be façade mounted in the same locations as the existing antennas and will be painted to match the color of the penthouse façade.

Despite being visible on the penthouse, this installation is generally well-designed and unobtrusive. The existing rooftop incorporates many appurtenances, and the proposed antenna color finish appears to be a good match with the existing façade. Since the new antennas all have varying dimensions, some refinements are suggested to help improve the new layout.


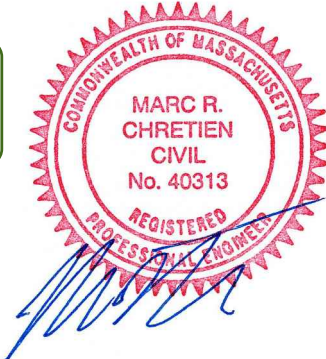





1. If feasible, consider utilizing antenna covers/sheaths so that the new antennas have similar dimensions, or can be more symmetrically laid out.
2. Utilize the smallest mounting brackets available so that the antennas can be mounted as close as possible to the façade.
3. If feasible, all cabling, including existing exposed cables, should be concealed and not located on the exterior of the penthouse.

BZA-223702, 120 Vassar Street

The proposal involves expansion of an existing wireless antenna installation on the façade of MIT's Howard Johnson Athletics Center. Two (2) existing panel antennas will be replaced with nine (9) new panel antennas and eight (8) existing RRUs will be replaced with six (6) new RRUs. All visible replaced and added antennas will be painted to match the color of the existing building.

Since this proposal expands the existing installation there are some additional visual impacts. Furthermore, as in the cases above, the new antennas all have varying dimensions and appear to interrupt the parapet line. The following refinements are suggested to help improve the new layout.

1. If feasible, the antennas should be moved down the façade to avoid visually interrupting the coping stone (top of parapet).
2. If feasible, consider utilizing antenna covers/sheaths so that the new antennas have similar dimensions.
3. Utilize the smallest mounting brackets available so that the antennas can be mounted as close as possible to the façade.
4. Ensure all exposed cables, mounts and wires are tightly fixed to the façade.

PROJECT INFORMATION		<div>SITE NUMBER: 4DE7040A</div> <div>SITE NAME: 51 BRATTLE</div> <div>51 BRATTLE STREET CAMBRIDGE, MA 02138 MIDDLESEX COUNTY</div> <div>DESIGN CONFIGURATION: 67E5A998E OUTDOOR</div>																																										
<div>SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS</div> <div>SITE ADDRESS: 51 BRATTLE STREET CAMBRIDGE, MA 02138</div> <div>LATITUDE: 42.37473918° N LONGITUDE: 71.12129730° W</div> <div>JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES</div> <div>CURRENT USE: TELECOMMUNICATIONS FACILITY</div> <div>PROPOSED USE: TELECOMMUNICATIONS FACILITY</div> <div>PROJECT TYPE: ANCHOR</div> <div>DESIGN CONFIGURATION: 67E5A998E OUTDOOR</div>																																												
DRAWING INDEX			REV			LOCUS MAP		GENERAL NOTES																																				
<div>T-1 TITLE SHEET</div> <div>GN-1 GENERAL NOTES</div> <div>A-1 ROOF & EQUIPMENT PLANS</div> <div>A-2 ELEVATION & EQUIPMENT SCHEDULE</div> <div>A-3 ANTENNA PLANS</div> <div>A-4 DETAILS</div> <div>S-1 ANTENNA MOUNT DETAILS</div> <div>S-2 CABINET MOUNTING DETAILS</div> <div>S-3 CUSTOM WALL MOUNT DETAILS</div> <div>G-1 GROUNDING, ONE-LINE DIAGRAM & DETAILS</div>			<div>1</div> <div>1</div> <div>1</div> <div>1</div> <div>1</div> <div>1</div> <div>1</div> <div>1</div> <div>1</div>					<div>1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.</div> <div>2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.</div> <div>3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.</div>																																				
<div>APPROVED</div> <div>By Bill Blake at 8:36 am, May 18, 2023</div> <div>APPROVED</div> <div>By Ryan Monte de Ramos at 10:15 am, May 31, 2023</div> <div>APPROVED</div> <div>By Mike DeLia at 10:35 am, May 31, 2023</div> <div></div>					<div> DIG SAFE SYSTEM, INC. </div> <div>CALL BEFORE YOU DIG</div> <div>CALL TOLL FREE: 811 OR 888-DIG-SAFE</div>																																							
							UNDERGROUND SERVICE ALERT																																					
				SITE NUMBER: 4DE7040A SITE NAME: 51 BRATTLE 51 BRATTLE STREET CAMBRIDGE, MA 02138 MIDDLESEX COUNTY		T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766 OFFICE: (508) 286-2700 FAX: (508) 286-2893		<table><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td></tr><tr><td>0</td><td>05/03/23</td><td>ISSUED FOR REVIEW</td><td>MER</td><td>MRC</td></tr><tr><td>1</td><td>05/17/23</td><td>ISSUED FOR CONSTRUCTION</td><td>MER</td><td>MRC</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>		NO.	DATE	REVISIONS	BY	CHK	0	05/03/23	ISSUED FOR REVIEW	MER	MRC	1	05/17/23	ISSUED FOR CONSTRUCTION	MER	MRC																				
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GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETCETERA DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.
19. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.
20. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
21. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

22. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
23. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

24. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
25. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

26. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

27. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR LEASE AREA SHALL BE RESTORED TO ORIGINAL CONDITION.
28. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES.
29. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS.
30. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.
31. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
- MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL
- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

- APPLICABLE BUILDING CODES:
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- BUILDING CODE:
- MASSACHUSETTS STATE BUILDING CODE 780 CMR, 9TH EDITION
- ELECTRICAL CODE: MASSACHUSETTS 527 CMR 12.00 (NEC 2020)
- NFPA 780, 2017

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250.
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.
23. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

ADDITIONAL NOTE:
GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".



ABBREVIATIONS

AAV	ALTERNATIVE ACCESS VENDOR	EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE
AC	ALTERNATING CURRENT	EGB	EQUIPMENT GROUND BAR	REF	REFERENCE
AGL	ABOVE GRADE LEVEL	EGR	EQUIPMENT GROUND RING	REQ	REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	(F)	FUTURE	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	GALV.	GALVANIZED	RGS	RIGID GALVANIZED STEEL
AZ	AZIMUTH	G.C.	GENERAL CONTRACTOR	RRH	REMOTE RADIO HEAD
BCW	BARE COPPER WIRE	KW	KILOWATT	TBD	TO BE DETERMINED
BEP	BUILDING ENTRY POINT	MGB	MASTER GROUND BUS	TBR	TO BE REMOVED
BTS	BASE TRANSCEIVER STATION	MIN.	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
CSC	CELL SITE CONTROLLER	(P)	PROPOSED	TYP	TYPICAL
(E)	EXISTING	PPC	POWER PROTECTION CABINET	U/G	UNDERGROUND



ADVANCED
ENGINEERING GROUP, P.C.

Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914

Phone: (401) 354-2403
Fax: (401) 633-6354



J. LEE
ASSOCIATES

J. LEE ASSOCIATES
420 NORTHBORO ROAD CENTRAL
MARLBOROUGH, MA 01752

SITE NUMBER: 4DE7040A

SITE NAME: 51 BRATTLE

51 BRATTLE STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

T-MOBILE NORTHEAST LLC

15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

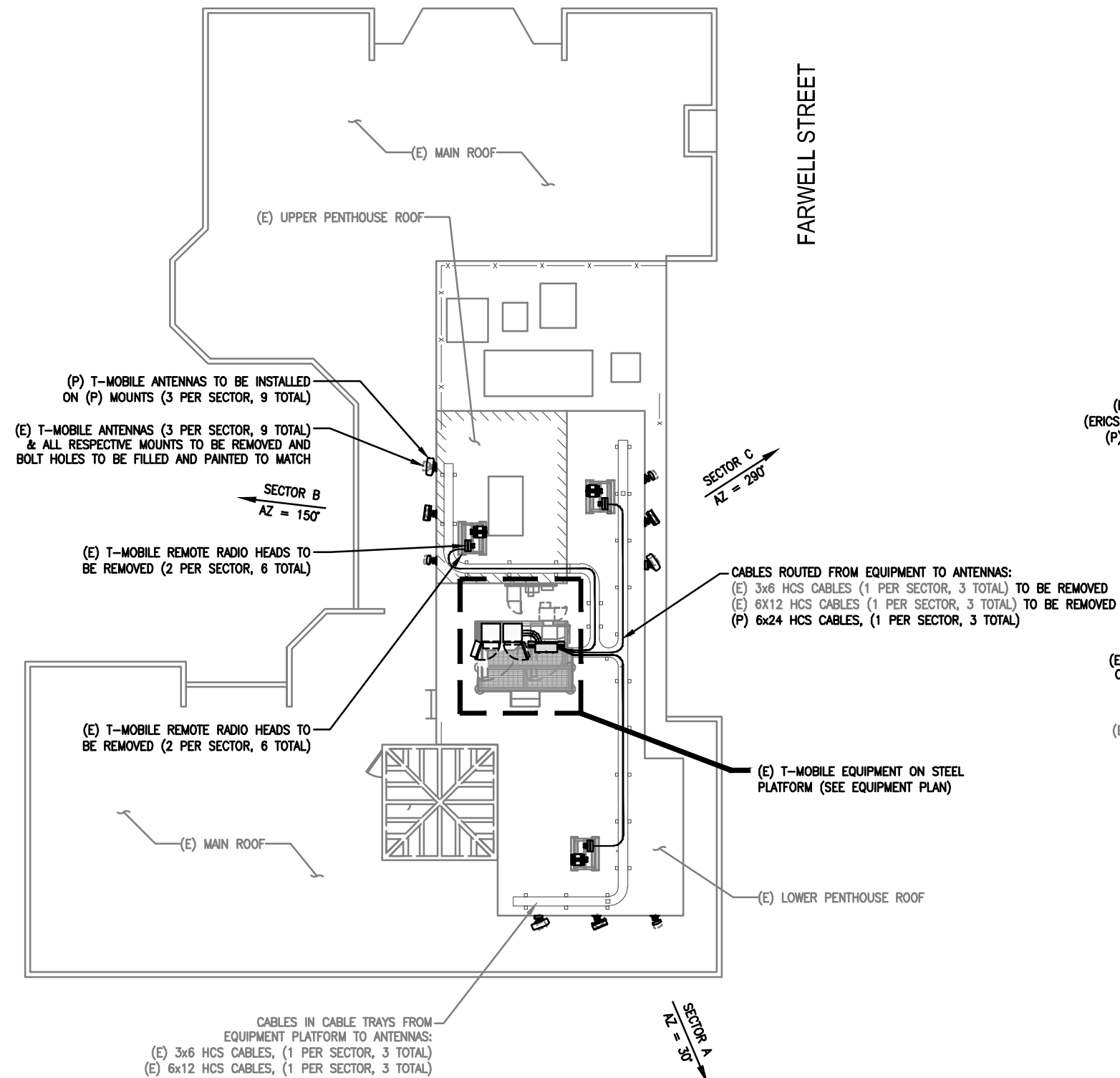
NO.	DATE	REVISIONS	BY	CHK
0	05/03/23	ISSUED FOR REVIEW	MER	MRC
1	05/17/23	ISSUED FOR CONSTRUCTION	MER	MRC

GENERAL NOTES

SHEET NO. **GN-1**

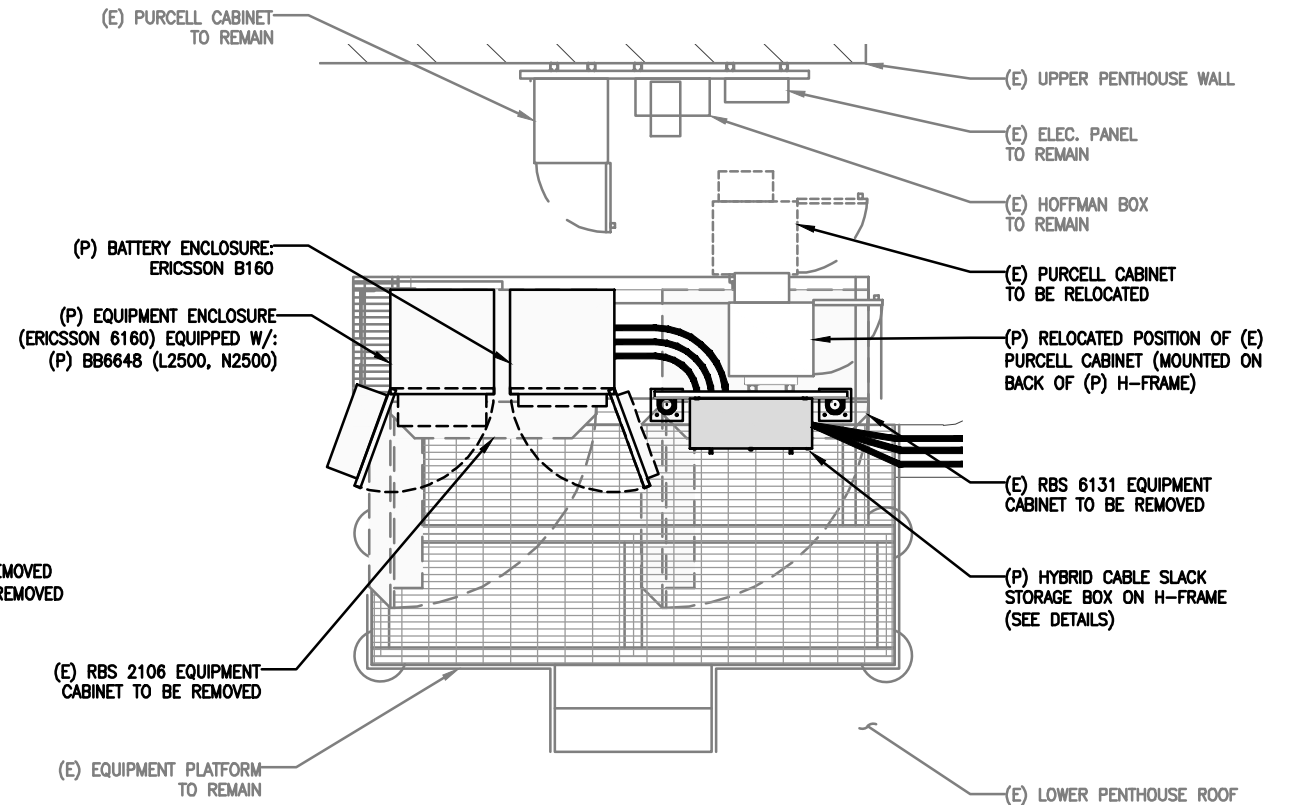
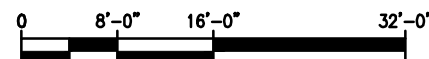
BRATTLE STREET

FARWELL STREET

1
A-1

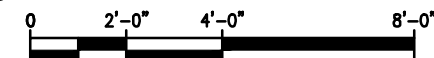
ROOF PLAN

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

2
A-1

EQUIPMENT PLAN

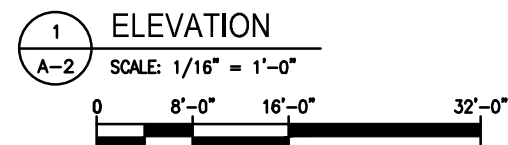
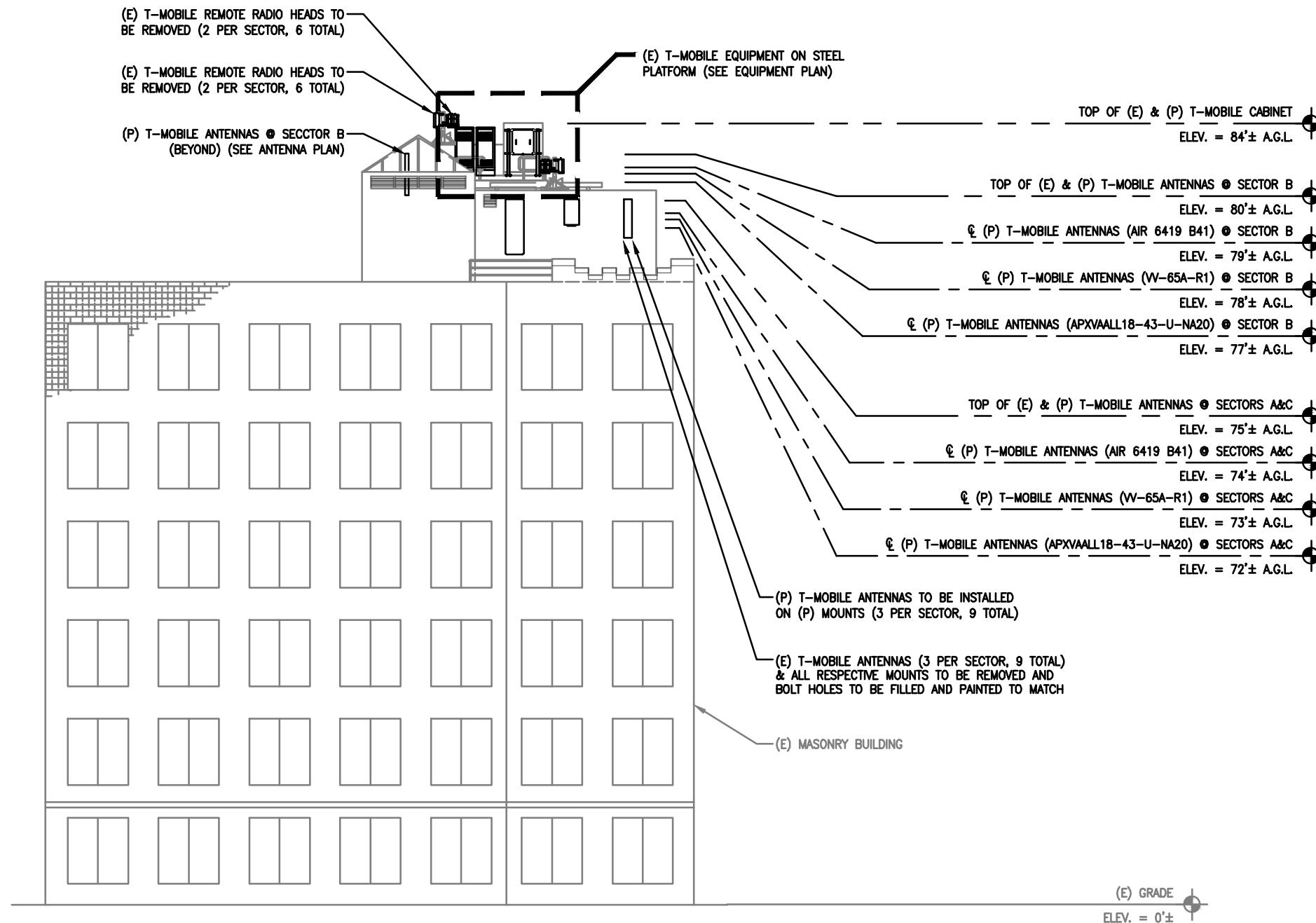
SCALE: 1/4"=1'-0"



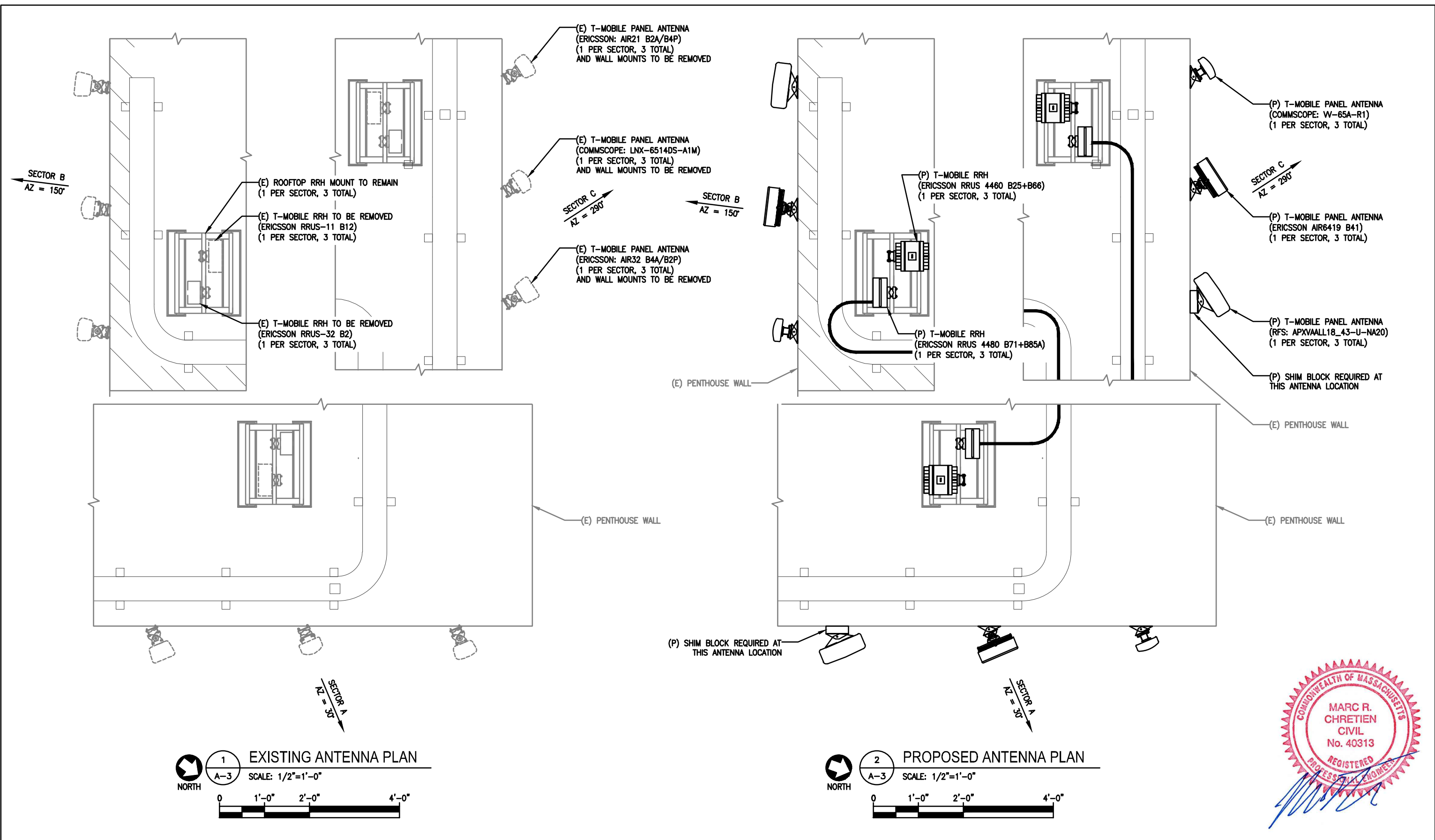
STRUCTURAL LIMITATION:
STRUCTURAL ANALYSIS WAS CONDUCTED UTILIZING THE T-MOBILE DESIGN STANDARD OF TWO BATTERY STRINGS (MAXIMUM TOTAL WEIGHT OF 1,353 LBS). THE GENERAL CONTRACTOR AND/OR T-MOBILE SHALL NOTIFY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION IF ADDITIONAL BATTERIES ARE TO BE INSTALLED AS STRUCTURAL DESIGN MODIFICATIONS MAY BE REQUIRED.



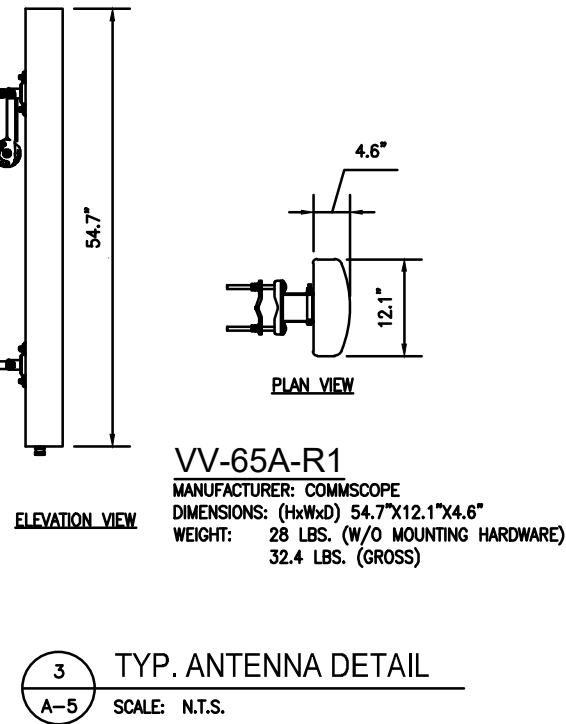
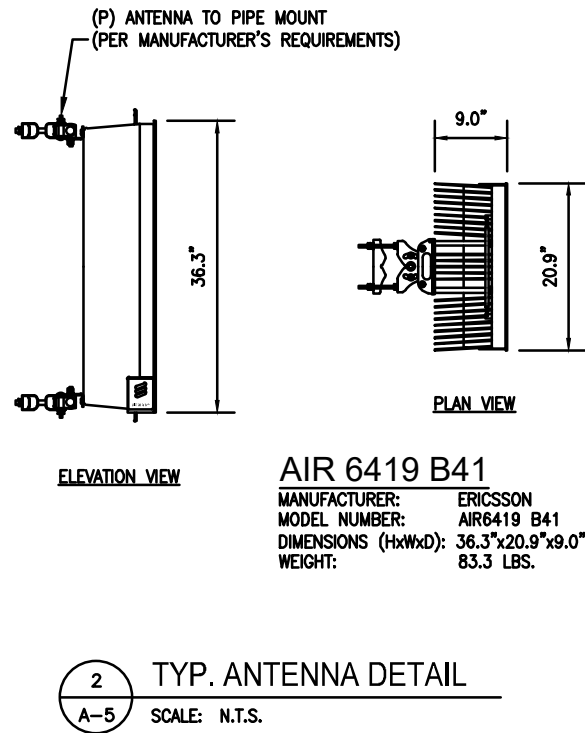
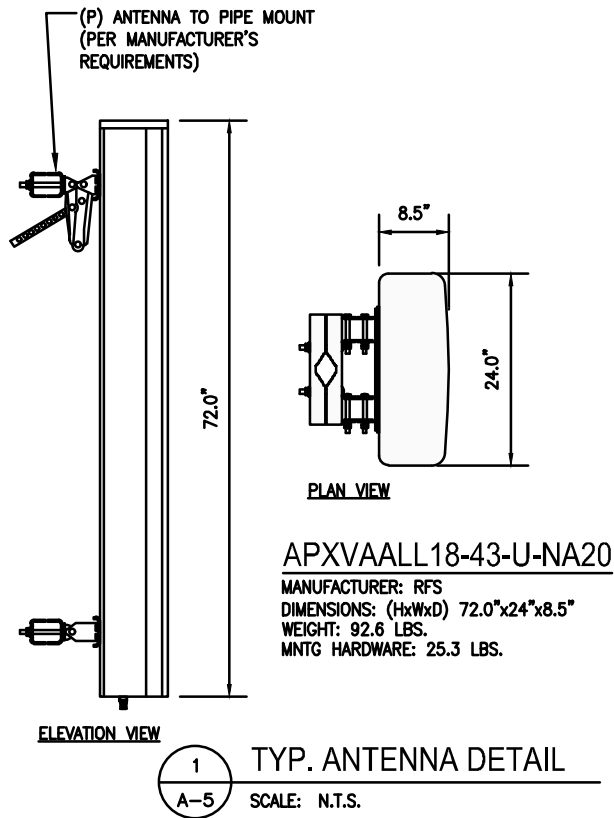
NO.	DATE	REVISIONS	BY	CHK
0	05/03/23	ISSUED FOR REVIEW	MER	MRC
1	05/17/23	ISSUED FOR CONSTRUCTION	MER	MRC



NO.	DATE	REVISIONS	BY	CHK
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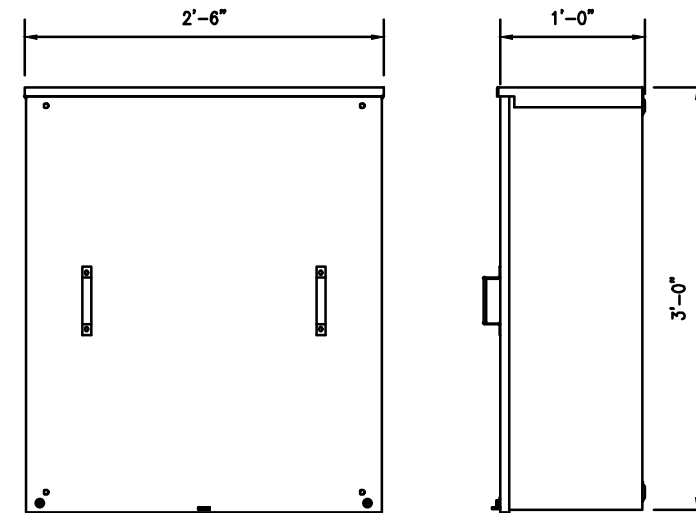
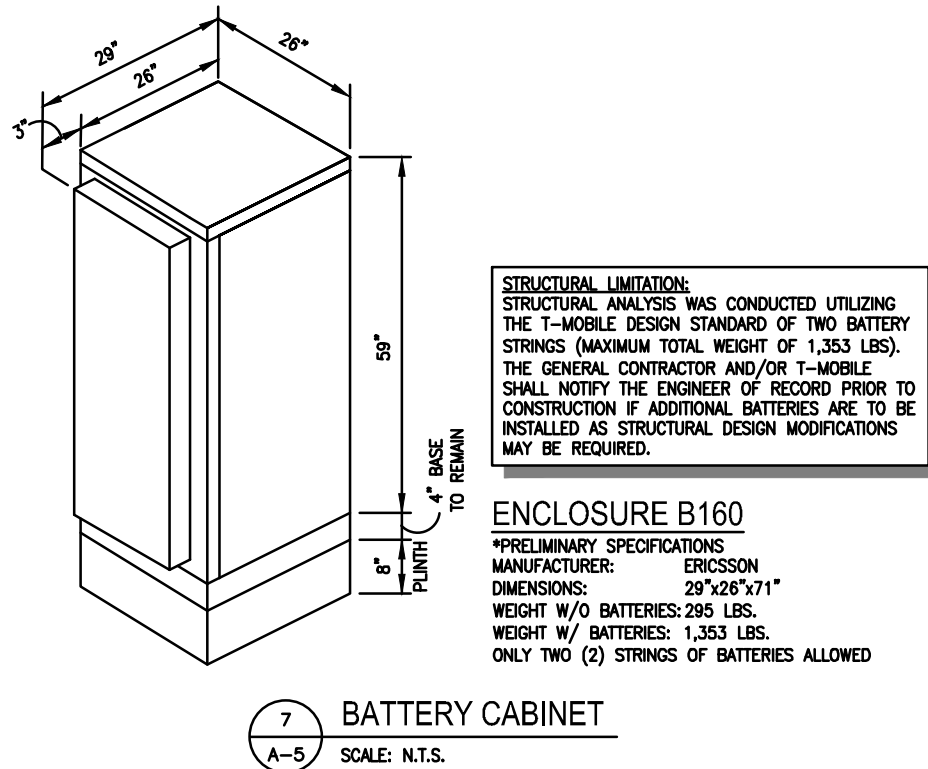
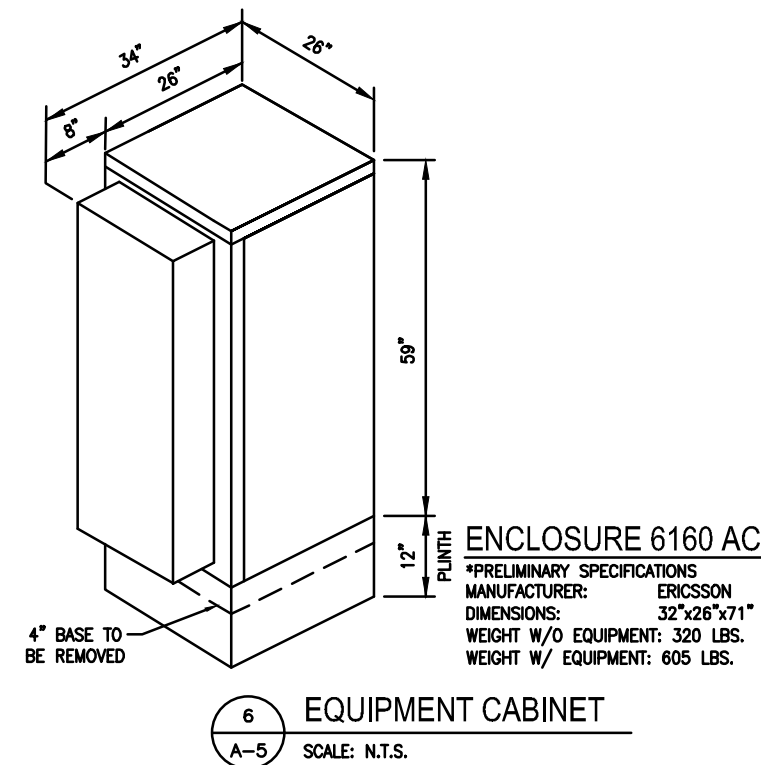
NO.	DATE	REVISIONS	BY	CHK
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4480 B71+B85
 MANUFACTURER: ERICSSON
 DIMENSIONS (HxWxD): 21.8"x15.7"x7.5"
 WEIGHT: 84 LBS



4460 B25+B66
 MANUFACTURER: ERICSSON
 DIMENSIONS (HxWxD): 19.6"x15.7"x12.1"
 WEIGHT: 109 LBS

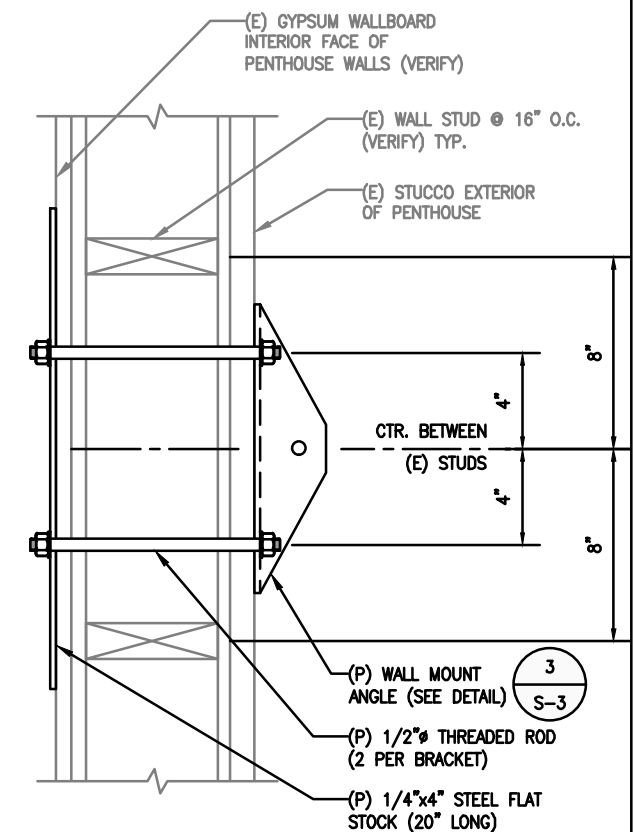
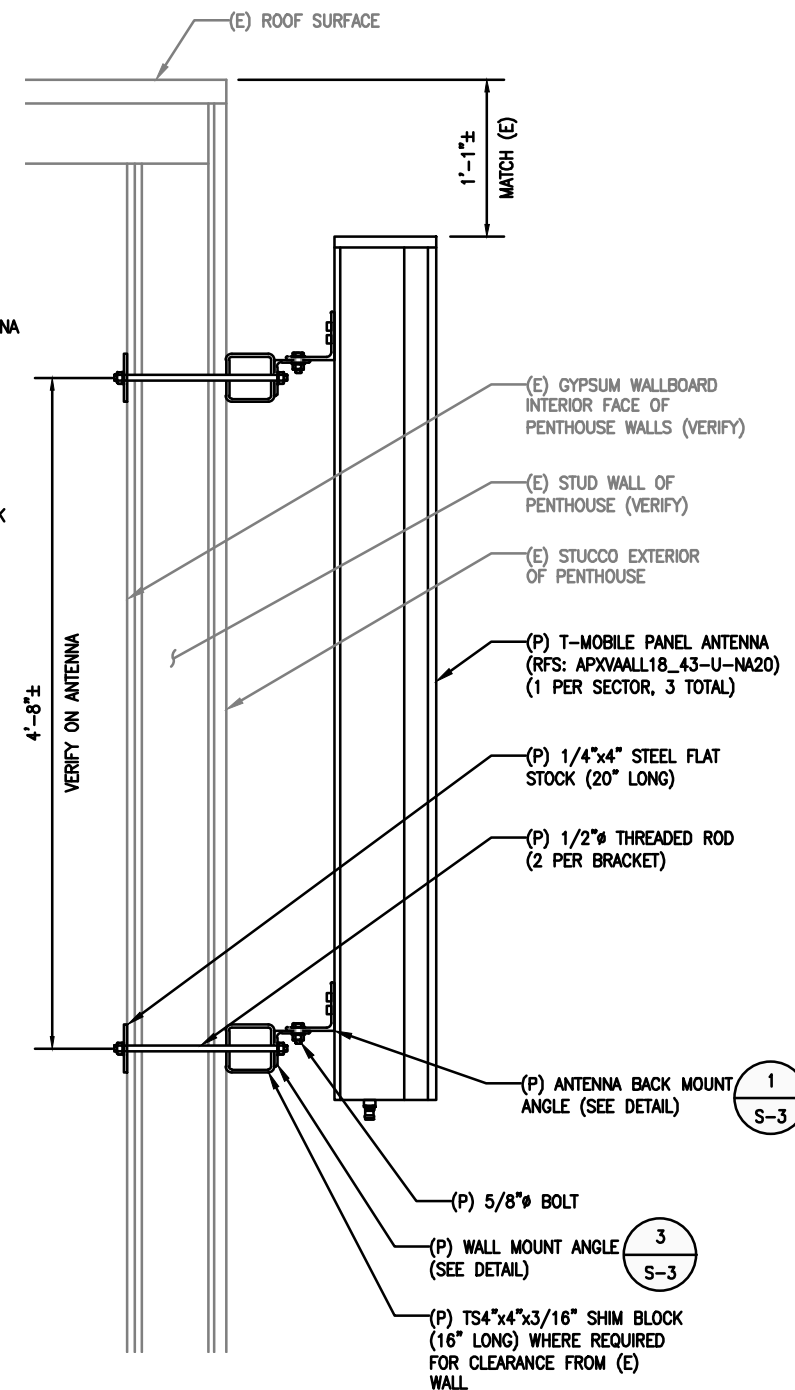
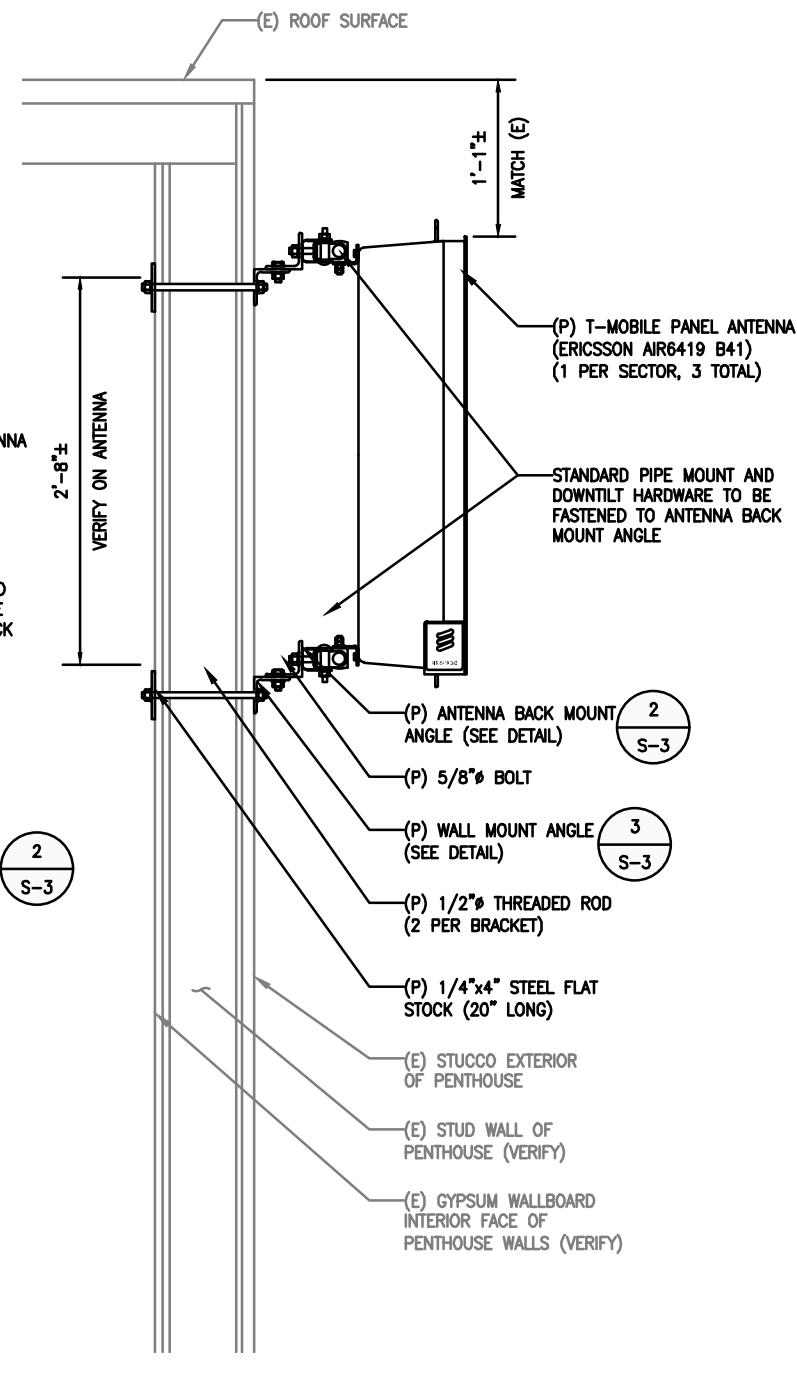
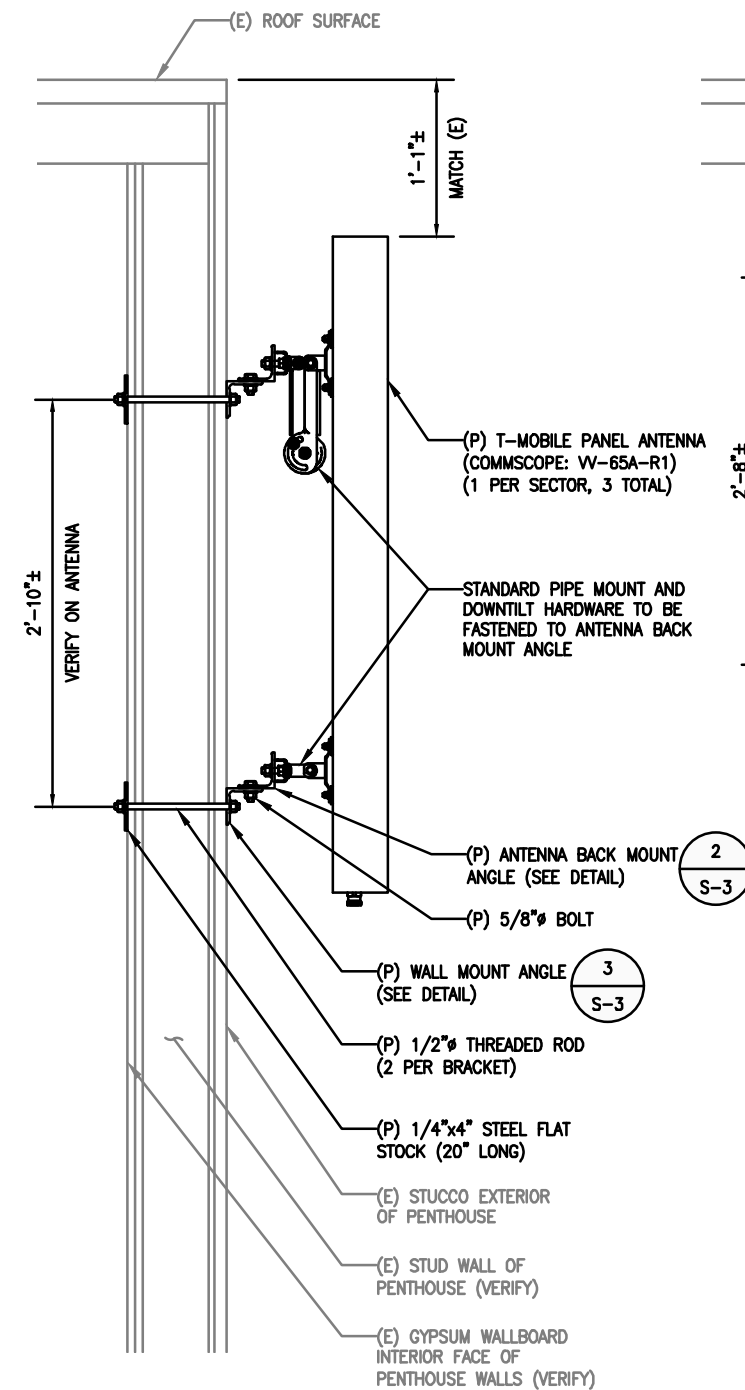


FIBER SLACK ENCLOSURE
 MANUFACTURER: HOFFMAN*
 MODEL: A-36R3012
 MATERIAL: STEEL
 DIMENSIONS (HXWXD): 36.0"x30.0"x12.0"
 PROTECTION RATING: NEMA TYPE 3; N
 (* OR AN APPROVED EQUAL)

8 FIBER SLACK ENCLOSURE
 A-4 SCALE: N.T.S.



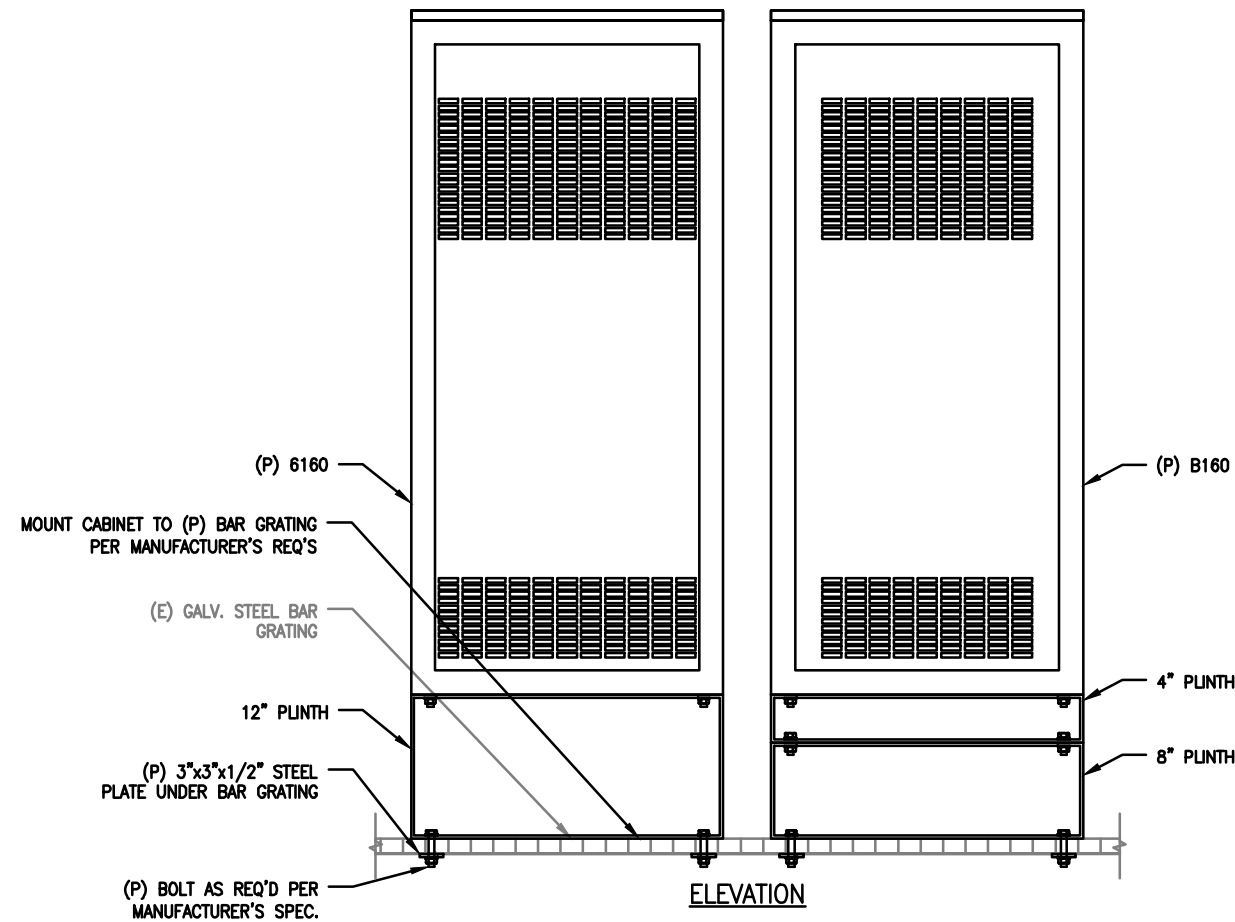
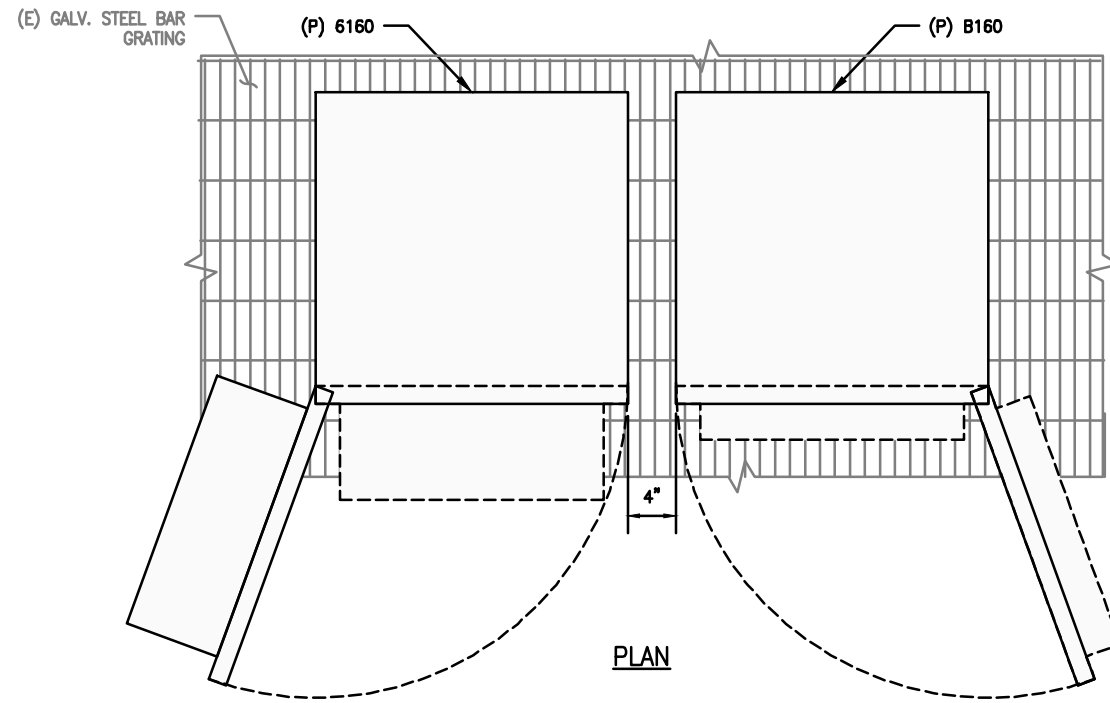
NO.	DATE	REVISIONS	BY	CHK
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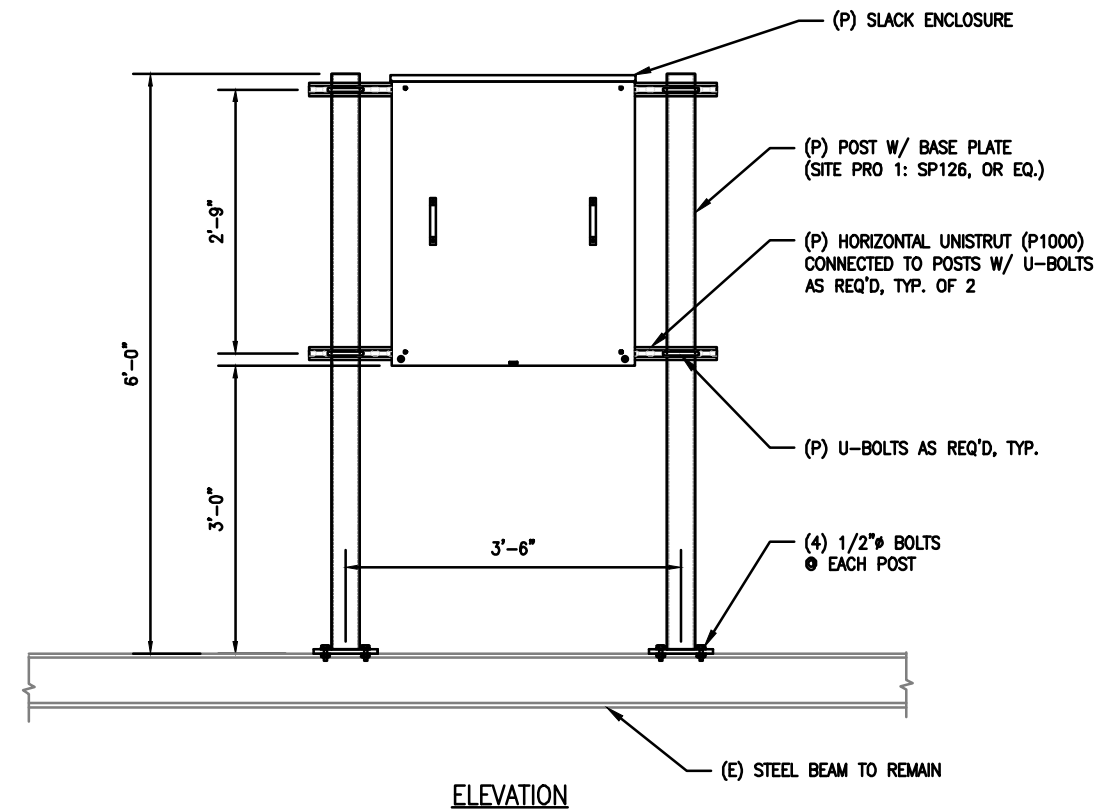
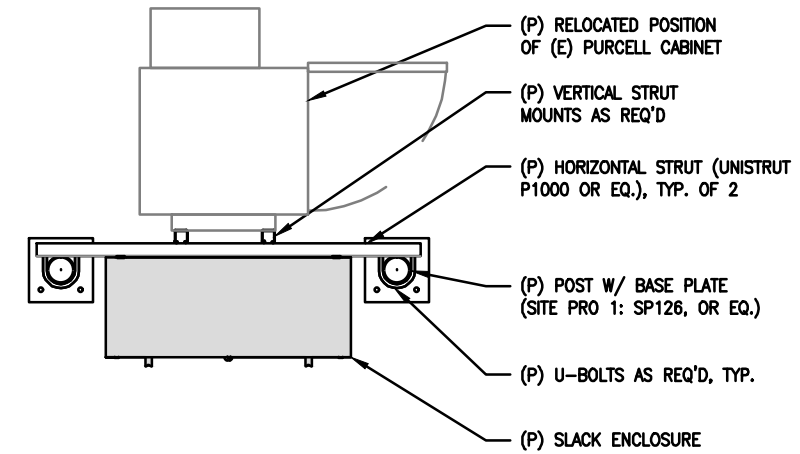
PLAN VIEW OF WALL MOUNT DETAIL

SCALE: 1 1/2" = 1'-0"





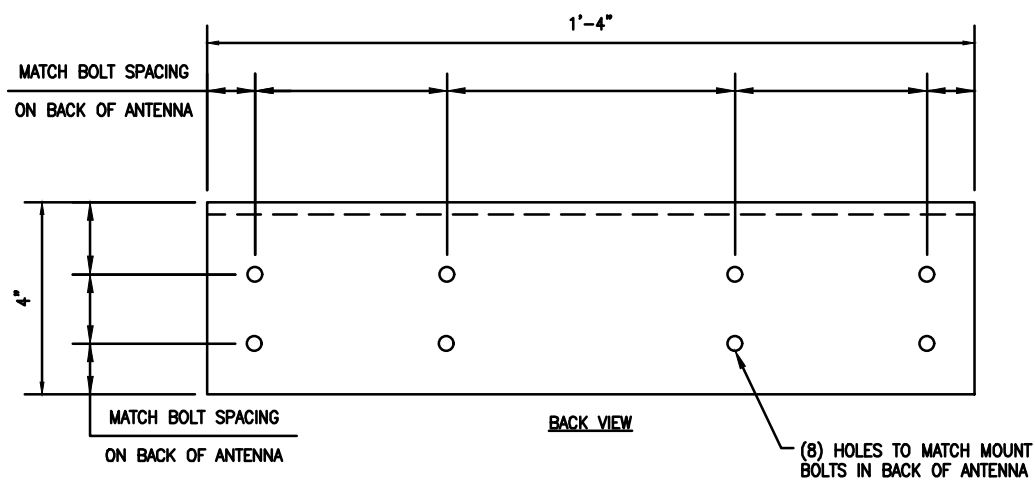
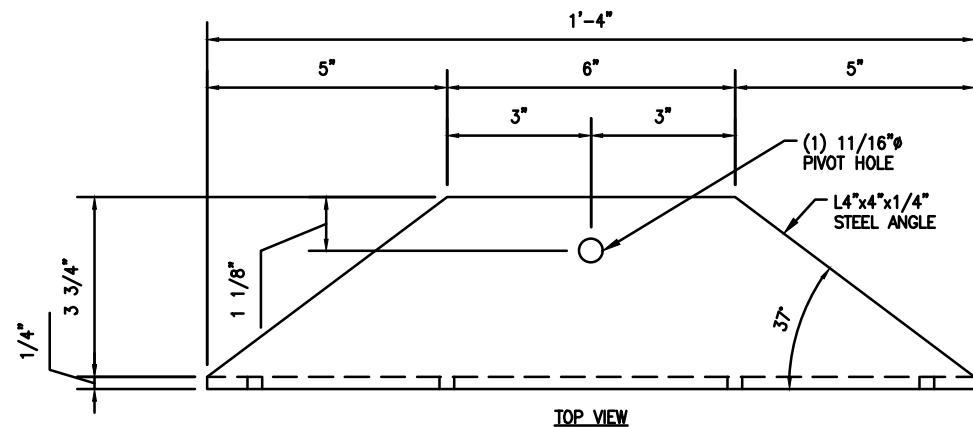
1 EQUIPMENT CABINET MOUNTING DETAILS
S-2 SCALE: 3/4" = 1'-0"



2 SLACK BOX MOUNT DETAIL
S-2 SCALE: 1/4" = 1'-0"



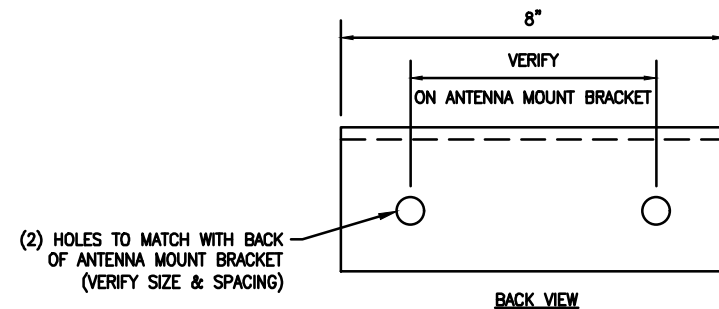
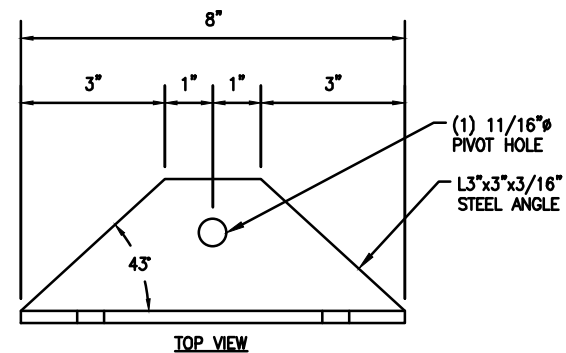
NO.	DATE	REVISIONS	BY	CHK
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1
S-3

POSITION 3
ANTENNA BACK ANGLE DETAIL

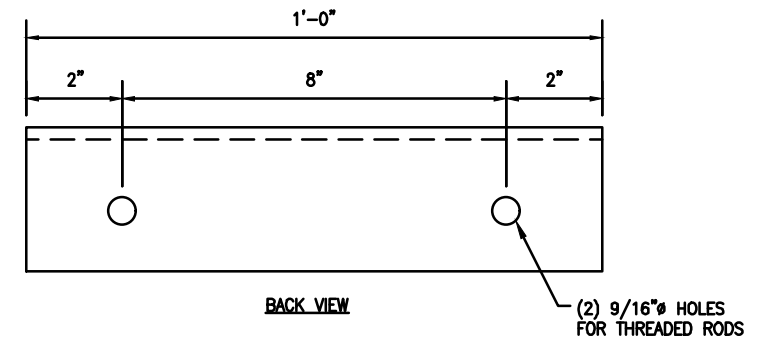
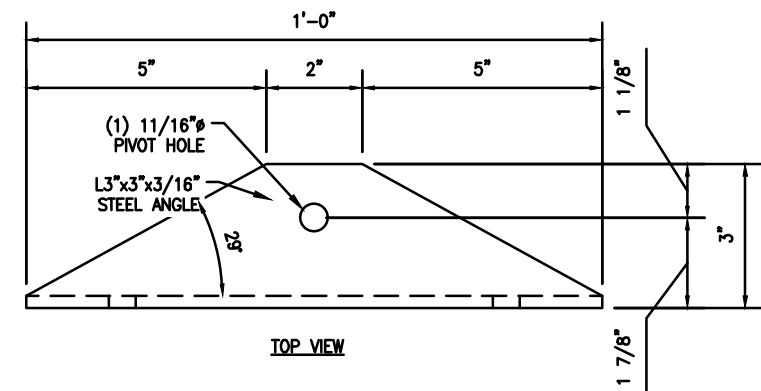
SCALE: 3" = 1'-0"



2
S-3

POSITION 1 & 2
ANTENNA BACK ANGLE DETAIL

SCALE: 3" = 1'-0"

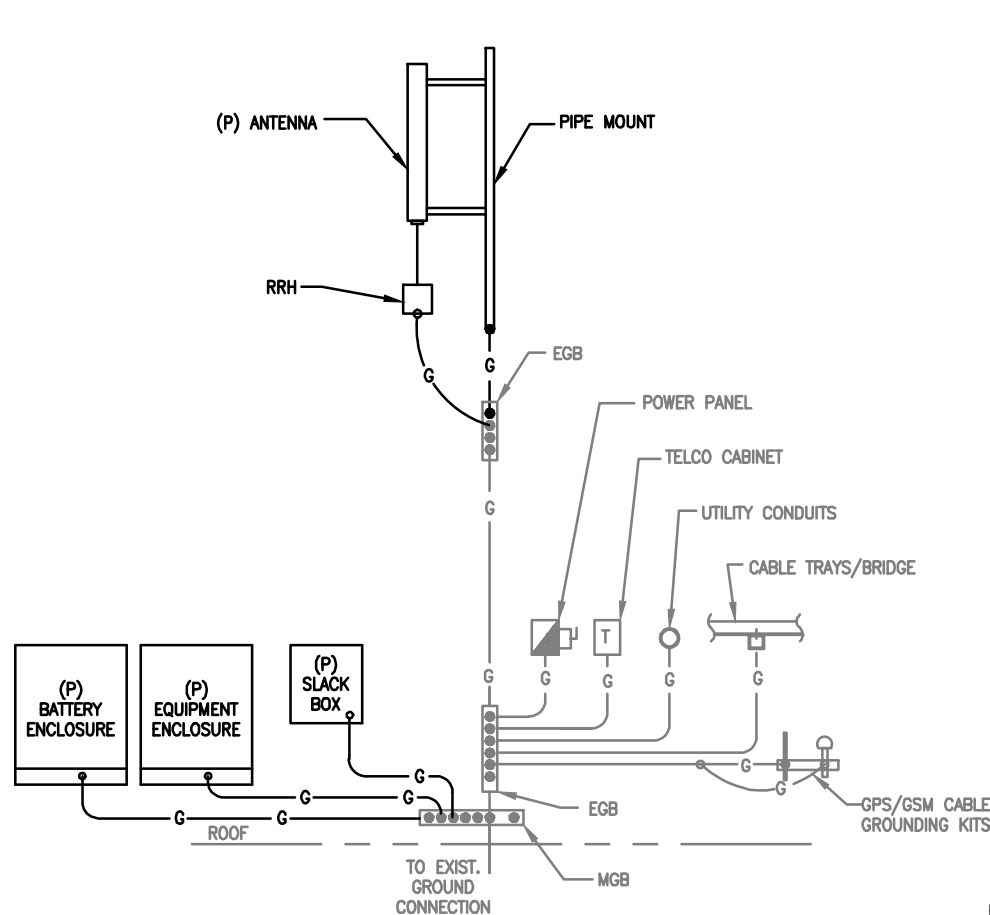


3
S-3

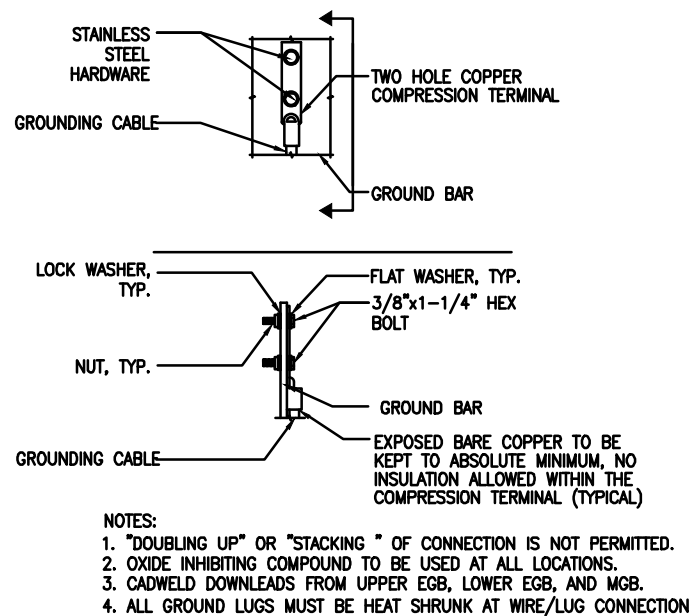
WALL MOUNT ANGLE DETAIL

SCALE: 3" = 1'-0"

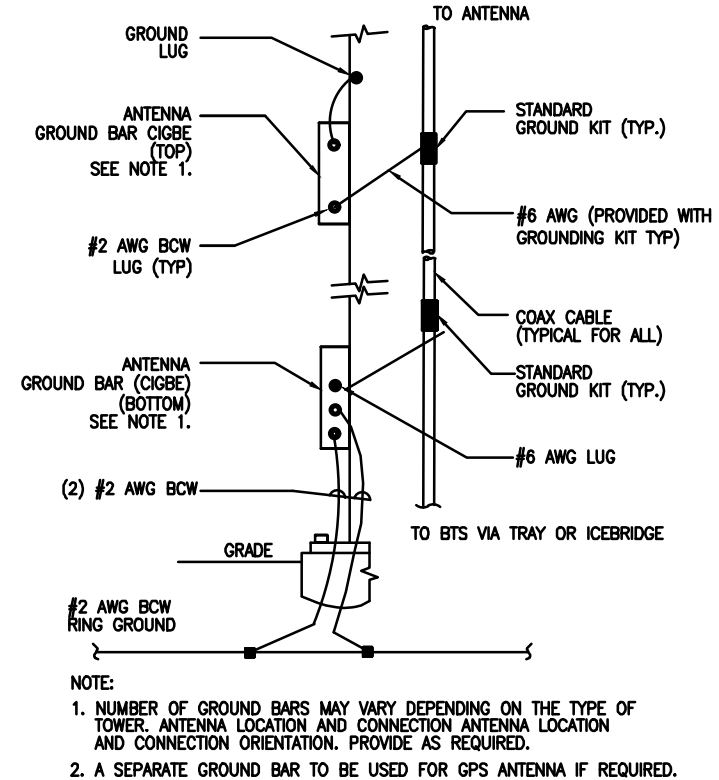




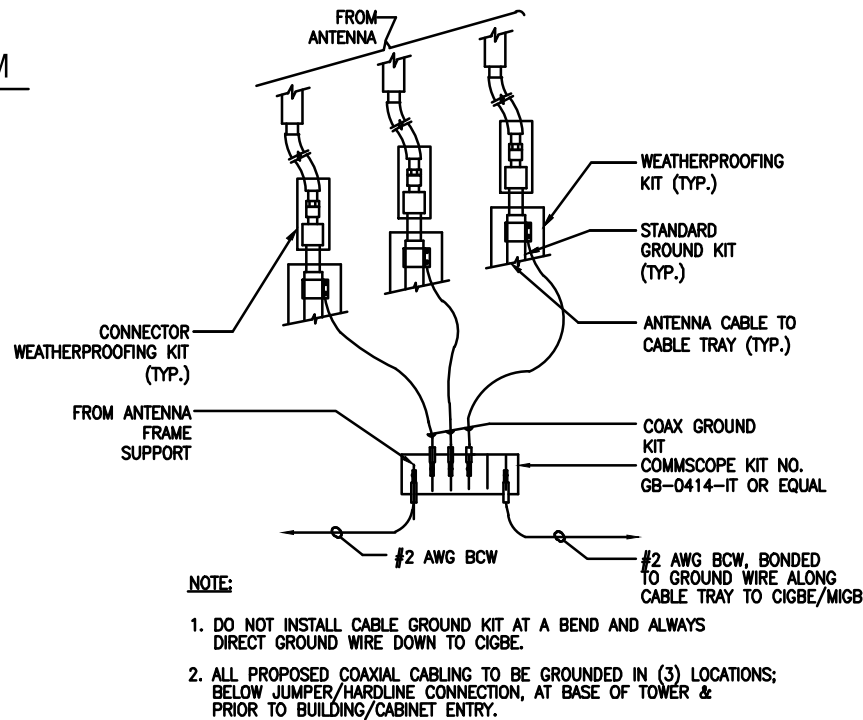
1 TYP. GROUNDING RISER DIAGRAM
G-1 SCALE: N.T.S.



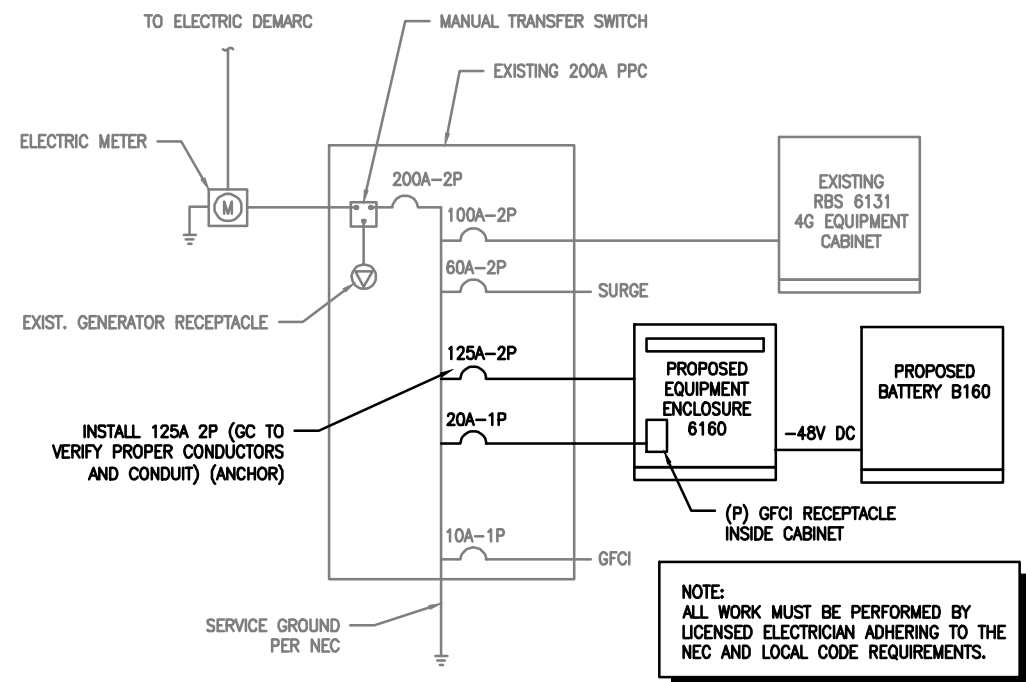
2 TYP. GROUND BAR CONNECTION DETAIL
G-1 SCALE: N.T.S.



3 ANTENNA CABLE GROUNDING
G-1 SCALE: N.T.S.



4 GROUND WIRE TO GROUND BAR CONNECTION DETAIL
G-1 SCALE: N.T.S.



5 ONE LINE POWER DIAGRAM
G-1 SCALE: N.T.S.



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