

brownrudnick

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September 16, 2019

VIA FEDERAL EXPRESS

Jessica Fosbrook
Director of Engineering
Somerville Engineering Department
City of Somerville
Department of Public Works
1 Franey Rd.
Somerville, MA 02145

Re: Request for Approval of Sixteen (16) Eligible Facilities Requests to Modify Transmission Equipment at Existing Base Stations within the Public Rights-of-Way Located Near the Following Addresses in Somerville, MA

**65 Main Street - Site 01
509 Broadway - Site 03
257 Cedar Street - Site 05
99 Brastow Avenue - Site 06
66 Belmont Street - Site 07
231 Lowell Street - Site 09
Webster Street - Site 15
4 Central Street - Site 17
79 Derby Street - Site 22
1 MacArthur Street - Site 23
1 Benedict Street - Site 24
41 Inner Belt Road - Site 26
1 Flint Street - Site 37
11 Hathorn Street - Site 38
Beacon Street, Near Sacramento Street - Site 70
Beacon Street, Near Park Street - Site 71**

Dear Ms. Fosbrook Council:

On behalf of Crown Castle NG East LLC ("Crown Castle") and while reserving all rights, we submit this Eligible Facilities Request application to add, remove, modify, or replace Transmission Equipment¹ at existing Base Stations located near the above referenced addresses in Somerville, MA. We seek approval of the site modifications as depicted on the attached plans (the "Plans") as Eligible

¹ 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." In the matter of Acceleration of Broadband Deployment By Improving Wireless Facilities Siting Policies, Report and Order, FCC 14-153, WT Docket No. 13-238, ¶ 160 (FCC Oct. 21, 2014) ("Wireless Infrastructure Order"); 47 C.F.R. § 1.140001(b)(8)



Facilities Requests pursuant to the Section 6409 of the federal Middle Class Tax Relief and Job Creation Act of 2012, commonly known as the "Spectrum Act" (codified at 47 U.S.C. § 1455, copy attached), the associated regulations promulgated by the Federal Communications Commission ("FCC"), (47 C.F.R. 1.40001, the "Regulations", copy attached) interpreting the Spectrum Act and Section 4 of the City of Somerville's Standards for Small Cell Wireless Facility Placement in Public Right-of-Way (the "Standards", copy attached). Please note that capitalized terms not otherwise defined herein shall have the respective meanings set forth in the Spectrum Act and the Regulations.

Crown Castle's request is governed by Section 6409 of the Spectrum Act which provides that 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 [emphasis added]"**. Under Section 6409(a)(2)(A)-(C), an Eligible Facilities Request is any request to modify a Tower or Base Station that involves "collocation of new", or "removal," or "replacement" of existing Transmission Equipment.

Additionally, Section 4 of the Standards provides: "Collocation, modification or replacement of a wireless facility shall be approved by the Somerville Engineering Department if it does not substantially change the physical dimensions of the tower or base station within the meaning of 47 U.S.C. § 1455(a). Notwithstanding any other provision of these standards, the City may not deny, and shall approve, applications for eligible facilities requests pursuant to 47 U.S.C. § 1455(a), within sixty (60) days according to the procedures established under 47 CFR 1.40001(c)."

These Eligible Facilities Requests involve an effort to collocate, remove, modify, or replace Transmission Equipment at Existing Base Stations within public rights of way. The Existing Base Stations in this application are utility poles which presently contains Transmission Equipment installed by Crown Castle. Pursuant to these Eligible Facilities Requests, Crown Castle proposes to replace the existing 51" high by 14" wide equipment shrouds with new 70" high by 23.6" wide equipment shrouds; and, (b) the existing 48" high by 8"Ø antennas with new 48" high by 14.6" Ø antennas. We note the antenna on Site 05 located near 257 Cedar Street is a side mounted 24" high by 8" Ø antenna being replaced by a 24" high 14.6" Ø antenna.

Pursuant to the Spectrum Act and the Regulations, federal law preempts many of the permit application requirements that state and local authorities have required from an applicant and provides for a limited, administrative review of Eligible Facilities Requests. These Eligible Facilities Requests involve an effort to collocate Transmission Equipment on an Existing Structure used by an FCC licensed wireless carrier. Crown Castle seeks administrative approval of its Eligible Facilities Requests for the proposed modifications which do not Substantially Change the physical dimensions of the Base Station pursuant to Section 6409 of the Spectrum Act and the Standards.

As you may know, the FCC promulgated the Regulations interpreting and implementing the provisions of the Spectrum Act. The Regulations define "Substantial Change" as modifications to a Tower or Base Station that meet any of the following six criteria. Crown Castle has provided its response to each of the criteria below in bold:



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.

The modifications to the Base Station will not increase the height of the Base Station by more than an inch or two, thus, less than ten (10) feet higher than the existing Base Station.

2. The modifications to the shroud do not protrude from the edge of the Base Station by more than six (6) feet.

After the modifications, the shroud, with the 7" mounting bracket, will protrude from the edge of the Base Station by approximately 28", thus, less than six (6) feet. As noted above, Site 05 located near 257 Cedar Street is side mounted and the arm holding the antenna will not extend more than 36" from the pole.

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.

The modifications do not involve the installation of any new equipment cabinets, thus, fewer than four.

4. The modifications to the Transmission Equipment do not entail any excavation or equipment placement outside the Base Station Site.

The modifications do not entail any excavation or equipment placed outside the Base Station Site.

5. The modifications to the Transmission Equipment do not defeat any existing concealed or stealth-design.

The modifications do not defeat any existing concealment elements. The equipment and antennas are located within stealth enclosures.

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.

The modifications do not violate any prior conditions of approval that are not due to the increase in height, width, addition of equipment cabinets or new excavation outside the Base Station Site.



Somerville Engineering Department
September 16, 2019
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Additionally, pursuant to Section 1.40001(c)(1) of the Regulations, "when an applicant asserts in writing that a request for a modification is covered by this section, a State or local government may require the applicant to provide documentation or information only to the extent reasonably related to determining whether the request meets the requirements of this section." The Regulations provide that applicants are not required to justify a need for the facility. Further, the Regulations and Standards also require that approvals must be granted for eligible facilities requests within 60 days of the date that the application is submitted. As with the Existing Base Stations, the modifications will comply with all applicable laws and regulations, including the FCC's radio frequency emissions standards.

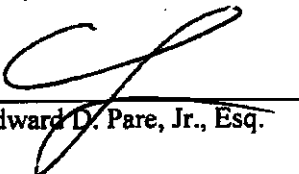
Under the Regulations and Standards, the City of Somerville must act upon these Eligible Facilities Requests within sixty (60) days from its submission or they will be deemed granted. If the City of Somerville contends that this Eligible Facilities Request is not complete, it must notify Crown Castle in writing within thirty days from its submission. In the written notification, the City of Somerville must "clearly and specifically delineate the missing information" as provided in the Regulations.

Crown Castle respectfully asserts, and we are confident that you will agree, that the modifications to the Existing Base Stations do not Substantially Change the dimensions of the Base Stations.

Please do not hesitate to contact me with any questions or if further information is necessary.

Respectfully,

BROWN RUDNICK LLP



Edward D. Pare, Jr., Esq.

Attachments: Plans
Section 6409 of the Spectrum Act
FCC Regulations
Somerville Standards
Prior Approvals

cc: Frank Wright, Esq., City Solicitor (via email only, w/o attachments)
David Shapiro, Esq., Assistant City Solicitor (via email only, w/o attachments)
Joseph Shannon, Crown Castle (via email only, w/o attachments)



AUGMENT/ PROJECT: BOSTON 236 PROJECT

SITE NAME: ODAS_2D-23

SPRINT CASCADE: BS90XSG89

MLA NUMBER:

SITE TYPE: EXISTING WOOD POLE

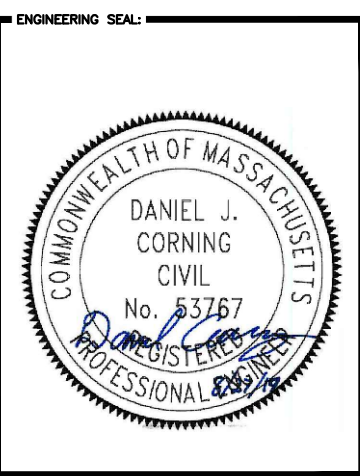
DRAWING DESCRIPTION: FINALIZED CD'S

PREPARED FOR:
Sprint
 6580 Sprint Parkway
 Overland Park, Kansas 66251

PREPARED BY:

 67 SHARP STREET
 HINGHAM, MA 02043

PREPARED BY:
JACOBS
 Jacobs Engineering Group, Inc.
 120 ST. JAMES AVENUE
 5TH FLOOR
 BOSTON, MA 02116
 TEL (617) 242-9222
 FAX (617) 242-9824



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REVISIONS:

REV	DATE	DESCRIPTION
0	08.27.19	FINALS
B	08.21.18	UPDATED SHROUD
A	08.07.18	FOR REVIEW

SITE NAME:
 ODAS_2D-23

SITE CASCADE:
 BS90XSG89

SITE ADDRESS:
 1 MACARTHUR ST.
 SOMERVILLE, MASSACHUSETTS

SHEET DESCRIPTION:
 TITLE SHEET

SHEET NUMBER:
 T-1

SITE INFORMATION

PROPERTY OWNER:
 CROWN CASTLE
 67 SHARP STREET
 HINGHAM, MA 02043

SITE ADDRESS:
 1 MACARTHUR ST.
 SOMERVILLE, MASSACHUSETTS

LATITUDE (NAD83):
 42° 23' 20.98" N
 42.389160

LONGITUDE (NAD83):
 71° 5' 16.62" W
 -71.087950

COUNTY:
 MIDDLESEX

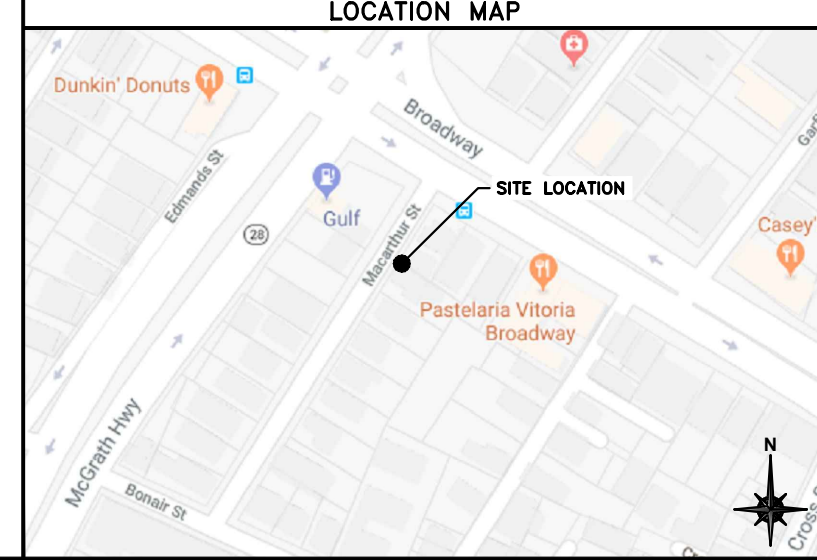
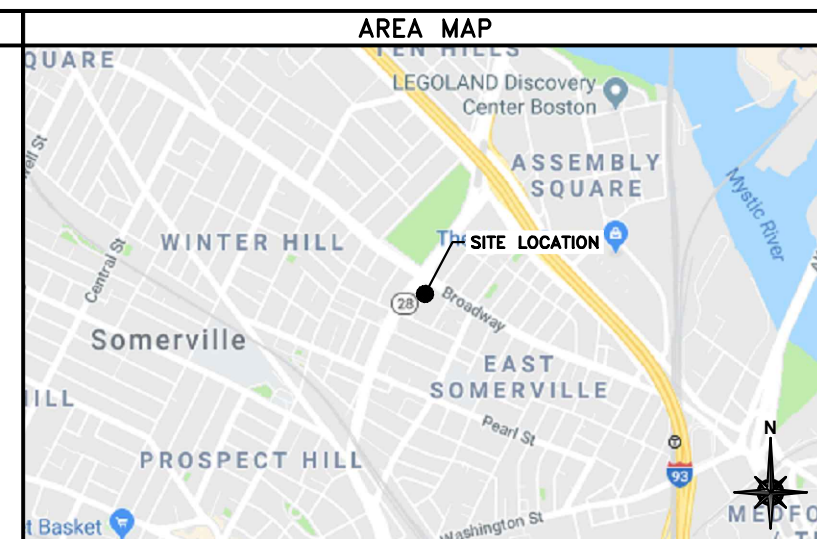
ZONING JURISDICTION:
 SOMERVILLE

ZONING DISTRICT:

POWER COMPANY:
 COMPANY NAME: EVERSOURCE ENERGY
 PHONE NUMBER: 800-340-9822

BACKHAUL PROVIDER:
 COMPANY NAME:
 PHONE NUMBER:

SPRINT CM:
 NAME:
 PHONE NUMBER:
 E-MAIL:



PROJECT EQUIPMENT

NEW SPRINT INSTALLED EQUIPMENT:

- INSTALL (1) OMNI ANTENNA
- INSTALL (1) RFS FILTER
- INSTALL (1) NOKIA TD-LTE B41 RADIO

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- INTERNATIONAL BUILDING CODE
- INTERNATIONAL MECHANICAL CODE
- ANSI/TIA-222 STRUCTURAL STANDARD
- NFPA 780 - LIGHTING PROTECTION CODE
- UNIFORM PLUMBING CODE
- NATIONAL ELECTRICAL CODE

Know what's BELOW. CALL before you dig. www.call811.com

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED OR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTORS ACTIVITIES.

DRAWING INDEX

SH #	SHEET DESCRIPTION	REV
T-1	TITLE SHEET	0
A-1	OVERALL SITE PLAN	0
A-2	POLE ELEVATIONS	0
A-3	CABLE ROUTING	0
A-4	EQUIPMENT DETAILS I	0
A-5	EQUIPMENT DETAILS II	0
E-1	ELECTRICAL & GROUNDING DIAGRAMS	0
PS-1	(PHOTOSIMS) UTILITY POLE BEFORE & AFTER	0

APPROVALS

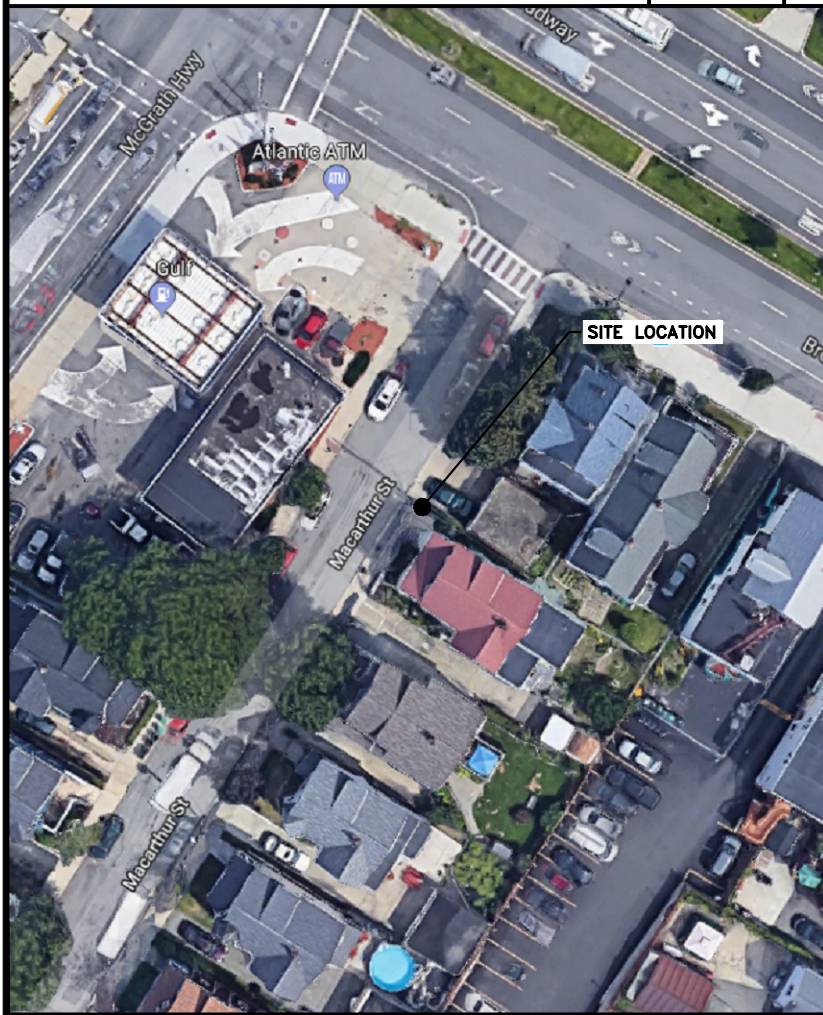
SIGNER	SIGNATURE	DATE
SPRINT CONSTRUCTION MANAGER		
SPRINT OPERATIONS MANAGER		
SPRINT RF ENGINEER		
LANDLORD		



SITE LOCATION PHOTO

N.T.S.

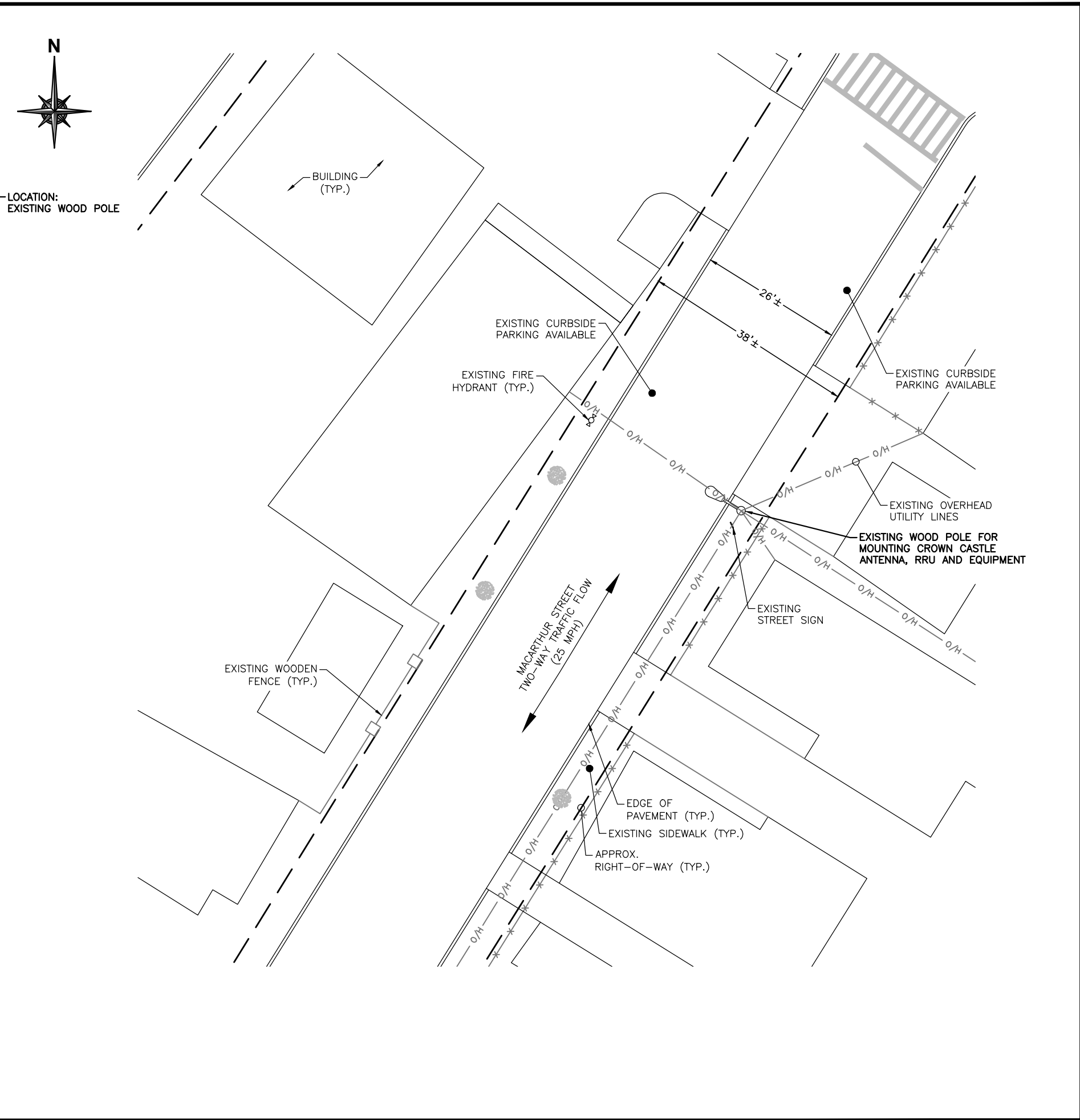
A



AERIAL SITE LOCATION

N.T.S.

B



OVERALL SITE PLAN

SCALE: 1"=20'

C

PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PREPARED BY:

67 SHARP STREET
HINGHAM, MA 02043

PREPARED BY:

Jacobs Engineering Group, Inc.
120 ST. JAMES AVENUE
5TH FLOOR
BOSTON, MA 02116
TEL (617) 242-9222
FAX (617) 242-9824

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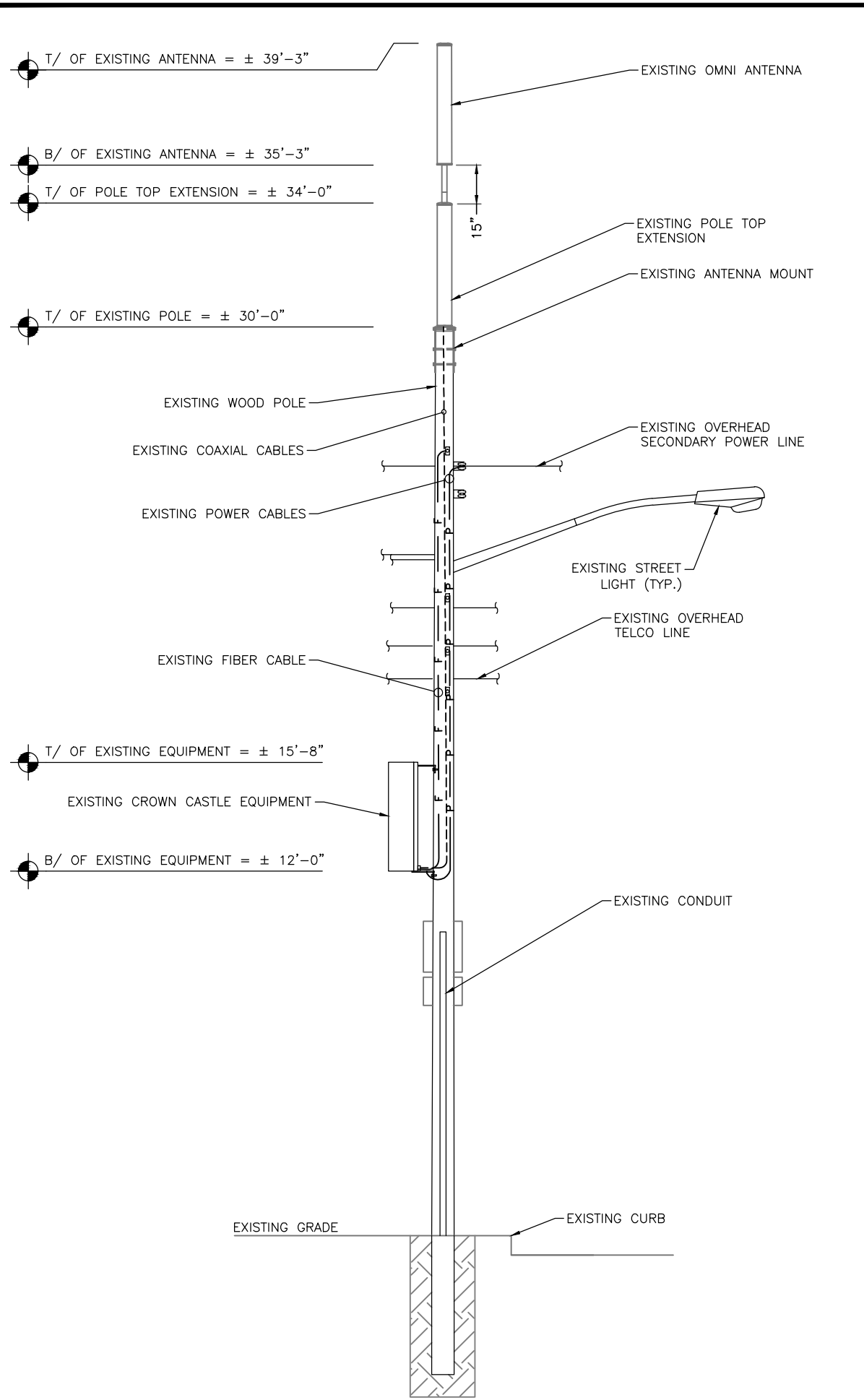
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ODAS_2D-23

SITE CASCADE:
BS90XSG89

SITE ADDRESS:
1 MACARTHUR ST.
SOMERVILLE, MASSACHUSETTS

SHEET DESCRIPTION:
OVERALL SITE PLAN

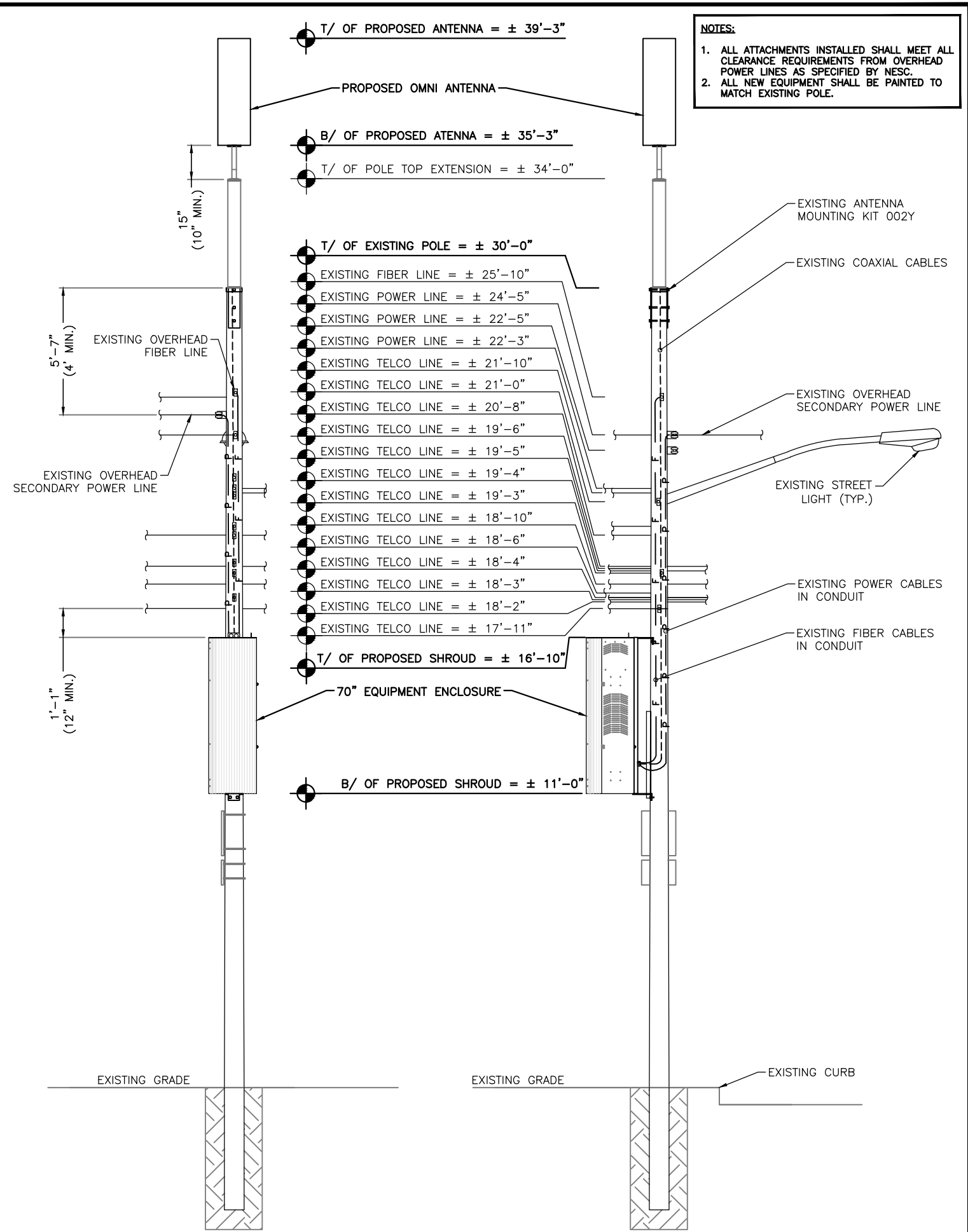
SHEET NUMBER:
A-1



EXISTING POLE ELEVATION

N.T.S.

A



PROPOSED POLE ELEVATION

N.T.S.

B

PREPARED FOR:

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Overland Park, Kansas 66251

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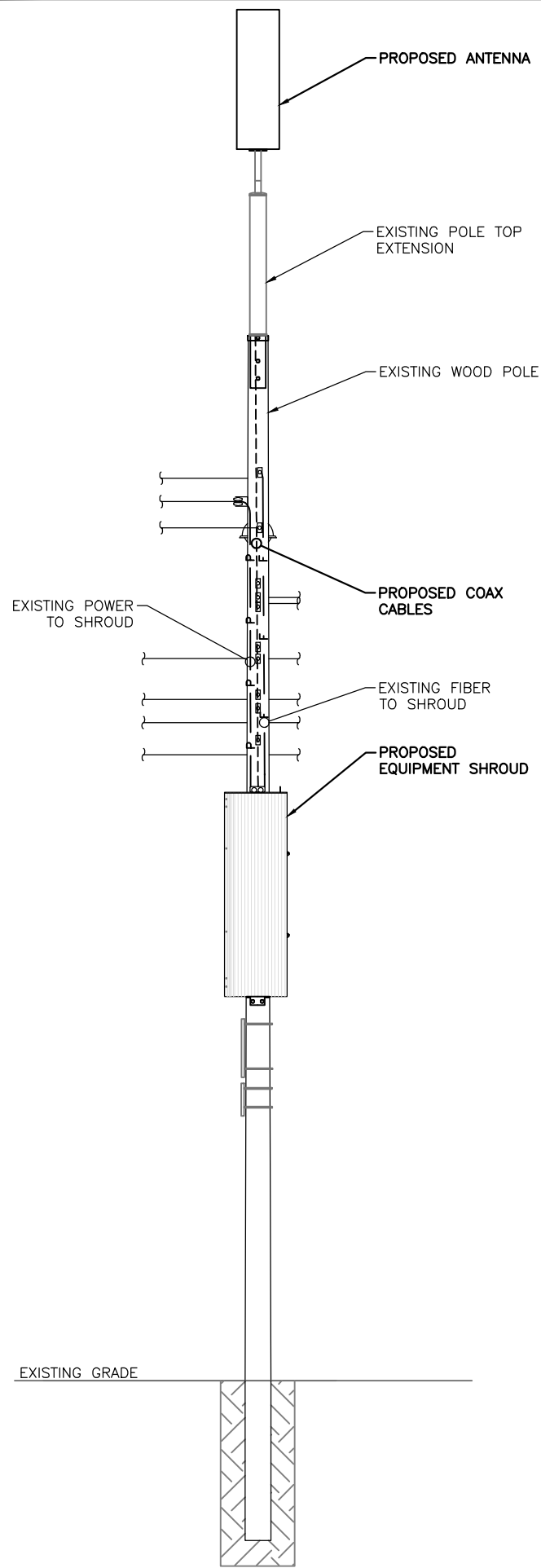
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ODAS_2D-23

SITE CASCADE:
BS90XSG89

SITE ADDRESS:
1 MACARTHUR ST.
SOMERVILLE, MASSACHUSETTS

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POLE ELEVATIONS

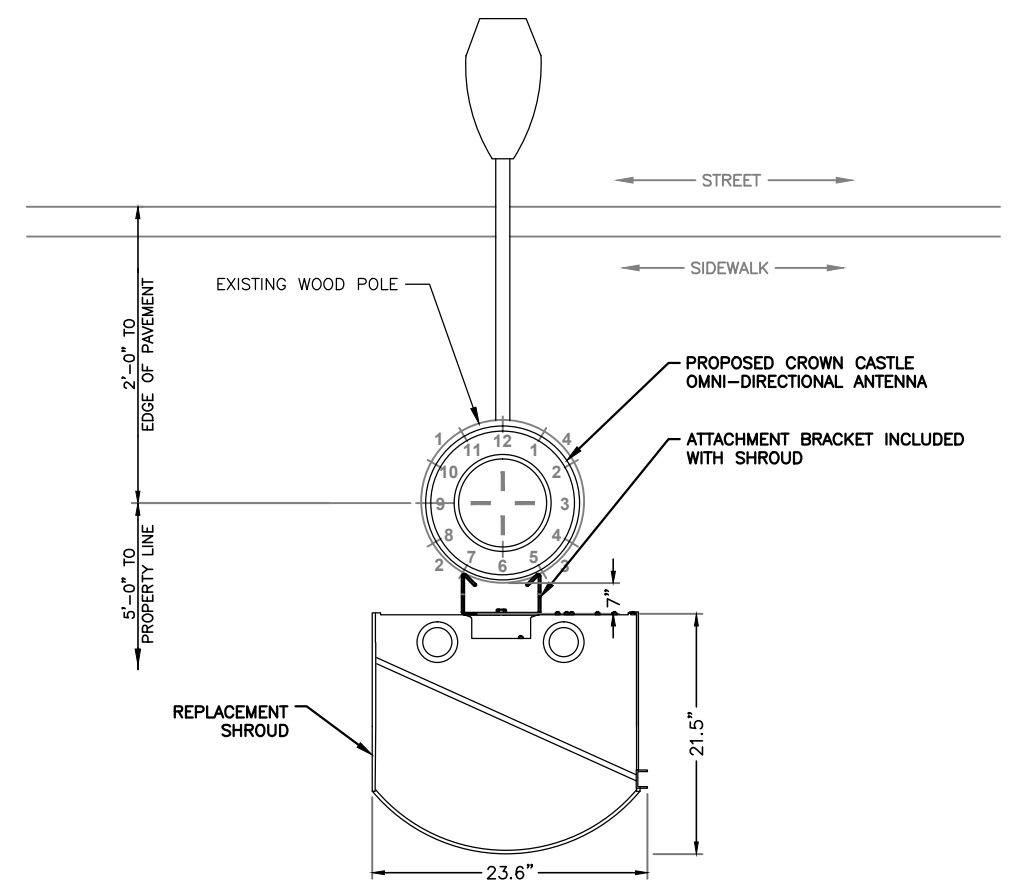
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A-2



CABLING NOTES:

- (A) WOOD, CONCRETE AND EXISTING METALLIC POLES
 - I) FROM GRADE LINE TO 11'-0" ABOVE GRADE, ALL CABLES/CONDUCTORS TO BE RUN INSIDE STREET LIGHT.
 - II) GROUNDING CONDUCTORS IN EXPOSED LOCATIONS MUST BE INSTALLED IN PVC.
 - III) IN EARTH INSTALL PVC CONDUIT FOR BACKHAUL AND ELECTRICAL SERVICE. TRANSITION TO RGS AT GRADE LINE.
 - IV) ABOVE 11'-0" ALL CABLES (POWER, ETHERNET, COAXIAL) MUST RUN IN PVC UTILITY POLE RISER.
- (1) AT MAJOR EQUIPMENT, EXTEND UTILITY DUCT IMMEDIATELY ADJACENT TO THE EQUIPMENT. INSTALL CABLES IN THE UTILITY POLE RISER CREATING CABLE DRIP LOOPS NOT LESS THAN THE CABLE BENDING RADIUS.
- (2) INSIDE THE UTILITY POLE RISER, UTILIZE HOISTING GRIPS AT THE TOP OF THE POLE TO SUPPORT COAX, RADIO AND MW POWER, RF COAX, AND ETHERNET CABLES TO WITHIN 12" OF THE EQUIPMENT BEING SERVED AND ON INTERVALS NOT TO EXCEED 6'.
- V) FOR UNDERGROUND HFC/PUBLIC BACKHAUL, ROUTE ETHERNET CABLE IN CONDUIT UP THE POLE AND ENTER THE UTILITY POLE RISER. SEAL EXPOSED END OF CONDUIT WITH A CABLE TERMINATION FITTING.
- VI) BY APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX. EXAMPLE: UTILITY-REQUIRED DISCONNECT ON POLE W/ AC DISTRIBUTION BOX ON OPPOSITE SIDE OF POLE.
- (B) NEW METALLIC POLES
 - I) PROCURE NEW POLES WITH SUITABLE HAND HOLES SUCH THAT HAND HOLES EXIST AT ALL EQUIPMENT LOCATIONS.
 - II) WITH CLIENT APPROVAL IN SELECT CASES TO FACILITATE IMPROVED APPEARANCE, 1/2" COAXIAL CABLES MAY BE (LDF-4.)
 - III) WHERE POSSIBLE, INSTALL POLE BASE SUCH THAT THE ELECTRICAL FEED AND BACKHAUL (IF UNDERGROUND) CIRCUIT ENTER THE POLE THROUGH THE POLE BASE. IF A DISCONNECTING MEANS SEPARATE FROM THE AC DISTRIBUTION BOX IS REQUIRED BY JURISDICTION OR UTILITY, WITH APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX.

DETAIL NOT USED N.T.S. C



PREPARED FOR:

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Overland Park, Kansas 66251

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HINGHAM, MA 02043

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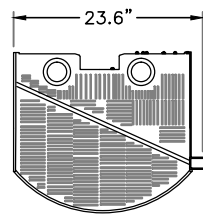
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SITE CASCADE:
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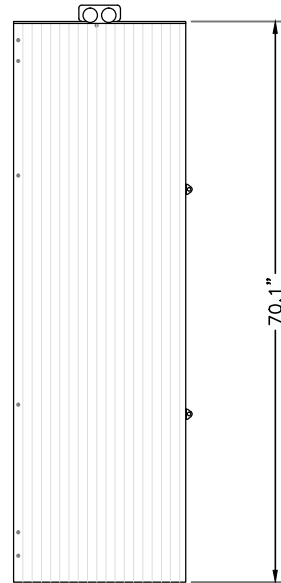
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1 MACARTHUR ST.
SOMERVILLE, MASSACHUSETTS

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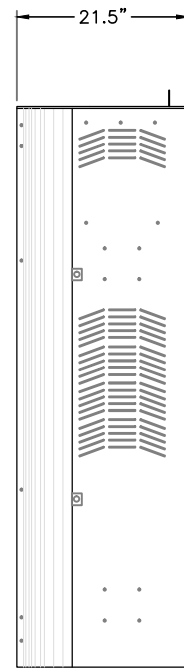
SHEET NUMBER:
A-3



PLAN VIEW



FRONT VIEW



SIDE VIEW

CHARLES SHRD60-601X7GN1 70" SHROUD

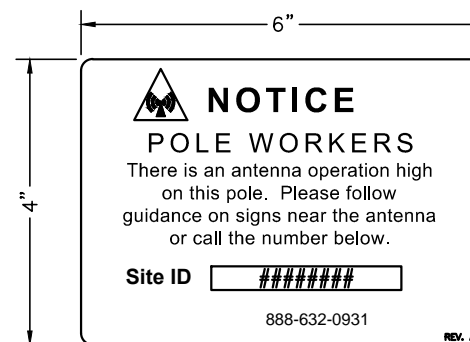
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DETAIL NOT USED

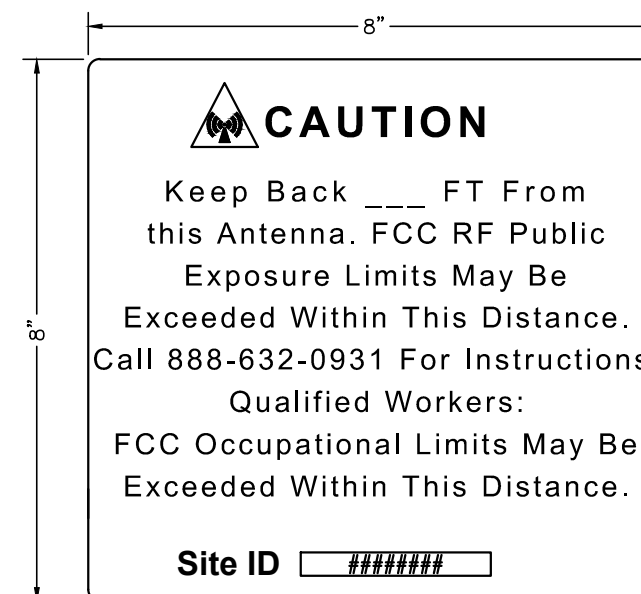
N.T.S.

C



ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
 AFFIX TO THE STRUCTURE 3-4' BELOW THE COMMERCIAL RF ANTENNA(S)
 SIZE APPROX. 8" x 5"

ANTENNA SIGNAGE



OWNER / OPERATOR NOTE:
 SITE ID LABEL TO BE AFFIXED AT OR NEAR THE POINT OF POWER CONNECTION WITH TZeS241 LABELING TAPE OR EQUIVALENT BLACK ON WHITE LABELING TAPE OF AT LEAST 18mm WIDTH WITH EXTRA-STRENGTH ADHESIVE. USE ANY COMPATIBLE P-TOUCH LABEL MAKER. TEXT SHOULD BE PRINTED IN ALL CAPS WITH A MINIMUM HEIGHT OF 1/2".

EMERGENCY CONTACT SIGN

DETAIL NOT USED

B

POLE MOUNTED SIGNS

N.T.S.

D

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Overland Park, Kansas 66251

PREPARED BY:

67 SHARP STREET
HINGHAM, MA 02043

PREPARED BY:

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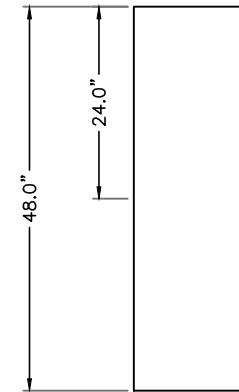
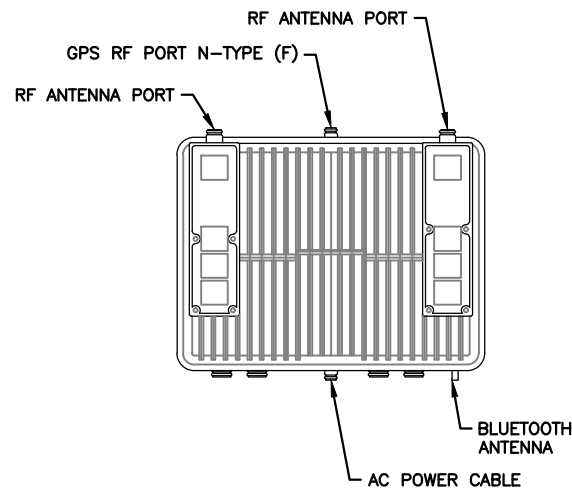
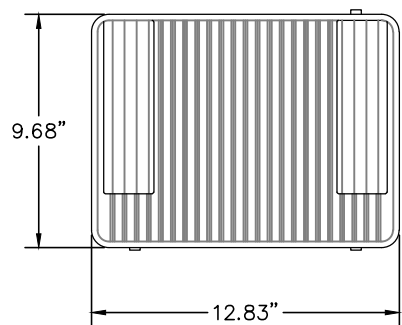
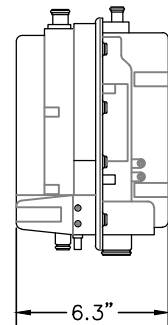
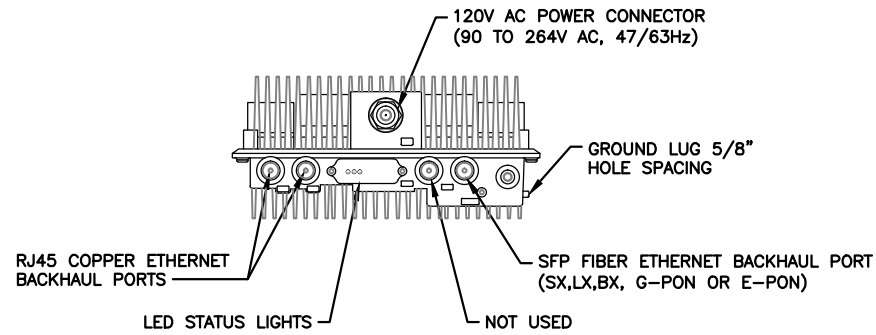
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 ODAS_2D-23

SITE CASCADE:
 BS90XSG89

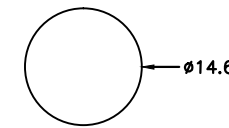
SITE ADDRESS:
 1 MACARTHUR ST.
 SOMERVILLE, MASSACHUSETTS

SHEET DESCRIPTION:
 EQUIPMENT DETAILS I

SHEET NUMBER:
 A-4



FRONT VIEW



TOP VIEW

NOKIA TD-LTE BAND 41 (FWHR)

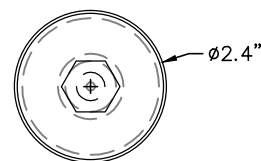
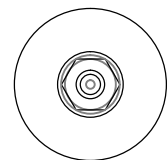
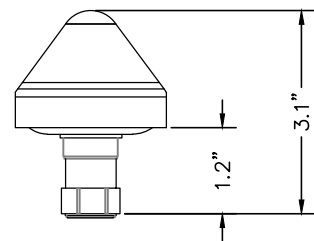
N.T.S.

A

AMPHENOL 6U4MT360X12FXYSO OMNI ANTENNA

N.T.S.

C



NOTE:

FROM TIME TO TIME IT MAY BE NECESSARY TO MAKE MINOR ADJUSTMENTS TO ACCOMMODATE, LEVEL OR SPACE ANTENNA MOUNTS AND EQUIPMENT. EXAMPLE ADDING A WASHER OR SHIM TO LEVEL OUT A BRACKET OR MOUNT TO MEET SPECIFICATIONS. HAVING TO OFFSET OR SPACE A BRACKET OR MOUNT DUE TO FLANGES AND OR OTHER SMALL PROTRUSIONS ON A POLE TOP ASSEMBLY. ANY MATERIALS, NUTS, BOLTS, SHIMS OR SPACERS USED TO ACCOMMODATE ADJUSTMENTS TO ANTENNA MOUNTS AND EQUIPMENT MUST BE PERMANENTLY AFFIXED, BOLTED TO THE MOUNT, BRACKET OR POLE; AS NEVER TO BECOME A FALL HAZARD. ALL MATERIALS NUTS, BOLTS, SHIMS OR SPACERS USED IN MINOR ADJUSTMENTS, MUST BE EITHER STAINLESS STEEL OR GALVANIZED; HALF WASHERS ARE PROHIBITED. ANY MINOR ADJUSTMENTS TO ACCOMMODATE ANTENNA MOUNTS AND EQUIPMENT SHOULD BE DONE IN A PROFESSIONAL MANOR WITH SAFETY AND AESTHETICS IN MIND. SHOULD YOU HAVE ANY QUESTIONS CONTACT YOUR ASSIGNED CONSTRUCTION PROJECT MANAGER OR ENGINEER FOR GUIDANCE.

NOKIA GPS ANTENNA

N.T.S.

B

MAINTENANCE NOTE

N.T.S.

D

PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PREPARED BY:

67 SHARP STREET
HINGHAM, MA 02043

PREPARED BY:

JACOBS
Jacobs Engineering Group, Inc.
120 ST. JAMES AVENUE
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REVISIONS:

NO.	DATE	DESCRIPTION
0	08.27.19	FINALS
B	08.21.18	UPDATED SHROUD
A	08.07.18	FOR REVIEW

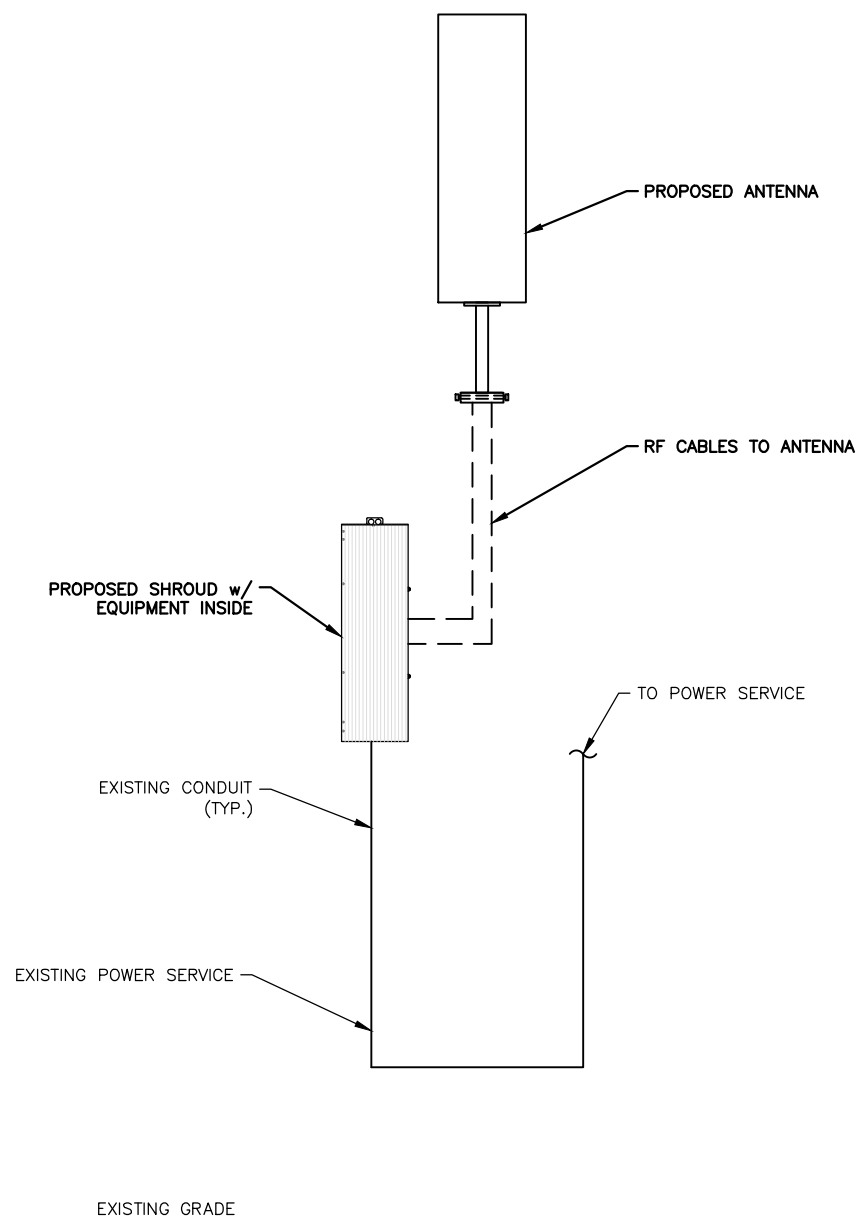
SITE NAME:
ODAS_2D-23

SITE CASCADE:
BS90XSG89

SITE ADDRESS:
1 MACARTHUR ST.
SOMERVILLE, MASSACHUSETTS

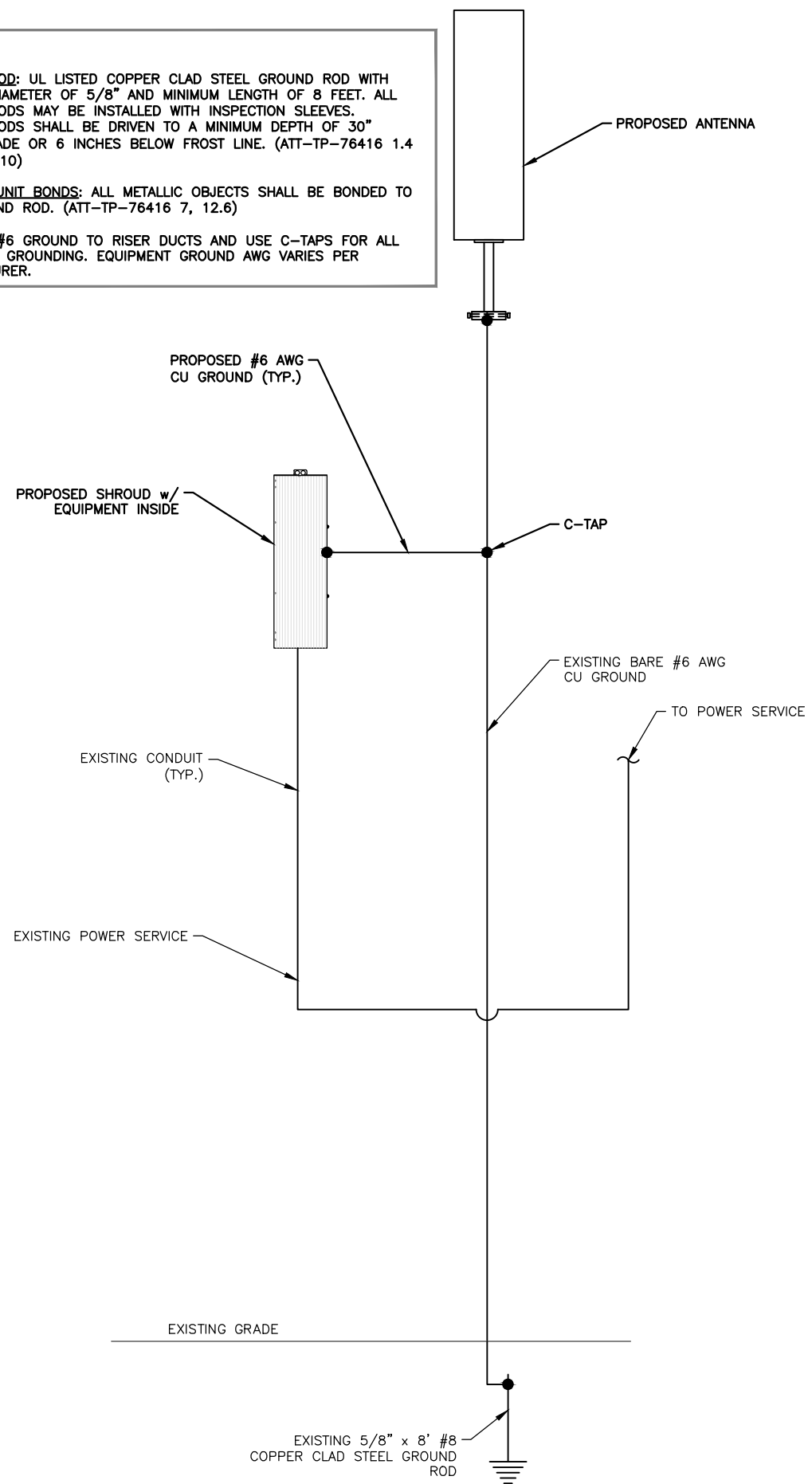
SHEET DESCRIPTION:
EQUIPMENT DETAILS II

SHEET NUMBER:
A-5



NOTES:

- GROUND ROD:** UL LISTED COPPER CLAD STEEL GROUND ROD WITH MINIMUM DIAMETER OF 5/8" AND MINIMUM LENGTH OF 8 FEET. ALL GROUND RODS MAY BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO A MINIMUM DEPTH OF 30" BELOW GRADE OR 6 INCHES BELOW FROST LINE. (ATT-TP-76416 1.4 / 2.2, 3, 10)
- EXTERIOR UNIT BONDS:** ALL METALLIC OBJECTS SHALL BE BONDED TO THE GROUND ROD. (ATT-TP-76416 7, 12.6)
- H-CLAMP #6** GROUND TO RISER DUCTS AND USE C-TAPS FOR ALL EQUIPMENT GROUNDING. EQUIPMENT GROUND AWG VARIES PER MANUFACTURER.



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SITE CASCADE:
BS90XSG89

SITE ADDRESS:
1 MACARTHUR ST.
SOMERVILLE, MASSACHUSETTS

SHEET DESCRIPTION:
ELECTRICAL &
GROUNDING DIAGRAMS

SHEET NUMBER:
E-1



UTILITY POLE – BEFORE

N.T.S. A




UTILITY POLE – AFTER

N.T.S. B

PREPARED FOR:
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 Overland Park, Kansas 66251

PREPARED BY:
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 ODAS_2D-23

SITE CASCADE:
 BS90XSG89

SITE ADDRESS:
 1 MACARTHUR ST.
 SOMERVILLE, MASSACHUSETTS

SHEET DESCRIPTION:
 UTILITY POLE
 BEFORE & AFTER

SHEET NUMBER:
 PS-1