



CITY OF SOMERVILLE
Commonwealth of Massachusetts
93 Highland Avenue
Somerville, MA 02143
(617) 625-6600

BUSINESS LICENSE APPLICATION - Small Wireless Facility

File #: 19-014866

License #: BL19-000107

Address: 34 PEARL ST

Licensee: Matthew Pricco Network Building + Consulting

DBA Name: ExteNet Systems, Inc.

Business Ownership Type: Corporation

Legal Name of Entity: ExteNet Systems, Inc.

Owners/Officers: James A. Hyde, H. Anthony Lehv, Daniel L. Timm,

License Information:

Do you believe this to be a 6409(a) application?: No

Describe the reason for the work, and the intended beneficiaries: This proposal maintains appearance of the existing streetscape and improves wireless capacity for residents, businesses and visitors.

Provide the detailed description of the work that should appear on the License: Extenet proposes to install a small cell wireless facility on a replacement cobra style light pole of approximately the same height, utilizing a steel look alike pole painted to match the existing concrete pole. The principal elements of the proposed facility are an antenna housed in a 24" long shroud at the top of the pole, including an additional 6" of base mounting equipment, and three radios in a shroud also mounted on the pole. The proposed replacement pole fully accommodates the same type of light fixture, to be installed and made operational as part of this proposal. It is structurally stronger than the existing pole. See the plans accompanying this application for details. This proposal maintains appearance of the existing streetscape and improves wireless capacity for residents, businesses and visitors.

of installations on existing poles: 1

of installations on new poles:

Provide the legal name of the entity that will own the License: ExteNet Systems, Inc.

Approval Conditions:

Approved By:

Hans Jensen, Approved

Karla Cuarezma, Approved

Malik Drayton, Approved

John Power, Approved

Mark Lawhorne, Approved

John J. Long, Approved



LATITUDE: 42.383873°
LONGITUDE: -71.081797°

NE-MA-BSTN3N01-TMO

NE-MA-BSTN3N01-03344 / NE3211BA_31LAB

PROPOSED SMALL CELL NODE

34 PEARL STREET, SOMERVILLE, MA 02145
CITY OF SOMERVILLE, MIDDLESEX COUNTY



Know what's below.
Call before you dig.

ENGINEERING FIRM



APPLICANT



SITE INFORMATION

NE-MA-BSTN3N01-03344
TMO ID: NE3211BA_31LAB
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SOMERVILLE, MA 02145
MIDDLESEX COUNTY

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PROFESSIONAL STAMP



ENGINEER

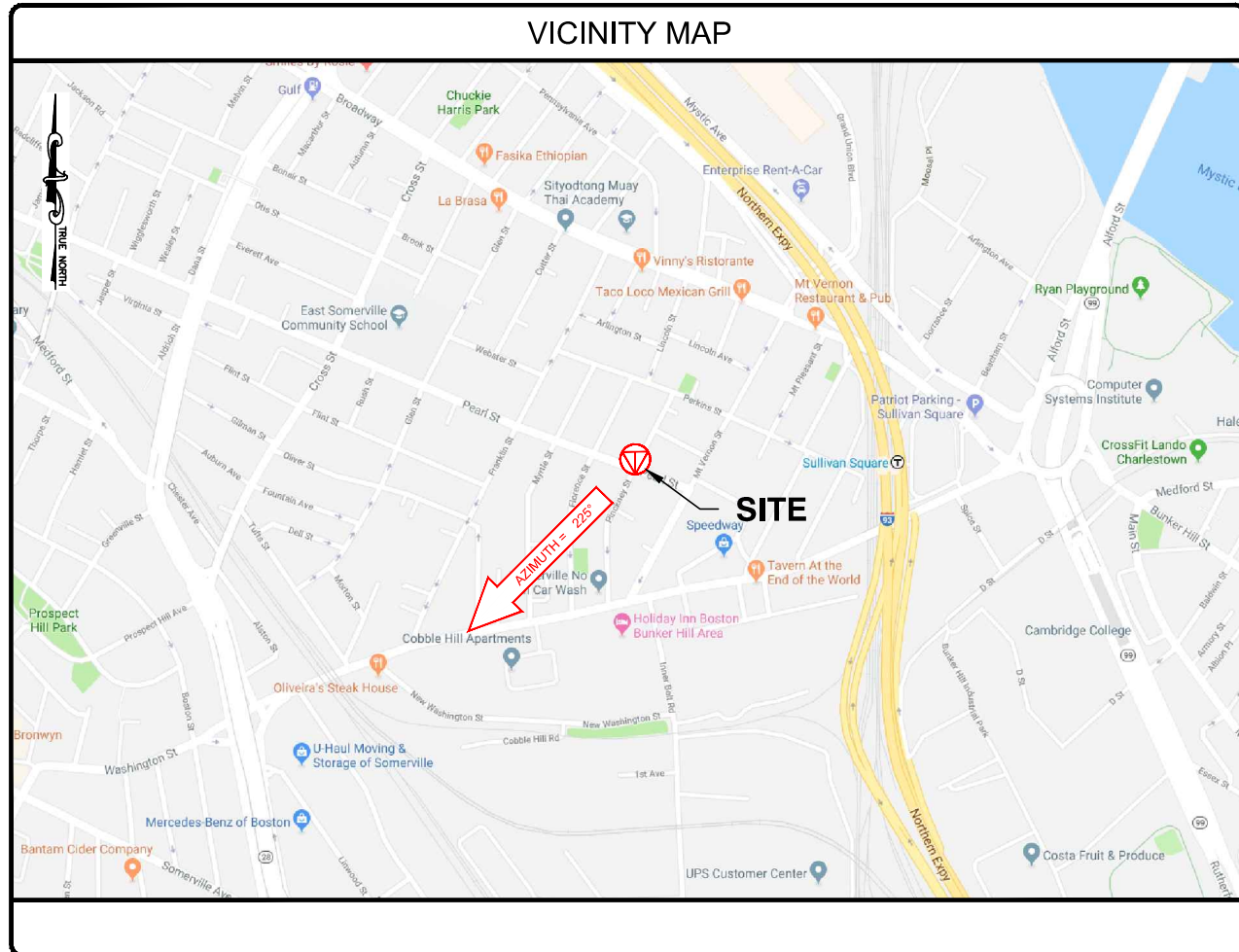
KRUPAKARAN KOLANDAIVELU, P.E.
MA PROFESSIONAL ENGINEER LIC. #50019

SHEET TITLE

TITLE SHEET

SHEET NUMBER

SHEET
01 OF 06



PROJECT INFORMATION	
PROJECT NAME:	NE-MA-BSTN3N01-TMO
POLE TAG:	NO TAG LATITUDE: 42.383873° LONGITUDE: -71.081797°
JURISDICTION:	CITY OF SOMERVILLE MIDDLESEX COUNTY
EXTENET PROJECT MANAGER:	RICK ANGELINI 3030 WARRENVILLE RD, SUITE 340 LISLE, IL 60532 NOC: (866) 892-5327
HUB LOCATION:	HUB: NEH0005A 39R MEDFORD STREET SOMERVILLE, MA 02143
ELECTRIC COMPANY:	EVERSOURCE

CODE COMPLIANCE	
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.	
<ul style="list-style-type: none"> 2015 INTERNATIONAL BUILDING CODE (MASSACHUSETTS AMENDED 9TH EDITION) 2017 NATIONAL ELECTRICAL CODE NFPA 1-2015 EDITION 2015 IFC - REFERENCE 527 CMR AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION 13TH EDITION 	<ul style="list-style-type: none"> ANSI/TIA-222-G TIA 607 INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81 IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION TELECORDIA GR-1275 ANSI/T 311

DRAWING INDEX	
01	TITLE SHEET
02	NOTES
03	ELEVATION
04	ANTENNA & EQUIPMENT DETAILS
05	ELECTRICAL & GROUNDING DETAILS
06	FOUNDATION DETAILS & NOTES
S-1	ELEVATION VIEW & STRUCTURAL DETAILS

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL GIVE ALL NOTICE AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LOCAL 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...

ELECTRICAL NOTES:

- 1. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.

- D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.

GROUNDING NOTES:

- 1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.

GROUNDING GUIDELINES:

ALL EQUIPMENT THAT IS INSTALLED AND MAY CAUSE ANY KIND OF ELECTRICAL CHARGE OR BUILD UP MUST HAVE PROPER AND ADEQUATE GROUNDING IN PLACE TO PREVENT FROM EQUIPMENT DAMAGE AND SHOCK HAZARDS.
RRH'S
MUST BE GROUND TO A MAIN BUSS BAR OR HOME RUN GROUND FROM THE GROUND PIN OR STUD THAT IS ON THE CHASSIS...

WEATHER SEAL GUIDELINES:

BUTYL

- 1. PRE WRAP ALL CONNECTIONS WITH BLACK ELECTRICAL TAPE TO COVER ALL METAL SHOWING TO PREVENT DAMAGE TO CONNECTOR WHEN WEATHER SEAL IS TO BE REMOVED. 3/4 INCH OR 2 INCH TAPE CAN BE USED FOR THIS PROCESS.

FUSION TAPE

- 1. CHECK TO MAKE SURE ALL CONNECTORS ARE TORQUED TO PROPER SPECIFICATIONS BEFORE YOU BEGIN.
2. NOTE: THIS STEP DOES NOT NEED A CURTUSY WRAP BECAUSE THE TAPE DOES NOT ACTUALLY ADHERE TO THE CONNECTOR ITSELF BUT BINDS TO ITSELF.

HEAT SHRINK

- 1. PRE WRAP ALL CONNECTIONS WITH BLACK ELECTRICAL TAPE TO COVER ALL METAL SHOWING TO PREVENT DAMAGE TO CONNECTOR WHEN WEATHER SEAL IS TO BE REMOVED. 3/4 INCH OR 2 INCH TAPE CAN BE USED FOR THIS PROCESS.

ANDREWS CLAM SHALL

- 1. PROPERLY TORQUE CONNECTOR TO SPECIFICATION.
2. APPLY ONE LAYER OF 3/4 INCH BLACK TAPE AROUND ENTIRE CONNECTOR ENDING AT LEAST 1-1/2 INCHES PAST TOP AND BOTTOM OF CONNECTOR TO PREVENT ANY MOISTURE FROM STICKING TO THE CONNECTOR.

PPC BOOT

- 1. PLACE BOOT OVER CABLE BEFORE CONNECTOR IS ATTACHED TO CABLE. THIS IS ONLY RATED FOR PPC TYPE CONNECTORS. (NOTE: IF THIS STEP IS SKIPPED OR NOT COMPLETED BEFORE MAKING A CONNECTOR THE SUBCONTRACTOR WILL NOT BE ABLE TO USE THE BOOT STYLE DEVICE TO SEAL THE CONNECTOR.)

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CHELSEA, MA 01824

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Table with 4 columns: REV, DATE, DESCRIPTION, BY. Includes revisions for POLE DETAILS ADDED, REVISED PER DPW COMMENTS, and PRELIMINARY.

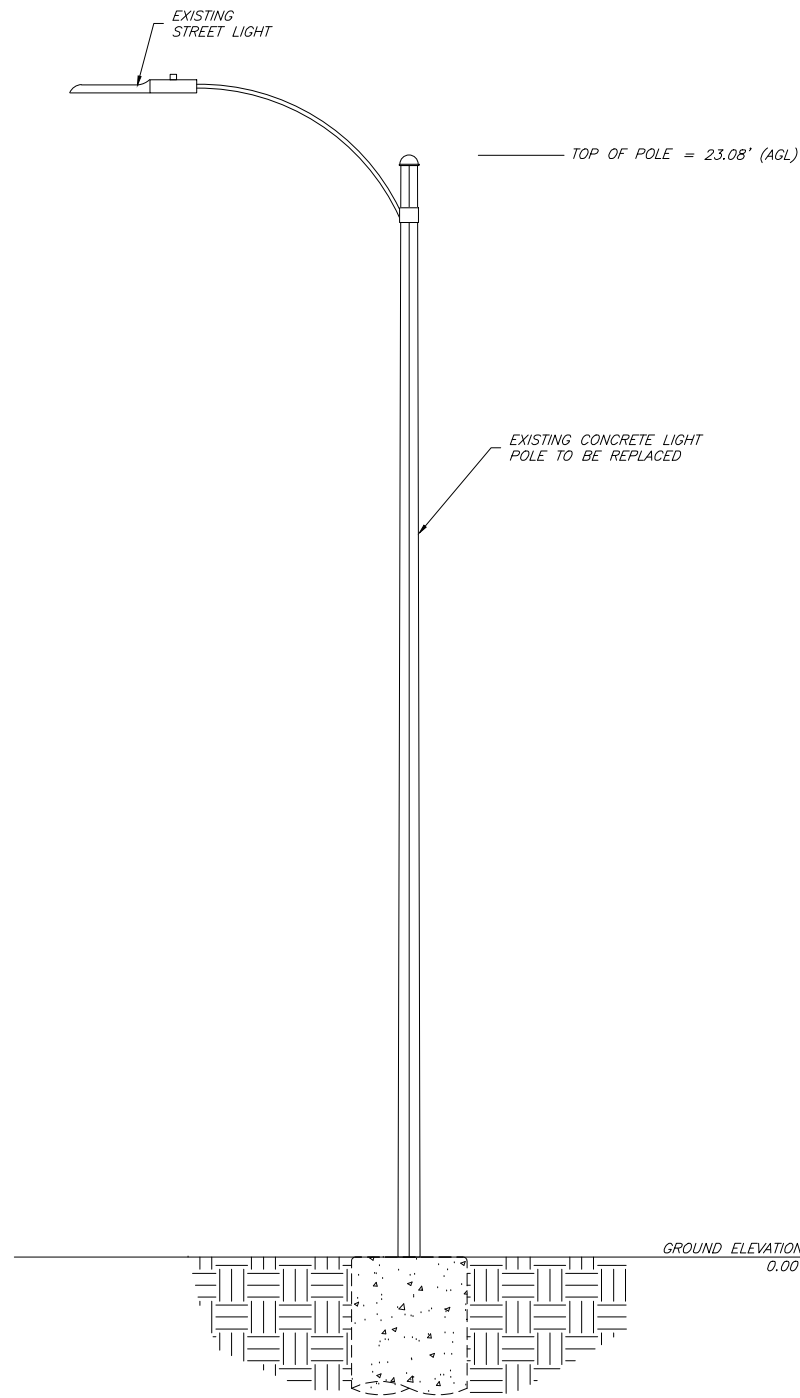
DESIGN RECORD
PROFESSIONAL STAMP
COMMONWEALTH OF MASSACHUSETTS
KRUPAKARAN KOLANDAIVELU
REGISTERED PROFESSIONAL ENGINEER
NO. 50019

ENGINEER
KRUPAKARAN KOLANDAIVELU, P.E.
MA PROFESSIONAL ENGINEER LIC. #50019

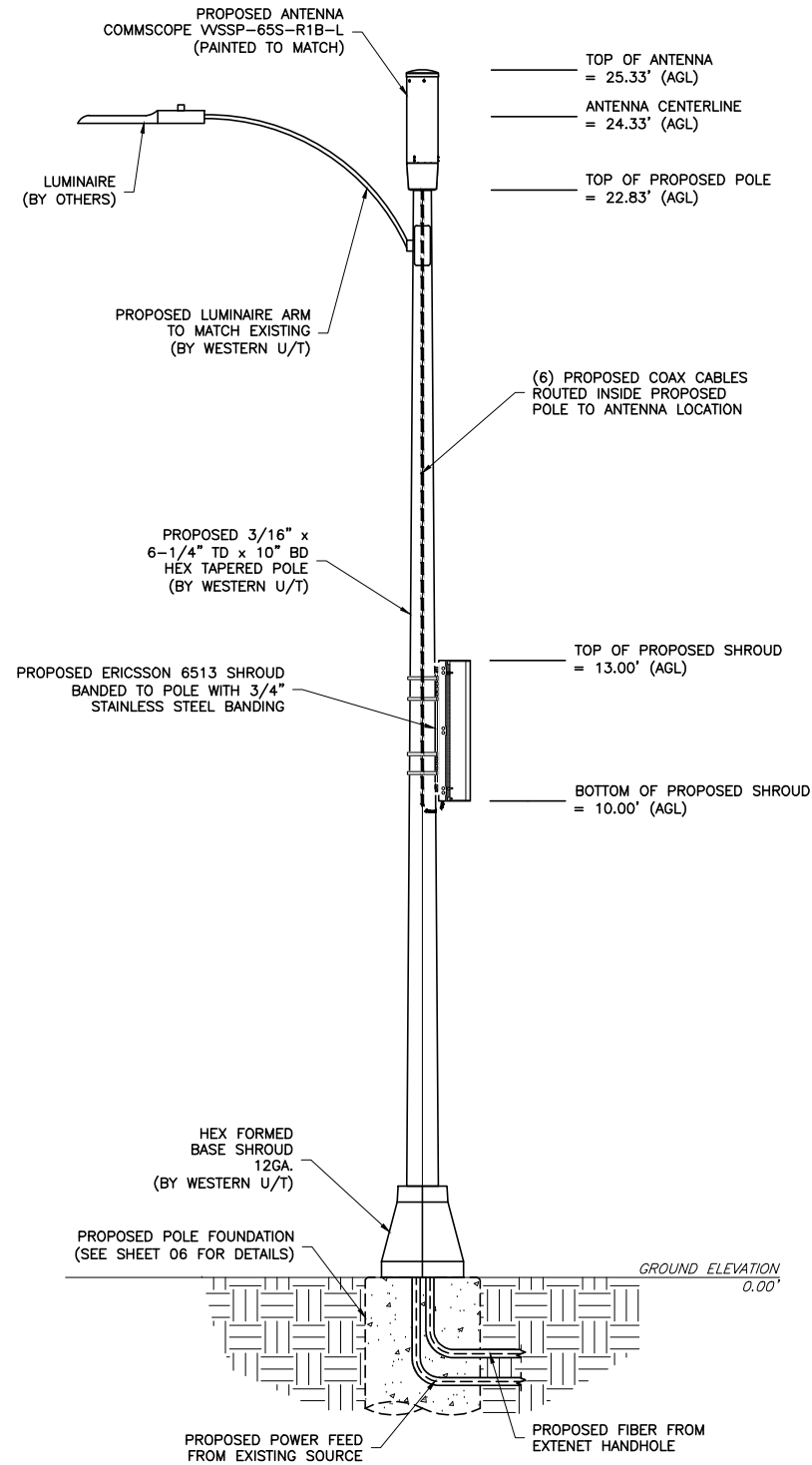
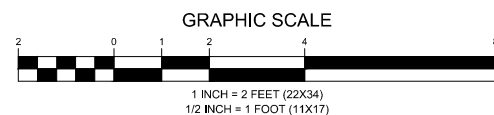
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SHEET NUMBER
SHEET
02 OF 06

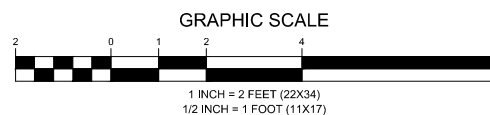




EXISTING ELEVATION (LOOKING SOUTHEAST)



PROPOSED ELEVATION (LOOKING SOUTHEAST)



EXISTING CONDITIONS

NOTES:

- ALL MATERIALS WILL MATCH CURRENTLY EXISTING MATERIALS AND WHERE NEEDED ANY RF FRIENDLY MATERIAL WILL BE PAINTED TO MATCH.
- IT IS ASSUMED THAT ALL PROPOSED UTILITIES WILL BE ROUTED BELOW GRADE TO THE PROPOSED INSTALLATION.
- EXTENET WILL PLACE SMALL PLACARD ON POLE IDENTIFYING OWNERSHIP/CONTACT INFORMATION.
- CONTRACTOR SHALL FIELD VERIFY SITE OR LAYOUT RESTRICTIONS, SITE CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER OF RECORD PRIOR TO BEGINNING PROJECT. ALL WORK SHALL BE PERFORMED USING ACCEPTED CONSTRUCTION PRACTICES.
- NO FIELD MODIFICATIONS MAY BE MADE TO THE STRUCTURE WITHOUT THE EXPRESS WRITTEN CONSENT FROM THE ENGINEER OF RECORD. WESTERN UT, INC. AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THE STRUCTURE IF ALTERATIONS AND/OR ADDITIONS ARE MADE.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK TO THE BEST OF HIS/HER ABILITY AND SKILL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING SAME, WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, FORMWORK, ETC., AND SHALL CONFORM TO ALL NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES IN ORDER TO SAFELY EXECUTE ALL STAGES OF WORK TO COMPLETE THIS PROJECT.
- CONTRACTOR ASSUMES RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THIS REQUIREMENT APPLIES CONTINUOUSLY, AND IS NOT LIMITED TO NORMAL WORKING HOURS.
- CONTRACTOR TO HOLD ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN. THE CONTRACTOR IS FINANCIALLY RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK ON THIS PROJECT.

ENGINEERING FIRM

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PROFESSIONAL STAMP



ENGINEER

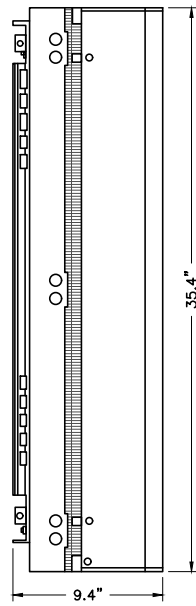
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SHEET TITLE

ELEVATION

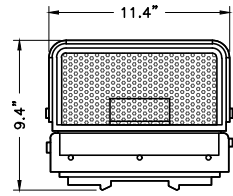
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03 OF 06

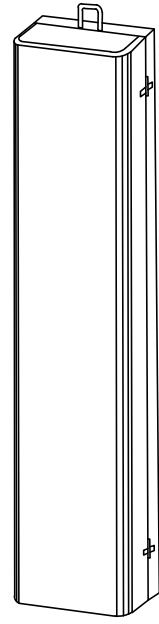


SIDE ELEVATION

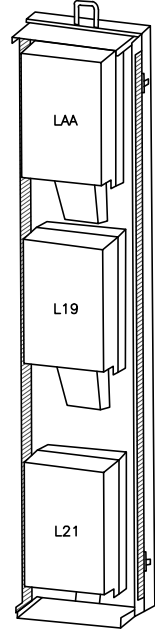
MECHANICAL SPECIFICATIONS
 ERICSSON PART# - ENCLOSURE 6513
 HEIGHT: 35.4 IN
 WIDTH: 11.4 IN
 DEPTH: 9.4 IN
 WEIGHT: 29.8 LBS (ENCLOSURE ONLY)
 WEIGHT: 71.4 LBS (FULLY EQUIPPED)



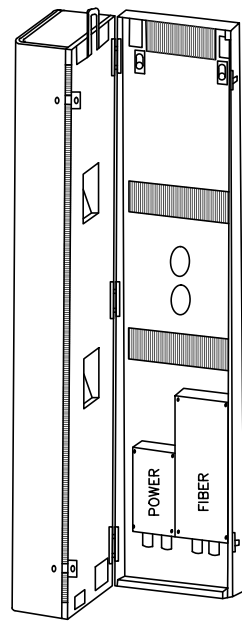
BOTTOM PLAN



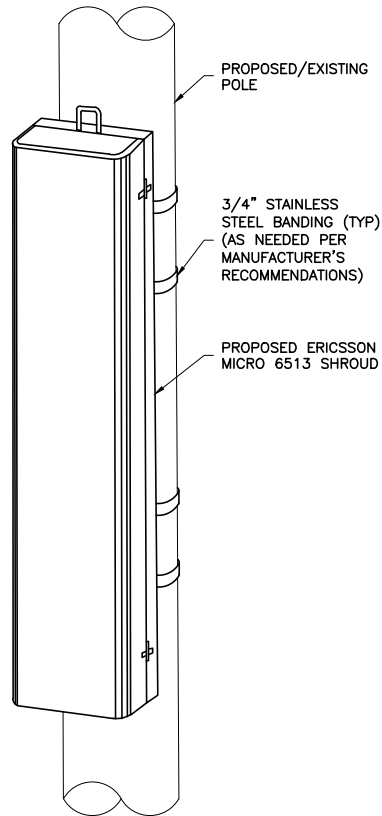
FRONT CLOSED ELEVATION



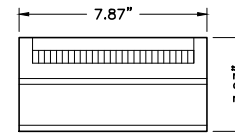
FRONT INTERIOR ELEVATION



BACK INTERIOR ELEVATION

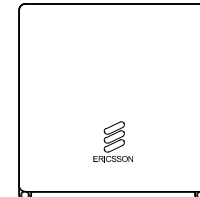


2 EQUIPMENT MOUNTING DETAIL
 04 NTS

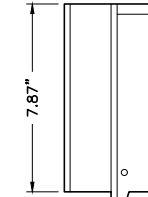


TOP VIEW

WEIGHT = 9.92LBS



FRONT ELEVATION

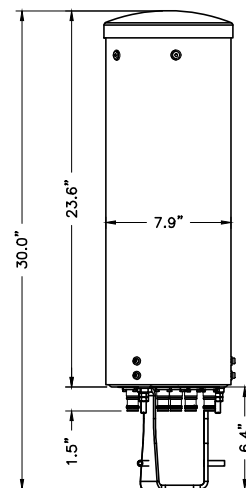


SIDE ELEVATION

ERICSSON RADIO				
2203 B66 & B25	AC: 100-250V	NORMAL VOLTAGE RANGE AT RADIO INPUT CONNECTOR DC: -36 TO -58.5	NOMINAL VOLTAGE: -48V DC	95W TYPICAL / 130W MAX
2205 B46	AC: 100-250V	NORMAL VOLTAGE RANGE AT RADIO INPUT CONNECTOR DC: -36 TO -58.5	NOMINAL VOLTAGE: -48V DC	75W TYPICAL / 130W MAX

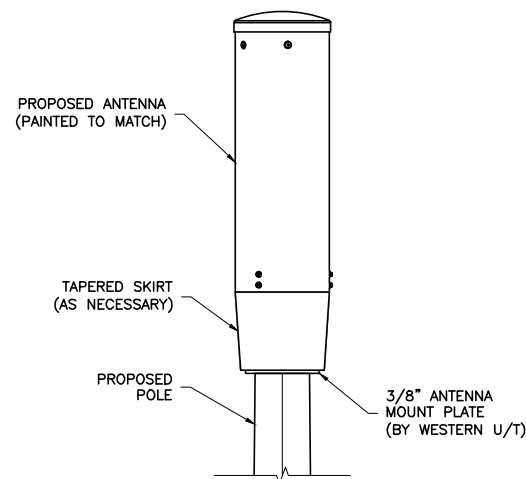
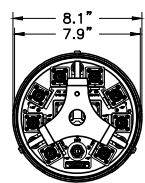
3 ERICSSON REMOTE RADIO UNIT (RRU)
 04 NTS

1 ERICSSON MICRO 6513 SHROUD DETAIL
 04 NTS

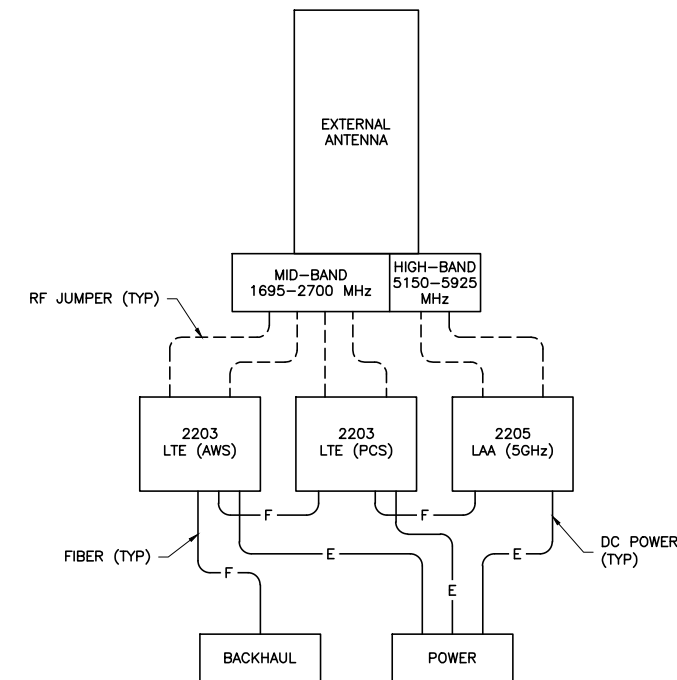


4 ANTENNA DETAIL
 04 NTS

MECHANICAL SPECIFICATIONS
 COMMSCOPE PART# - VVSP-65S-R1B-L
 HEIGHT: 23.6 IN
 WIDTH: 7.9 IN
 WEIGHT: 13.0 LBS (WITHOUT MOUNT)



5 ANTENNA MOUNT DETAIL
 04 NTS



6 WIRING DIAGRAM
 04 NTS

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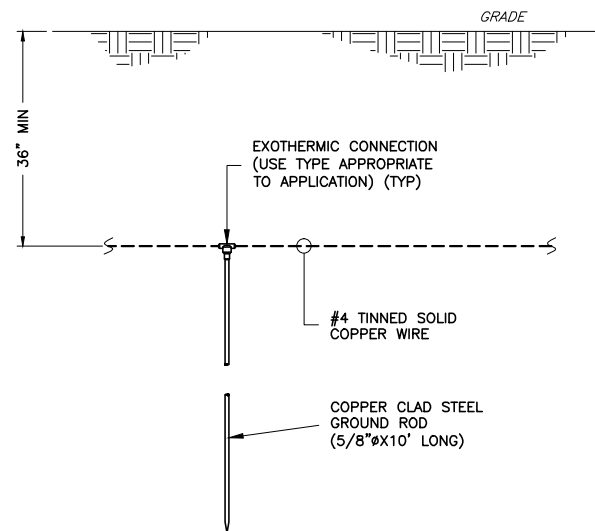
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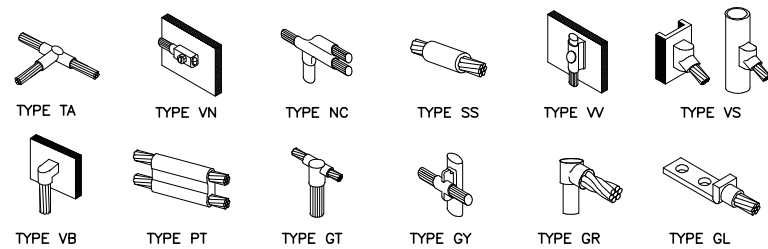
ANTENNA & EQUIPMENT DETAILS

SHEET NUMBER

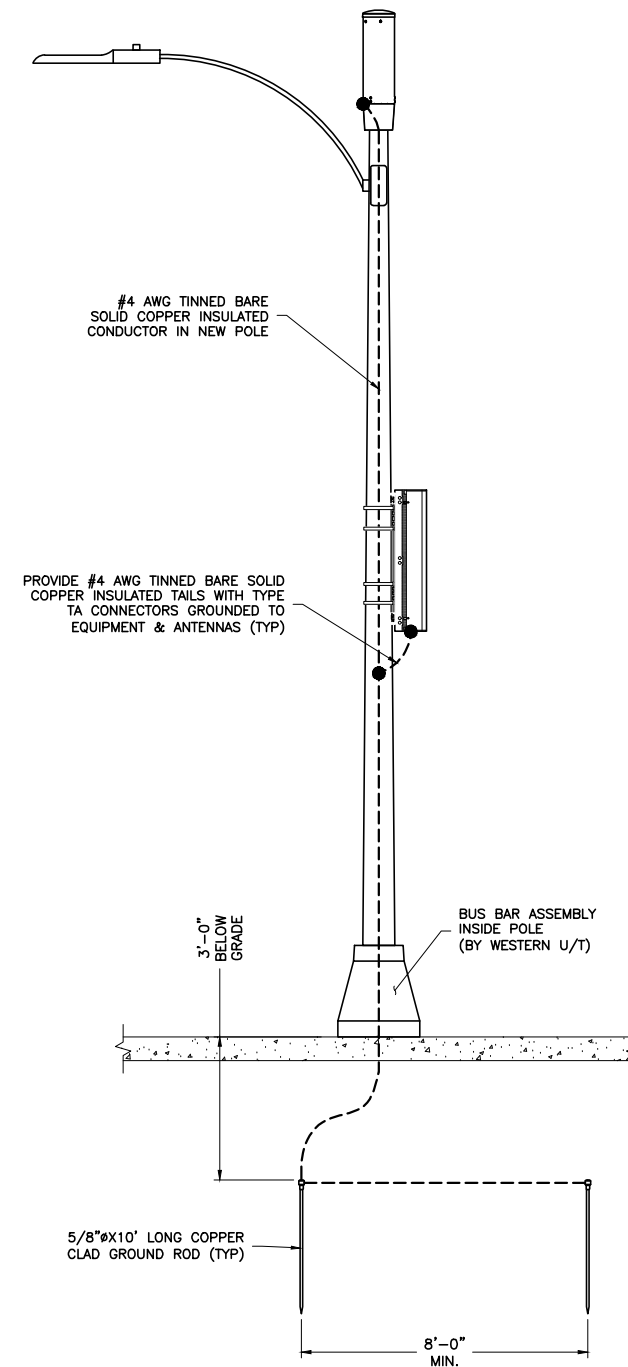
SHEET
04 OF 06



1 TYPICAL GROUND ROD DETAIL
05 NTS



2 GROUNDING CONNECTION DETAILS
05 NTS



3 ELECTRICAL & GROUNDING RISER DIAGRAM
05 NTS

NOTE:
EXISTING/PROPOSED UTILITY WIRES,
SIGNS, AND EXISTING EQUIPMENT
NOT SHOWN FOR CLARITY.

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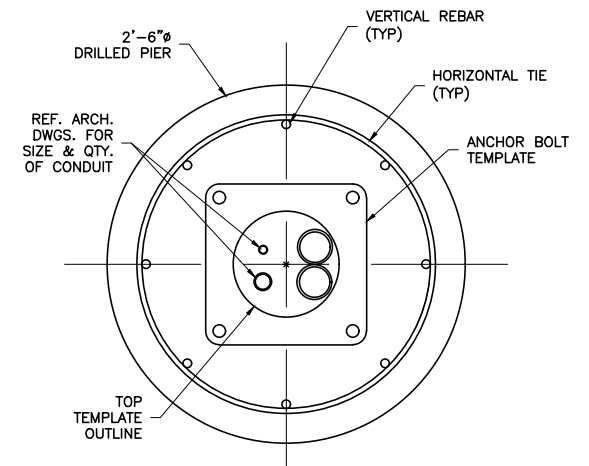
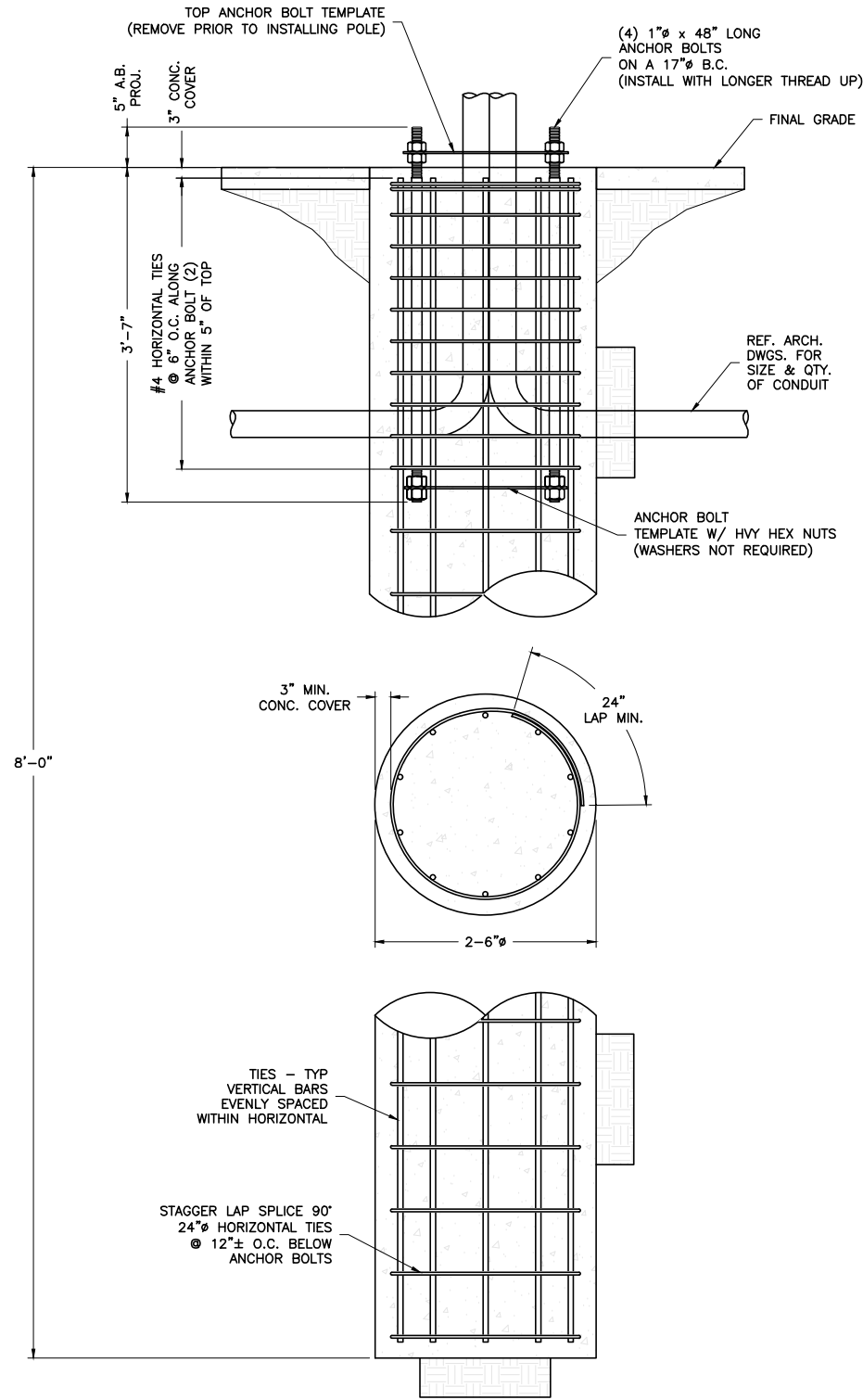
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**ELECTRICAL
& GROUNDING
DETAILS**

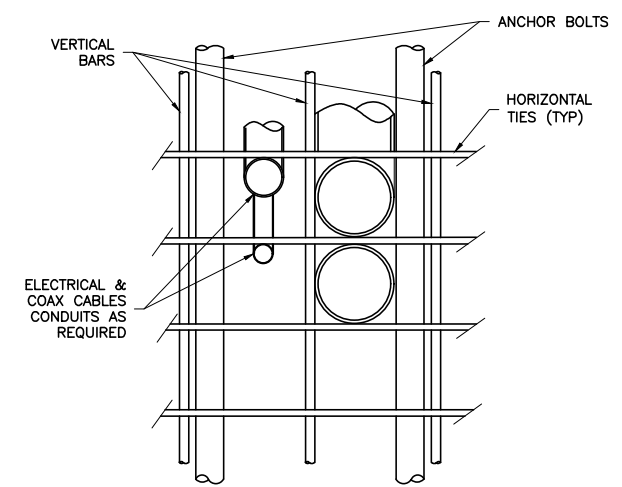
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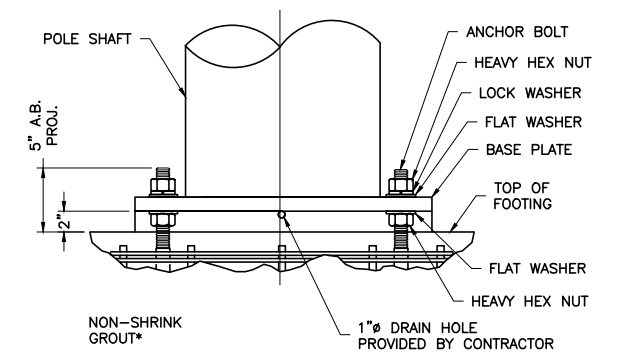
INSTALL CONDUIT IN CENTER OF CLUSTER TO CLEAR BASEPLATE

1 CONDUIT DETAIL @ PIER SEC.
06 NTS



ADJUST REBAR AS NEEDED TO ACCOMMODATE CONDUIT. SEE REINFORCEMENT SUMMARY FOR SIZE, QUANTITY AND LOCATION OF VERTICAL BARS AND HORIZONTAL TIES.

2 CONDUIT DETAIL
06 NTS



*NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI.

BASE PLATE SHALL NOT BE GROUTED UNTIL AFTER THE STRUCTURE HAS BEEN INSTALLED AND PLUMBED.

3 BASE GROUNDING DETAIL
06 NTS

GENERAL NOTES

- CONTRACTOR IS RESPONSIBLE FOR CHECKING AREA FOR UNDERGROUND FACILITIES PRIOR TO EXCAVATING ANY MATERIALS.
- CONTRACTOR SHALL INSPECT AND REMOVE ALL DEBRIS FROM BOTTOM OF EXCAVATION.
- CONTRACTOR SHALL VERIFY ANCHOR BOLT LAYOUT PRIOR TO, AND IMMEDIATELY AFTER PLACING CONCRETE. ANCHOR BOLT LAYOUT IS CRITICAL FOR MONOPOLE INSTALLATION.
- CONTRACTOR SHALL USE AND PROVIDE DEFORMED REINFORCING BARS CONFORMING TO ASTM A615 GR. 60 (60,000 PSI MIN. YIELD). CONTRACTOR SHALL USE STEEL WIRE TO HOLD REINFORCING BARS TOGETHER. IF WELDING REBAR IS PREFERRED, SUBSTITUTE USING A706 GR. 60 DEFORMED BARS.
- CONTRACTOR SHALL USE AND PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. CONCRETE SHALL USE 1" MAXIMUM STONE AGGREGATE MIX DESIGN: 6 1/2 SACKS OF CEMENT MINIMUM PER CUBIC YARD. 5" MINIMUM AND 7" MAXIMUM CONCRETE SLUMP.
- CONCRETE SHALL BE CONSOLIDATED USING VIBRATORY METHODS THROUGHOUT DEPTH OF FOUNDATION. VIBRATING LOWER DEPTHS MAY BE ACCOMPLISHED BY TOUCHING REBAR CAGE WITH VIBRATOR.
- CONTRACTOR SHOULD ANTICIPATE THE USE OF A FULL-LENGTH TEMPORARY CASING TO STABILIZE THE EXCAVATION. THE CASING SHALL BE WITHDRAWN DURING THE PLACEMENT OF CONCRETE IN THE EXCAVATED HOLE. CONCRETE SHALL BE PLACED USING CONVENTIONAL METHODS TO MINIMIZE SEGREGATION OF CONCRETE AND AGGREGATE. CONCRETE SHALL NOT FREE FALL MORE THAN 5 FT. CONCRETE MAY BE PLACED BELOW WATER USING TREMIE METHODS.
- CONCRETE SHALL BE PLACED TO THE DEPTH INDICATED, AND THE ABOVE GRADE PORTION SHALL BE FORMED. THE REBAR CAGE, ANCHOR BOLTS, AND CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF COMPLETING THE EXCAVATION. COLD JOINTS ARE NOT ALLOWED.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADEQUATE CONCRETE COVERAGE OVER REINFORCING BARS TO MINIMIZE CORROSION POTENTIAL. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL USE 3" CONCRETE COVER OVER REBAR. TOP OF FOOTING SHALL BE TROWELLED LEVEL AND SMOOTH.
- DRILLED PIER FOUNDATION DESIGN PER 2009/2012 IBC, TABLE 1806.2, CLASS 4 MATERIAL.
- TOTAL VOLUME OF CONCRETE REQUIRED FOR THIS FOUNDATION IS APPROXIMATELY 1.5 CU. YDS.

FACTORED BASE REACTIONS

MOMENT	=	44.3 ft-kips
SHEAR	=	2.86 kips
VERTICAL	=	1.44 kips




SPECIAL INSPECTIONS

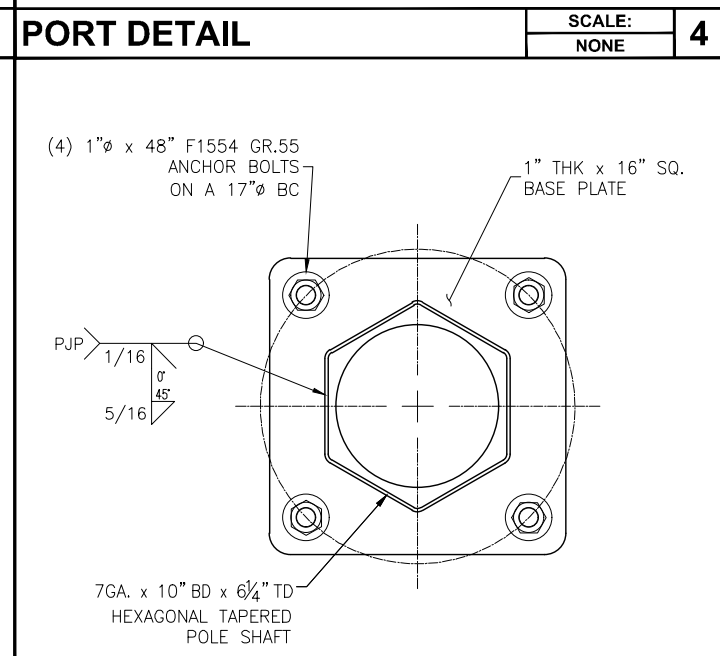
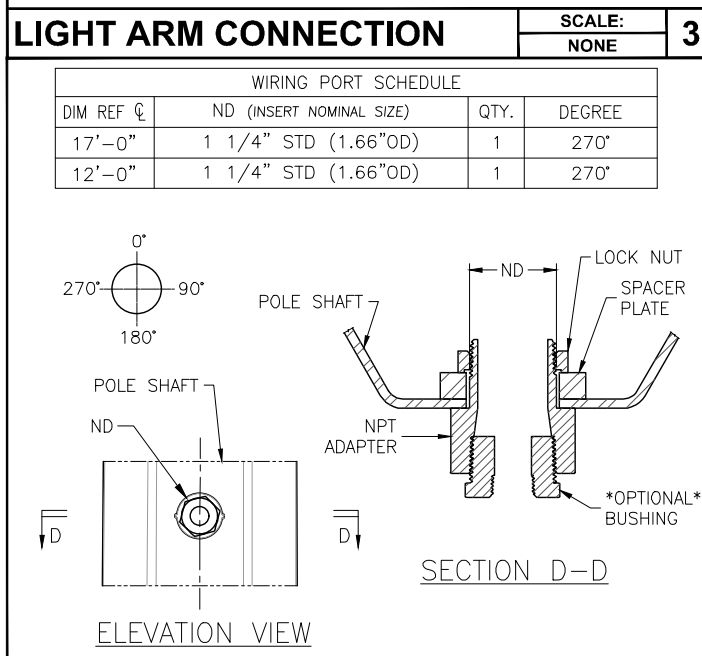
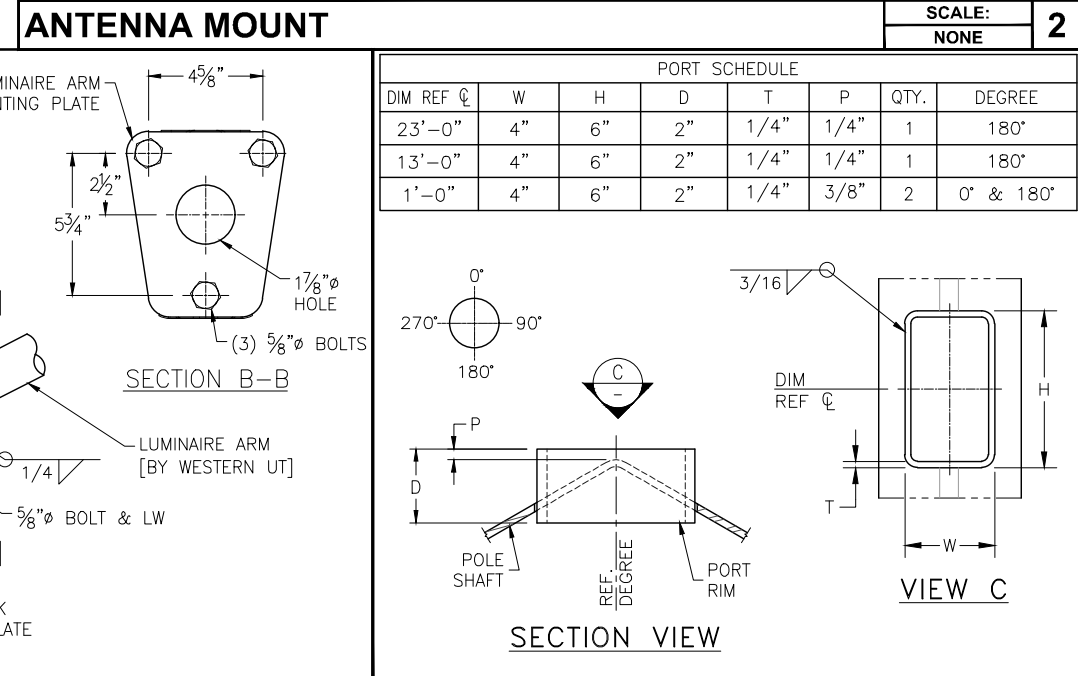
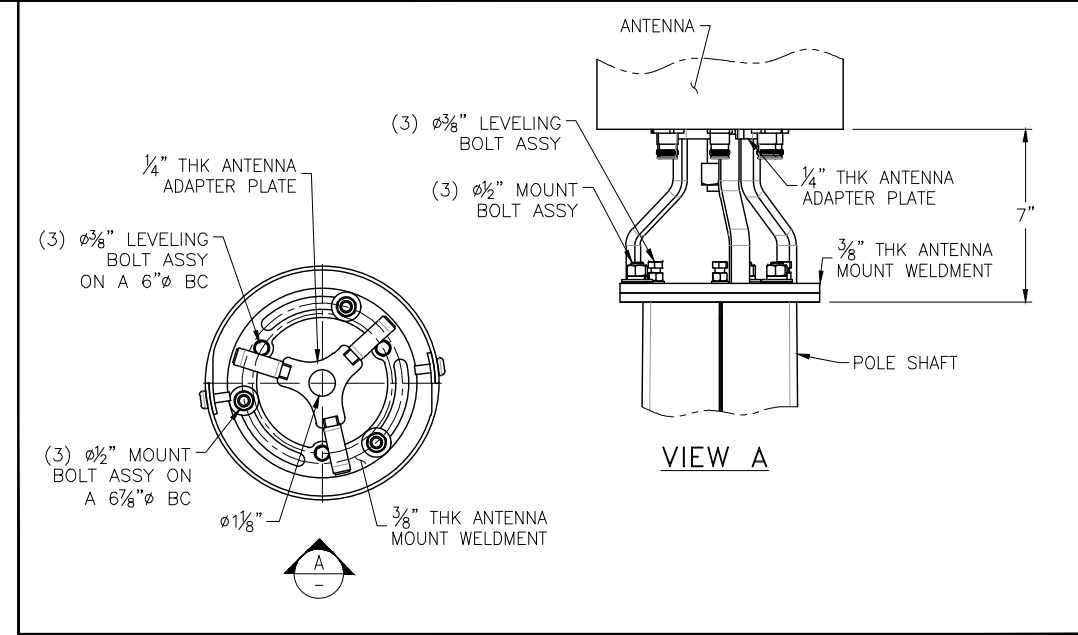
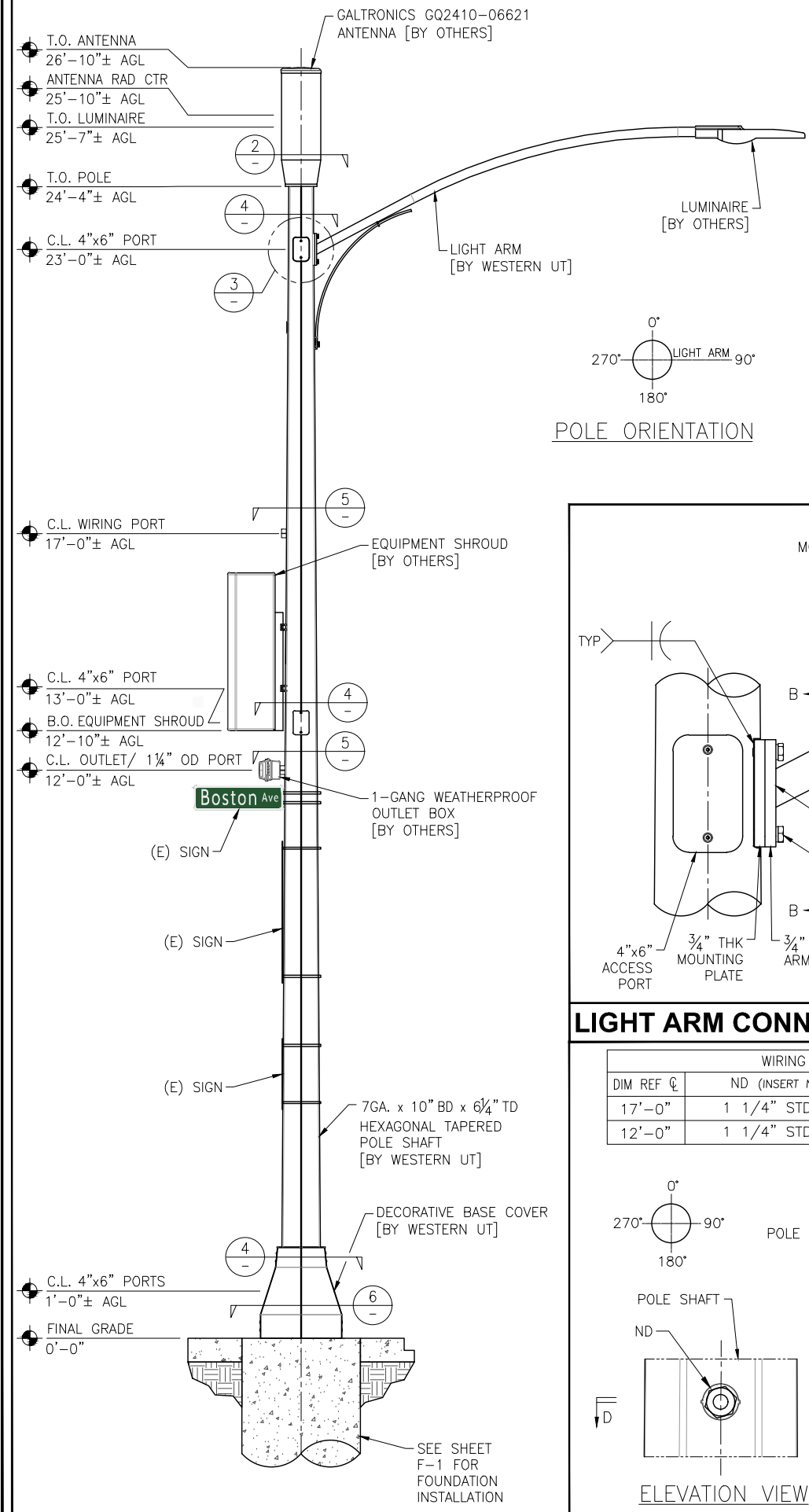
SPECIAL INSPECTION: THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER 2009/2012 IBC, SECTION 1704

ITEM DESCRIPTION	INSPECTION BY	MATERIAL
1. PIER EXCAVATION LATERAL BEARING CAPACITY	SOILS ENGINEER	300 PSF/FT LATERAL
2. PIER CONSTRUCTION REINFORCING STEEL BAR SIZES AND INSTALLATION	SPECIAL INSPECTOR	ASTM A615 GR. 60
3. ANCHOR BOLTS BOLT SIZE AND LENGTHS INSTALLATION	SPECIAL INSPECTOR	ASTM F1554 GR. 55
4. CONCRETE TEST SPECIMENS PLACEMENT OF CONCRETE	SPECIAL INSPECTOR	f'c=4,000 PSI TYPE II CEMENT

FOUNDATION DESIGN PREPARED BY WESTERN UTILITY/TELECOM, INC.

DESCRIPTION	QTY.	SIZE	LENGTH	WEIGHT	OVERLAP
VERTICAL BARS	8	#6	7'-6"	90 LBS.	N/A
HORIZONTAL TIES	12	#4	8'-4"	67 LBS.	2'-0"

ENGINEERING FIRM	 TOTALLY COMMITTED. <small>NB+C ENGINEERING SERVICES, LLC. 100 APOLLO DRIVE, SUITE 303 CHELMSFORD, MA 01824 (978) 856-8308</small>																								
APPLICANT	 extenet <small>SYSTEMS 3030 WARRENVILLE ROAD, SUITE 340 LISLE, IL 60532 (630) 505-3800</small>																								
SITE INFORMATION	<p>NE-MA-BSTN3N01-03344 TMO ID: NE3211BA_31LAB 34 PEARL STREET SOMERVILLE, MA 02145 MIDDLESEX COUNTY</p>																								
DESIGN RECORD	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>08/28/20</td> <td>POLE DETAILS ADDED</td> <td>RAL</td> </tr> <tr> <td>3</td> <td>02/28/20</td> <td>REVISED PER DPW COMMENTS</td> <td>DRG</td> </tr> <tr> <td>2</td> <td>09/12/19</td> <td>REVISED</td> <td>NSB</td> </tr> <tr> <td>1</td> <td>08/06/19</td> <td>FINAL</td> <td>CWE</td> </tr> <tr> <td>0</td> <td>05/14/19</td> <td>PRELIMINARY</td> <td>CJI</td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	BY	4	08/28/20	POLE DETAILS ADDED	RAL	3	02/28/20	REVISED PER DPW COMMENTS	DRG	2	09/12/19	REVISED	NSB	1	08/06/19	FINAL	CWE	0	05/14/19	PRELIMINARY	CJI
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PROFESSIONAL STAMP																									
ENGINEER	<p>KRUPAKARAN KOLANDAIVELU, P.E. MA PROFESSIONAL ENGINEER LIC. #50019</p>																								
SHEET TITLE	<p>FOUNDATION DETAILS & NOTES</p>																								
SHEET NUMBER	<p>SHEET 06 OF 06</p>																								



GENERAL DESIGN NOTES:

DESIGN NOTES AND MATERIAL REQUIREMENTS:

1) THE DESIGN CRITERIA FOR THIS STRUCTURE IS AS FOLLOWS:

A) STANDARDS AND DESIGN CODES:
INDUSTRY STANDARD: ANSI/TIA-222-G, 2015 IBC
1609.1.1 EXCEPTION 5
STEEL MANUAL: AISC 14TH EDITION
CONCRETE CODE: ACI 318-14
WELDING CODE: ANSI/AWS D1.1.1

B) DESIGN:
WIND(V_{std}): 110 MPH (3-SECOND GUST) PER ANSI/TIA-222-G
CLASSIFICATION OF STRUCTURE: II
EXPOSURE CATEGORY: B
TOPOGRAPHIC CATEGORY: 1
WIND(V_{ult}): 142 MPH (3-SECOND GUST) RISK CAT. II, PER 2015 IBC, SECTION 1609.3.1
ICE: 1" RADIAL ICE @ 40 MPH (3-SECOND GUST)
SOIL: PER 2015 IBC, TABLE 1806.2, CLASS 5 MAT'L
SEISMIC: PER 2015 IBC SECTION 1613, ASCE 7-10, SECTIONS 15.1.3 & 12.8

C) LOADING:
(1) 10" Ø X 24.9" TALL CANISTER ANTENNA, WT. = 35 LBS., C.L. @ 25.83' ± AGL
(1) TOP MOUNT W/SHROUD, WT. = 35 LBS., C.L. @ 24.42' ± AGL
(1) COBRA HEAD LUMINAIRE, WT. = 35 LBS., C.L. @ 25.58' ± AGL
(1) 8'-0" LONG RAISED LIGHT ARM, WT. = 120 LBS. C.L. @ 25' ± AGL
(2) 72" TALL X 30" BANNER, WT. = 25 LBS. C.L. @ 17.5' ± AGL
(1) EXISTING CAMERA, WT. = 30 LBS. C.L. @ 18.6' ± AGL
(1) EQUIPMENT SHROUD, WT. = 200 LBS. C.L. @ 14.6' ± AGL
(1) EXISTING SPEED LIMIT SIGN GROUP, WT. = 35 LBS. C.L. @ 10.5' ± AGL
(1) EXISTING SIGN, WT. = 35 LBS. C.L. @ 5.58' ± AGL
(1) DISCONNECT BOX, WT. = 15 LBS. C.L. @ 12' ± AGL

D) FACTORED BASE REACTIONS:
OVERTURNING MOMENT = 35.6 FT-KIPS
BASE SHEAR = 2.43 KIPS
BASE WEIGHT = 1.19 KIPS

2) GENERAL STRUCTURAL NOTES:
A) ALL MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:
POLE SHAFT: ASTM A595 GR. A/A1011 HSLA GR. 55
BASE PLATE: ASTM A572 GR. 50
PORTS: ASTM A500 GR. B (RECT.)
SHAPES/PLATES: ASTM A36
WELDS: E70XX ELECTRODES
STRUCTURAL BOLTS: ASTM F3125 GR. A325
ANCHOR BOLTS: ASTM F1554 GR. 55
REBAR: ASTM A615 GR. 60
B) ALL WELDING TO BE PERFORMED BY WELDERS CERTIFIED IN ACCORDANCE WITH AWS D1.1. FIELD WELDING IS PROHIBITED.
C) ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
D) ALL STRUCTURAL BOLTS SHALL BE TIGHTENED TO SNUG-TIGHT AS DEFINED BY AISC 14TH EDITION, PG. 16.2-46 PARAGRAPH 8.1

GENERAL NOTES:

1) CONTRACTOR SHALL FIELD VERIFY SITE OR LAYOUT RESTRICTIONS, SITE CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF WESTERN UT, INC. PRIOR TO BEGINNING PROJECT. ALL WORK SHALL BE PERFORMED USING ACCEPTED CONSTRUCTION PRACTICES.

2) NO FIELD MODIFICATIONS MAY BE MADE TO MONOPOLE WITHOUT THE EXPRESS WRITTEN CONSENT FROM THE ENGINEER OF RECORD. WESTERN UT, INC. AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THE STRUCTURE IF ALTERATIONS AND/OR ADDITIONS ARE MADE TO THE DESIGN AS SHOWN IN THESE DRAWINGS.

3) THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.

4) THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK TO THE BEST OF HIS/HER ABILITY AND SKILL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

5) THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING SAME, WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, FORMWORK, ETC., AND SHALL CONFORM TO ALL NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, IN ORDER TO SAFELY EXECUTE ALL STAGES OF WORK TO COMPLETE THIS PROJECT.

6) IT IS THE INTENT OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION OF THE STRUCTURE SHOWN.

7) CONTRACTOR ASSUMES RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THIS REQUIREMENT APPLIES CONTINUOUSLY, AND IS NOT LIMITED TO NORMAL WORKING HOURS.

8) CONTRACTOR TO HOLD ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

9) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN. THE CONTRACTOR IS FINANCIALLY RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK ON THIS PROJECT.

CONSULTANT

WESTERN
UTILITY / TELECOM, INC.

5032 SALEM DALLAS HWY
SALEM, OR 97304
Ph: 503-587-0101 Fax: 503-316-1864
WesternUtilityTelecom.com

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CLIENT

extenet
SYSTEMS

PROJECT

24'- 4" TALL, HEXAGONAL
TAPERED ANTENNA/LIGHT POLE

LOCATION

**NE-MA-CMARD3M1-ATT
NODE 39**
693 BROADWAY
SOMMERVILLE, MA 02155
MIDDLESEX COUNTY

ISSUED FOR

PERMIT/INSTALL

DW'N BY: JH CK'D BY: AM DATE: 05MAY20

REVISIONS

REV.	CHANGES	DATE	BY

ENGINEER SEAL

ALVIN A. KRAFT
STRUCTURAL
No. 38569
REGISTERED PROFESSIONAL ENGINEER

5/7/2020

SHEET TITLE

ELEVATION VIEW &
STRUCTURAL DETAILS

WUT PROJECT NUMBER

20-0116

DRAWING NUMBER

PD-002009

PAGE NUMBER

S-1