



LATITUDE: 42.346804°
LONGITUDE: -71.067667°

NE-MA-BSTN3N01-TMO
NE-MA-BSTN3N01-03739 / NE3576BA_11LAB
PROPOSED SMALL CELL NODE
398-498 TREMONT STREET, BOSTON, MA 02118
CITY OF BOSTON, SUFFOLK COUNTY



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ENGINEERING FIRM



APPLICANT



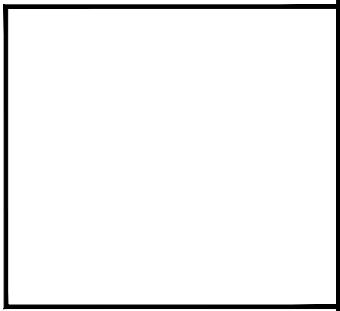
SITE INFORMATION

NE-MA-BSTN3N01-03739
TMO ID: NE3576BA_11LAB
398-498 TREMONT STREET
BOSTON, MA 02118
SUFFOLK COUNTY

DESIGN RECORD

REVISIONS			
REV	DATE	DESCRIPTION	BY
1	07/30/19	METER REMOVED	CWE
0	05/02/19	PRELIMINARY	NSB

PROFESSIONAL STAMP



ENGINEER

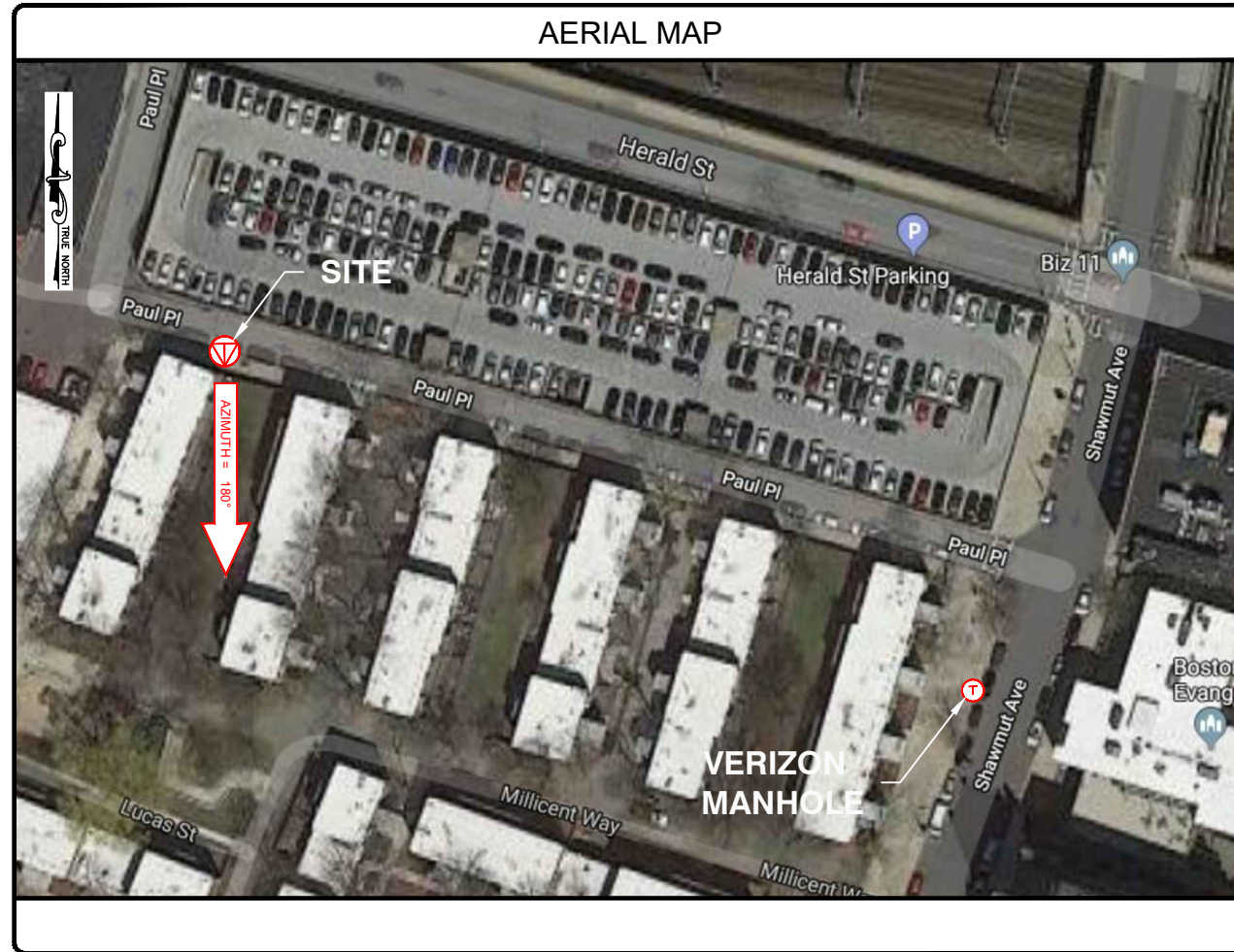
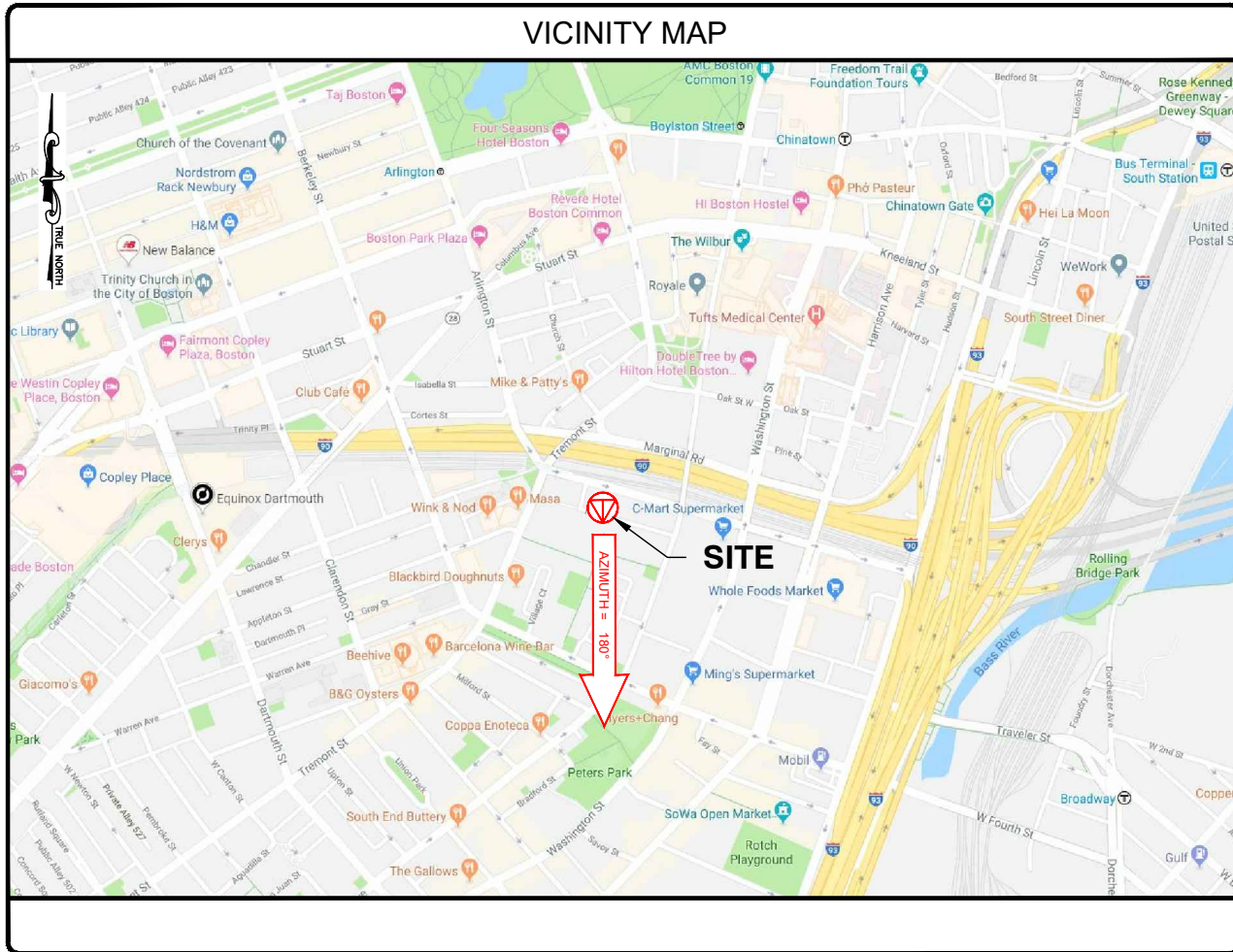
KRUPAKARAN KOLANDAIVELU, P.E.
MA PROFESSIONAL ENGINEER LIC. #50019

SHEET TITLE

TITLE SHEET

SHEET NUMBER

SHEET
01 OF 06



PROJECT INFORMATION	
PROJECT NAME:	NE-MA-BSTN3N01-TMO
POLE TAG:	NO TAG LATITUDE: 42.346804° LONGITUDE: -71.067667°
JURISDICTION:	CITY OF BOSTON SUFFOLK COUNTY
EXTENET PROJECT MANAGER:	RICK ANGELINI 3030 WARRENVILLE RD, SUITE 340 LISLE, IL 60532 NOC: (866) 892-5327
HUB LOCATION:	HUB: 4DE1078A 140 CLARENDON STREET BOSTON, MA 02116
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

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL GIVE ALL NOTICE 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 HAS 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 SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
...
23. AFTER COMPLETION OF CONSTRUCTION, RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO CONSTRUCTION MANAGER.

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.
2. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT.
...
11. CONDUIT:
A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR.
...
C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.

- D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILING 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.
E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
F. UNDERGROUND CONDUIT SHALL BE SCHEDULE 80 PVC CONDUIT AS REQUIRED BY LOCAL JURISDICTION AND/OR UTILITY.
12. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
...
15. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.

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.
3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE.
...
17. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
18. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL.
...
19. ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

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. IF ANY EQUIPMENT HAS A GROUND POINT ON IT, IT SHOULD BE GROUND.
...
DIPLXERS/DUPLXERS/SPLITTERS/PASSIVE COMPONENTS
IF IT HAS A PLACE FOR A GROUND TO BE INSTALLED - INSTALL IT.
ANY STRUCTURE OR FRAME SHOULD HAVE 2 GROUND WIRE, I.E. MAST PIPES, OUTDOOR ENCLOSURES, SHROUDS, BUSS BAR HOME RUN TO EARTH GROUND. ALL EQUIPMENT HAS 6 TO BUSS BARS.
...
GREEN HEAT SHRINK.

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.
2. WRAP CONNECTIONS WITH BUTYL WEATHER SEALANT WITH TWO LAYERS TO FORM A CONE LIKE SHAPE. OVER LAPPING THE LAYERS BY AT LEAST 50%. MOLD SEALANT TO PROPER SHAPE. THIS STEP IS CRUCIAL OR THE BUTYL WILL LEAK OVER TIME.
...
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.
2. USE ONLY OUTDOOR RATED HEAT SHRINK THAT HAS THE SELF-ADHESIVE WHEN HEATED PROPERLY.
...
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.



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Table with columns: REV, DATE, DESCRIPTION, BY. Row 1: 1, 07/30/19, METER REMOVED, CWE. Row 2: 0, 05/02/19, PRELIMINARY, NSB.

REVISIONS

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

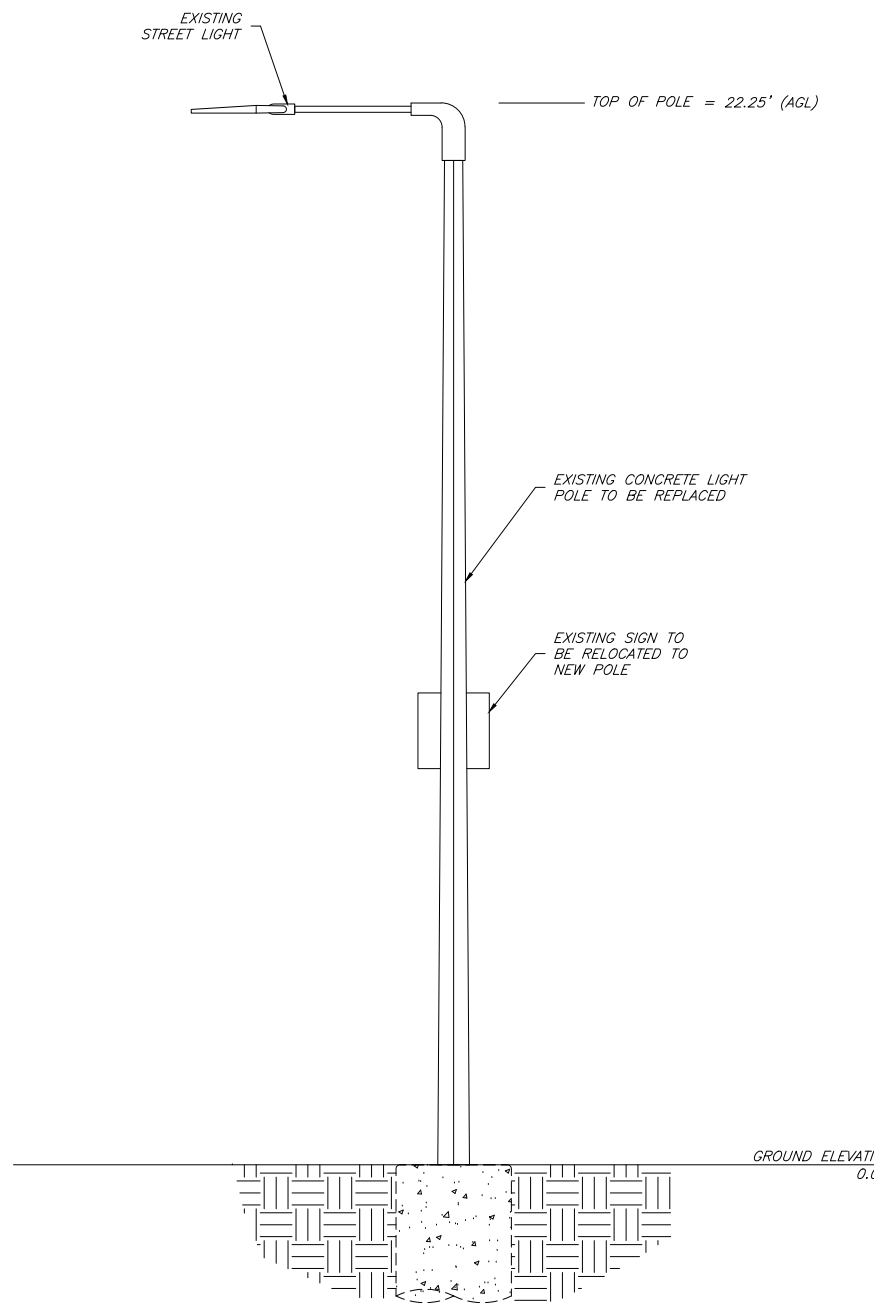
NOTES

SHEET
02 OF 06

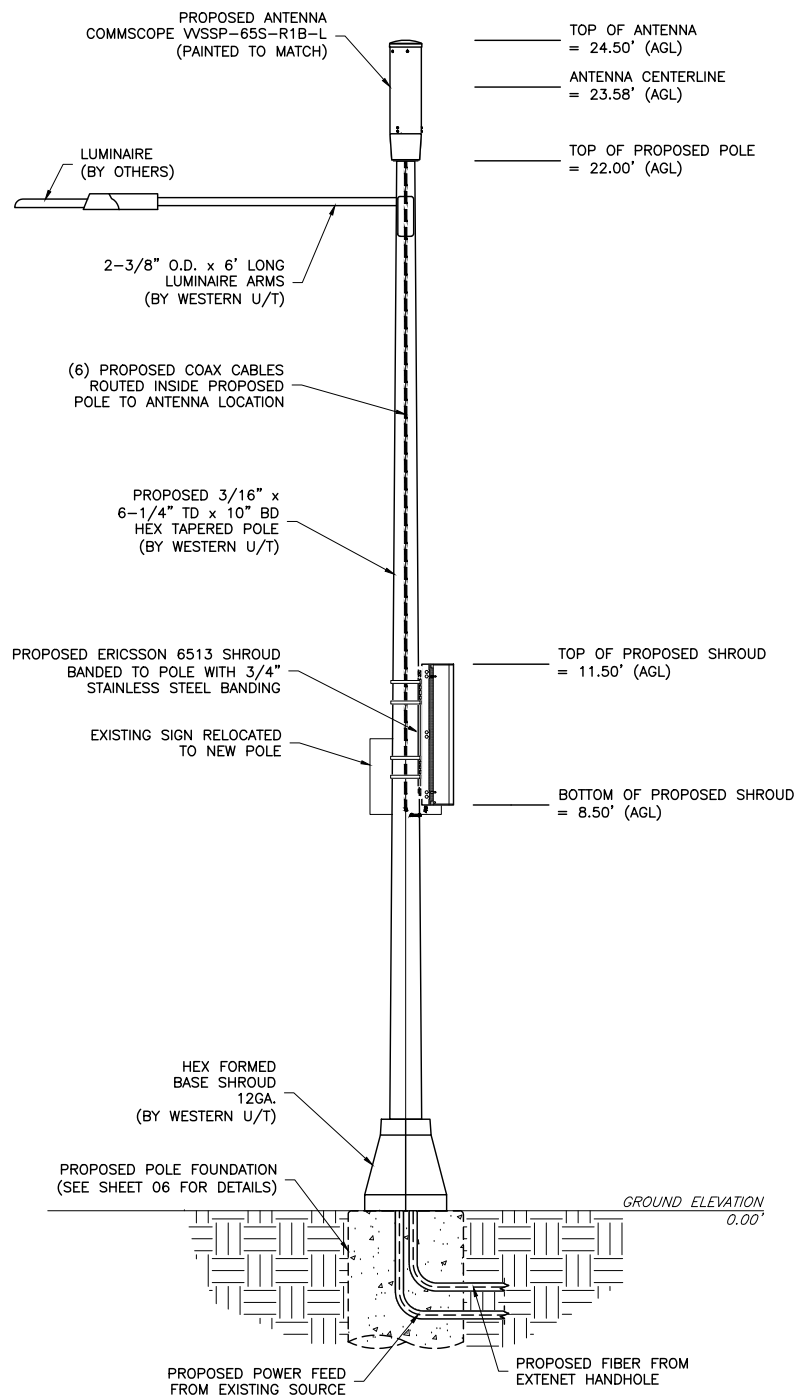
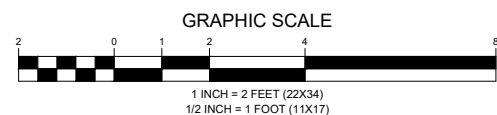


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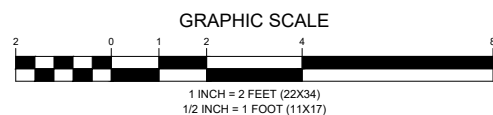
ENGINEERING FIRM
APPLICANT
SITE INFORMATION
DESIGN RECORD
PROFESSIONAL STAMP
ENGINEER
SHEET TITLE
SHEET NUMBER



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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NB+C ENGINEERING SERVICES, LLC.
100 APOLLO DRIVE, SUITE 303
CHELMSFORD, MA 01824
(978) 856-8308

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3030 WARRENVILLE ROAD, SUITE 340
LISLE, IL 60532
(630) 505-3800

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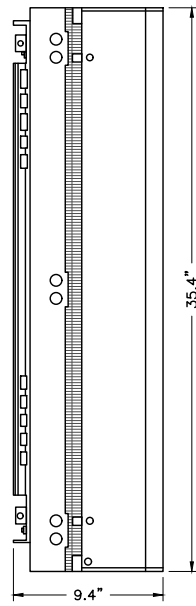
KRUPAKARAN KOLANDAIVELU, P.E.
MA PROFESSIONAL ENGINEER LIC. #50019

SHEET TITLE

ELEVATION

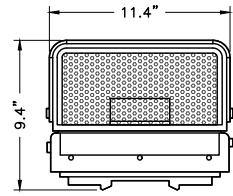
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SHEET
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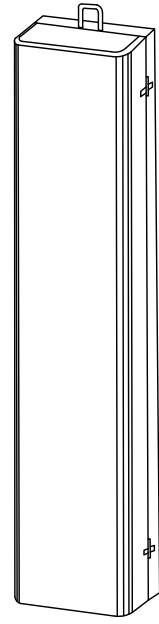


SIDE ELEVATION

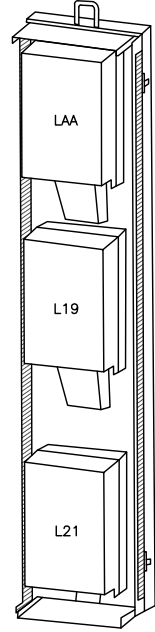
MECHANICAL SPECIFICATIONS
 ERICSSON PART# - ENCLOSURE 6513
 HEIGHT: 35.4 IN
 WIDTH: 11.4 IN
 DEPTH: 9.4 IN
 WEIGHT: 29.8 LBS (ENCLOSURE ONLY)
 WEIGHT: 71.4 LBS (FULLY EQUIPPED)



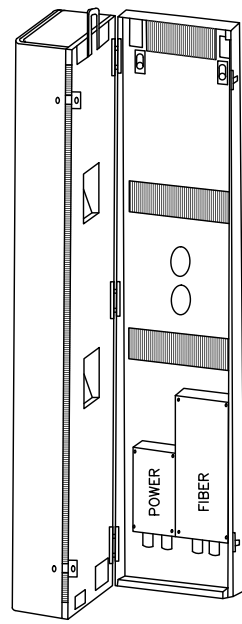
BOTTOM PLAN



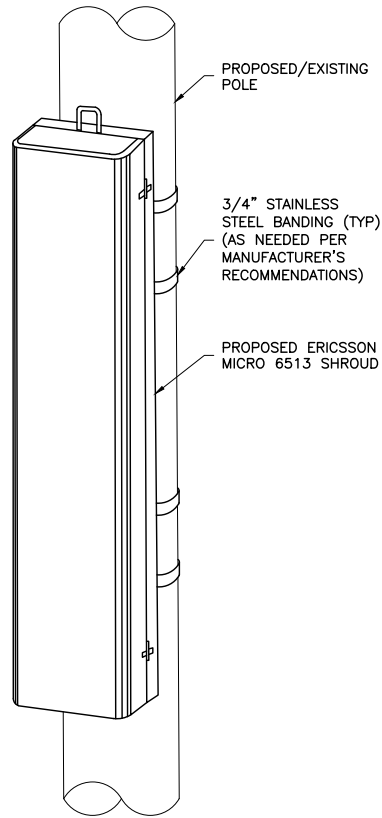
FRONT CLOSED ELEVATION



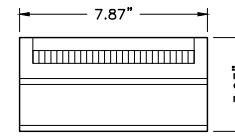
FRONT INTERIOR ELEVATION



BACK INTERIOR ELEVATION

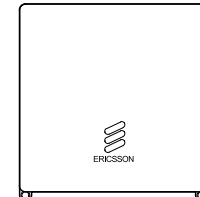


2 EQUIPMENT MOUNTING DETAIL
04 NTS

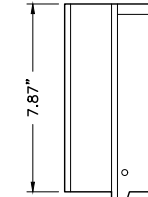


TOP VIEW

WEIGHT = 9.92LBS



FRONT ELEVATION

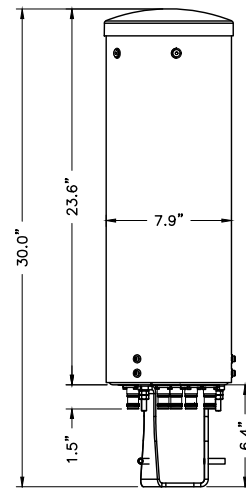


SIDE ELEVATION

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

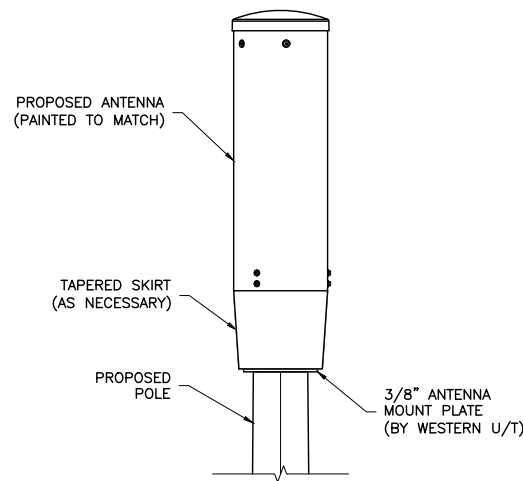
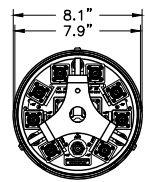
3 ERICSSON REMOTE RADIO UNIT (RRU)
04 NTS

1 ERICSSON MICRO 6513 SHROUD DETAIL
04 NTS

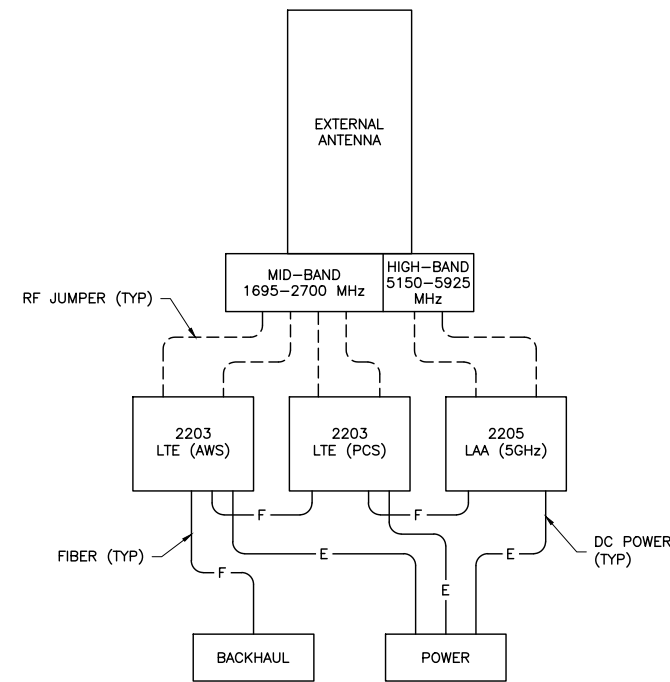


4 ANTENNA DETAIL
04 NTS

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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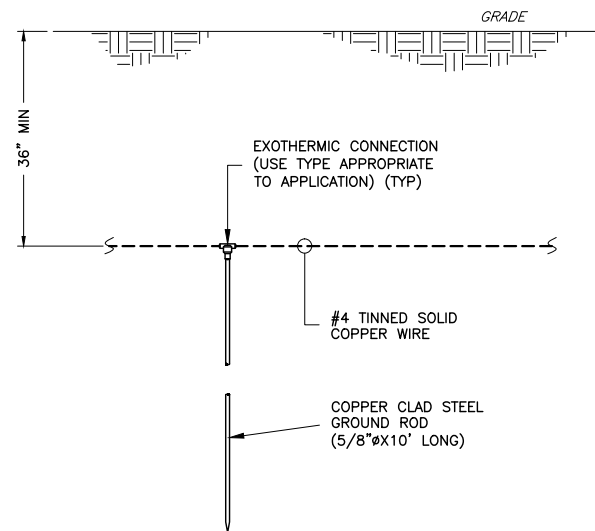
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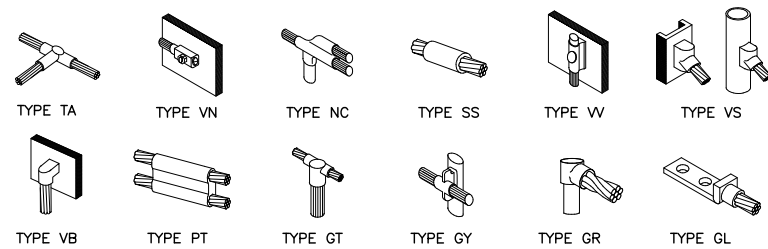
ANTENNA & EQUIPMENT DETAILS

SHEET NUMBER

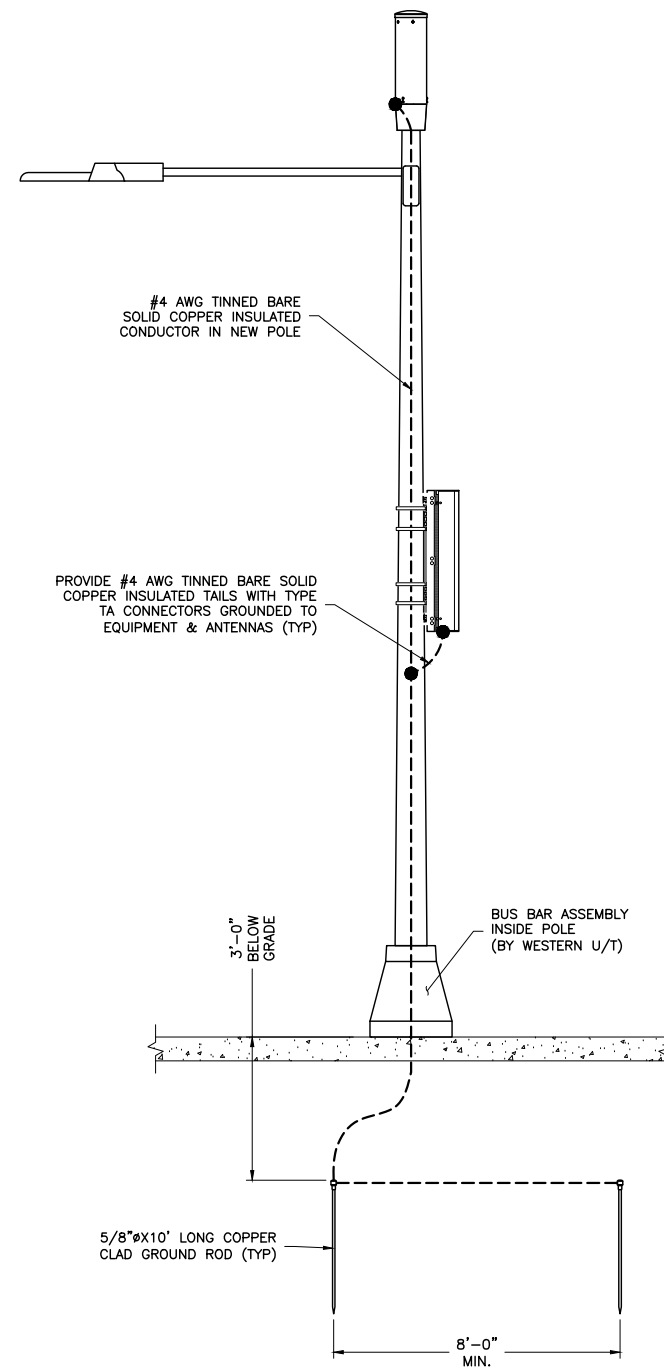
SHEET
04 OF 06



1
05
NTS
TYPICAL GROUND ROD DETAIL



2
05
NTS
GROUNDING CONNECTION DETAILS



3
05
NTS
ELECTRICAL & GROUNDING RISER DIAGRAM

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

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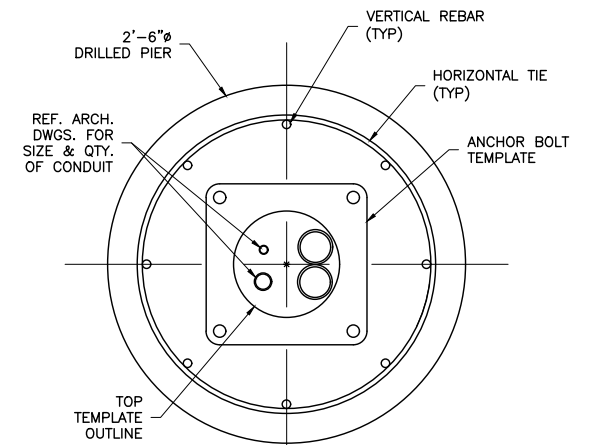
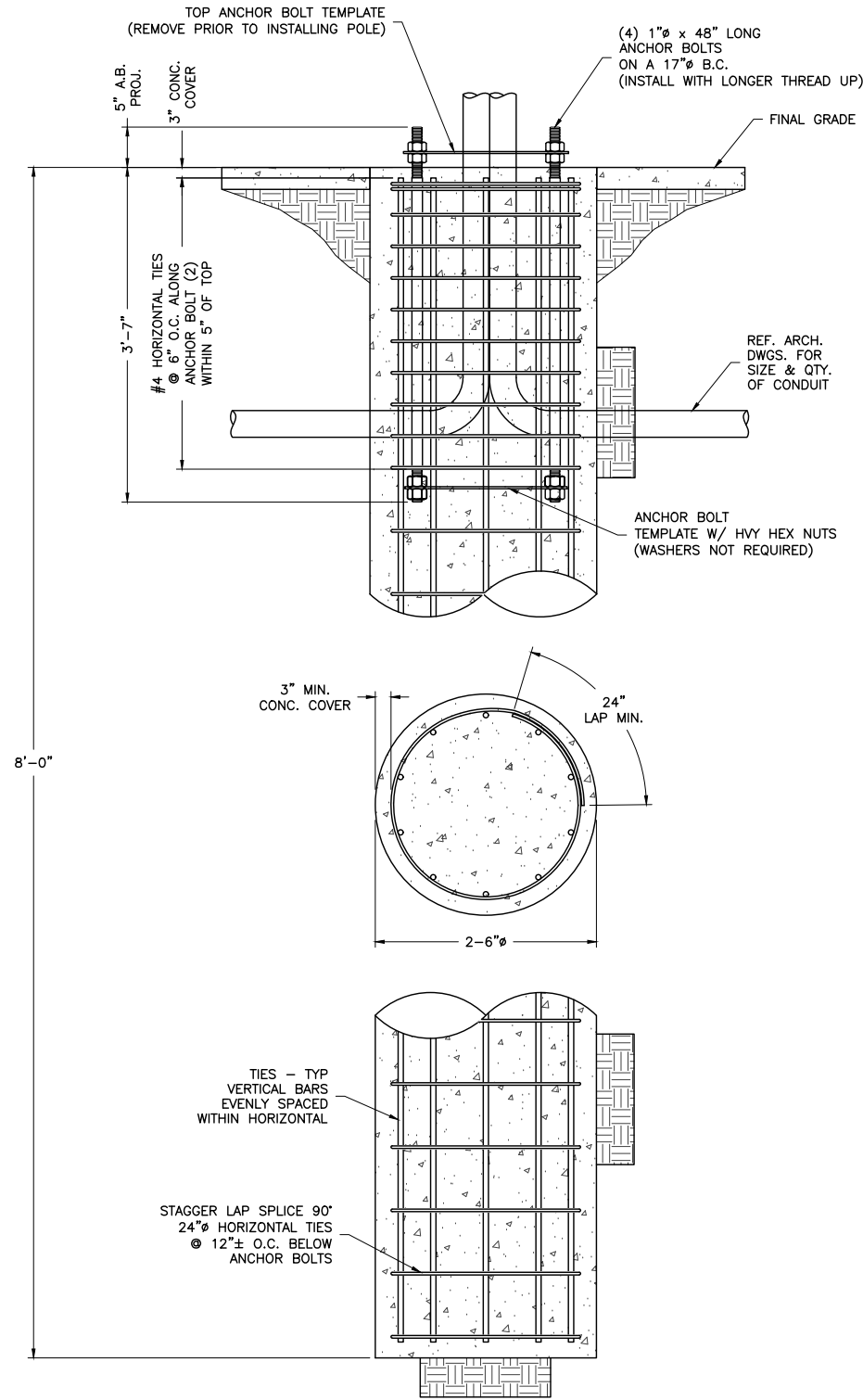
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**ELECTRICAL
& GROUNDING
DETAILS**

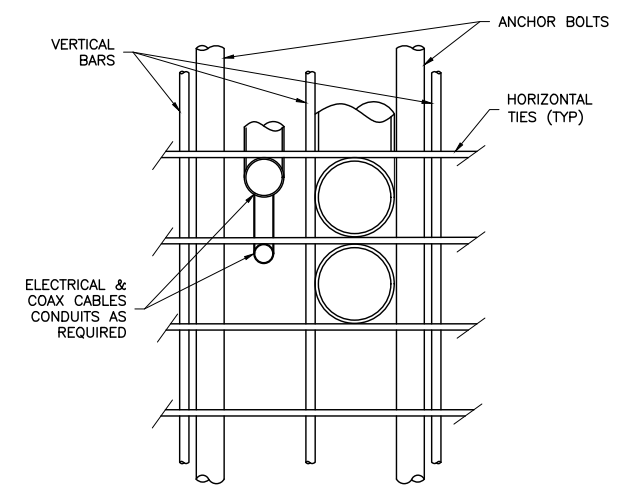
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SHEET
05 OF 06



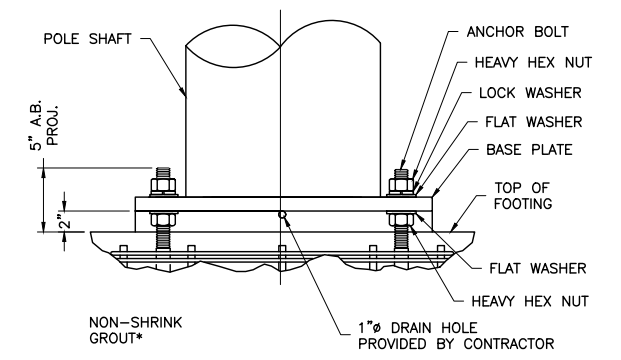
INSTALL CONDUIT IN CENTER OF CLUSTER TO CLEAR BASEPLATE

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

1. CONTRACTOR IS RESPONSIBLE FOR CHECKING AREA FOR UNDERGROUND FACILITIES PRIOR TO EXCAVATING ANY MATERIALS.
2. CONTRACTOR SHALL INSPECT AND REMOVE ALL DEBRIS FROM BOTTOM OF EXCAVATION.
3. CONTRACTOR SHALL VERIFY ANCHOR BOLT LAYOUT PRIOR TO, AND IMMEDIATELY AFTER PLACING CONCRETE. ANCHOR BOLT LAYOUT IS CRITICAL FOR MONOPOLE INSTALLATION.
4. 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.
5. 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.
6. CONCRETE SHALL BE CONSOLIDATED USING VIBRATORY METHODS THROUGHOUT DEPTH OF FOUNDATION. VIBRATING LOWER DEPTHS MAY BE ACCOMPLISHED BY TOUCHING REBAR CAGE WITH VIBRATOR.
7. 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.
8. 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.
9. 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.
10. DRILLED PIER FOUNDATION DESIGN PER 2009/2012 IBC, TABLE 1806.2, CLASS 4 MATERIAL.
11. 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	 YOUR NETWORK EVERYWHERE. <small>SYSTEMS 3030 WARRENVILLE ROAD, SUITE 340 LISLE, IL 60532 (630) 505-3800</small>																
SITE INFORMATION	NE-MA-BSTN3N01-03739 TMO ID: NE3576BA_11LAB 398-498 TREMONT STREET BOSTON, MA 02118 SUFFOLK COUNTY																
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>07/30/19</td> <td>METER REMOVED</td> <td>CWE</td> </tr> <tr> <td>0</td> <td>05/02/19</td> <td>PRELIMINARY</td> <td>NSB</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	1	07/30/19	METER REMOVED	CWE	0	05/02/19	PRELIMINARY	NSB
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PROFESSIONAL STAMP	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>																
ENGINEER	<small>KRUPAKARAN KOLANDAIVELU, P.E. MA PROFESSIONAL ENGINEER LIC. #50019</small>																
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