

Extenet Systems, Inc.



BOSTON LANDMARKS COMMISSION - 2/25/20

COLIN ROBINSON

Scope of Work:

- ▶ Attach a wireless communications antenna at the top of the new pole along with related equipment side mounted below. Utilities to be brought underground to the new pole.
- ▶ This replacement will be done in accordance with the Agreement between the Applicant and the City of Boston.

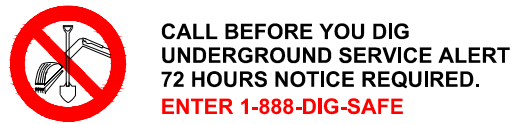
LOCATION	DESCRIPTION
Storrow Dr and Charles St (NE-MA-BSTBSC01-00070)	Existing metal streetlight, within a row of metal street lights.
Storrow Dr and Leverett Cir (NE-MA-BOSTD3M1-04001)	Existing metal streetlight, within a row of metal street lights.

CRAN ID / EXTENET ID:
CRAN_RCTB_2HA4_070/NE-MA-BSTBSC01-00070

LATITUDE / LONGITUDE:
42.36361238° / -71.07060934°

SITE ADDRESS:
STORROW DR

CITY, STATE, ZIP:
BOSTON, MA 02114



NOTE:
GENERAL CONTRACTOR IS REQUIRED TO CROSS CHECK COORDINATES, EXHIBIT PHOTO, AERIAL PHOTO AND SITE PLAN TO ENSURE PROPER POLE LOCATION PRIOR TO BREAKING GROUND, CONCERNS OR QUESTIONS SHOULD BE IMMEDIATELY DIRECTED TO ASSIGNED EXTENET PROJECT MANAGER.

Location and Design Approved
Boston Public Works
Street Lighting Department

By: _____
Date: _____



FOR PERMITTING PURPOSES ONLY

LOCATION:
STORROW DR
BOSTON, MA 02114
SUFFOLK COUNTY

P.E. STAMP AREA:

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE.

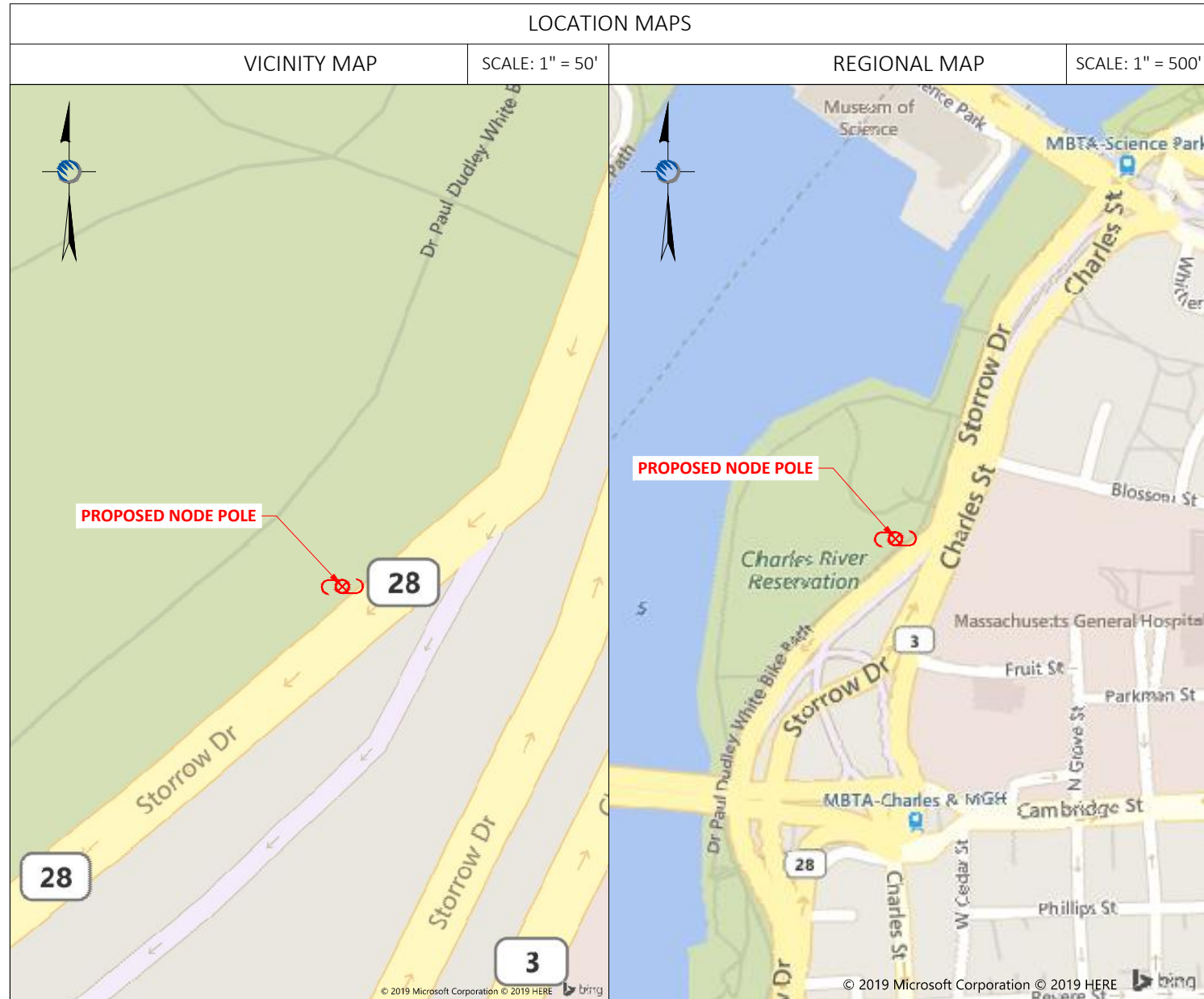
SITE INFORMATION	
CRAN ID:	CRAN_RCTB_2HA4_070
EXTENET NODE ID:	NE-MA-BSTBSC01-00070
LATITUDE:	42.36361238°
LONGITUDE:	-71.07060934°
SITE ADDRESS:	STORROW DR
CITY, STATE ZIP:	BOSTON, MA 02114
COUNTY:	SUFFOLK
JURISDICTION:	BOSTON
PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
APPLICANT:	EXTENET SYSTEMS 876 HAMMOND ST CHESTNUT HILL, MA 02467 (617) 232-4154

ENGINEER

RICK ANGELINI
3030 WARRENVILLE RD
SUITE 340
LISLE, IL 60532
NOC: (866) 892-5327

DO NOT SCALE DRAWINGS

CONTRACTORS SHALL VERIFY ALL PLANS, (EX.) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



PROJECT DESCRIPTION

INVOLVING INSTALLMENT:
THESE PLANS REPRESENT A PORTION OF A PROPOSED SMALL CELL BUILD INVOLVING THE INSTALLMENT OF AN ANTENNA AND RADIO EQUIPMENT ON AN EXISTING WOODEN UTILITY OR REPLACEMENT METAL STREETLIGHT POLE.

CODES

2019 INTERNATIONAL BUILDING CODE
NATIONAL ELECTRIC SAFETY CODE
TIA/EIA-222-G-2 OR LATEST EDITION
LOCAL BUILDING / PLANNING CODE

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
A-1	SITE PLAN & EXHIBIT PHOTO
A-2	ELEVATIONS
A-3	ELEVATIONS
D-1	ANTENNA DETAILS
D-2	RADIO SHROUD DETAILS
D-3	FOUNDATION DETAILS
D-4	GROUNDING & WIRING DIAGRAMS
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES

DRAWING NOTES:

ORIGINAL PLAN:	SCALE:	AS NOTED
DRAWN BY:	GL	
PLAN ORIG. DATE:	3/11/19	

REVISIONS:

REV	DESCRIPTION	BY	DATE

SITE INFO:

LAT: 42.36361238°
LONG: -71.07060934°

CRAN ID:
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EXTENET NODE ID:
NE-MA-BSTBSC01-00070

SITE ADDRESS:
STORROW DR

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:

T-1

NOTE:
EXHIBIT PHOTO IS FOR
REFERENCE USE ONLY AND
SHOULD NOT BE USED FOR
CONSTRUCTION PURPOSES.



PROPOSED NODE POLE

EXHIBIT PHOTO

SCALE: NOT TO SCALE

1

NOTE:
1. ALL DAMAGED AREAS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION.
2. THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS / ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.
3. GENERAL CONTRACTORS ARE REQUIRED TO CROSS CHECK COORDINATES, AERIAL PHOTO AND SITE PLAN TO ENSURE PROPER POLE LOCATION PRIOR TO BREAKING GROUND. CONCERNS OR QUESTIONS SHOULD BE IMMEDIATELY DIRECTED TO THE ASSIGNED EXTENET PROJECT MANAGER.

TEDDY EBERSOL'S
RED SOX FIELDS

EXISTING METAL STREETLIGHT
POLE TO BE REPLACED AND USED
FOR MOUNTING ANTENNA AND
RADIO EQUIPMENT

APPROXIMATE ROW LINES
ESTABLISHED FROM TAX MAPS

58'-2"± EOP

183'-10"± ROW

RCTB
2HA4_070



1" = 30 FEET



ENLARGED SITE PLAN

SCALE: 1" = 30'

3



PROPOSED NODE POLE

AERIAL SITE LOCATION

SCALE: 1" = 60'

2

PLANS PREPARED FOR:

YOUR NETWORK EVERYWHERE

PLANS PREPARED BY:

Innovative Thinking. Engineered Solutions.
21 OXFORD RD
MANSFIELD, MA 02048
www.ucseeng.com 1-508-337-7600

**FOR PERMITTING
PURPOSES ONLY**

LOCATION:
STORROW DR
BOSTON, MA 02114
SUFFOLK COUNTY

P.E. STAMP AREA:

DRAWING NOTES:

ORIGINAL PLAN:	AS NOTED
SCALE:	AS NOTED
DRAWN BY:	GL
PLAN ORIG. DATE:	3/11/19

REVISIONS:			
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SITE ADDRESS:
STORROW DR
SHEET TITLE:
SITE PLAN & EXHIBIT PHOTO

SHEET NUMBER:
A-1

DRAWINGS NOTES:

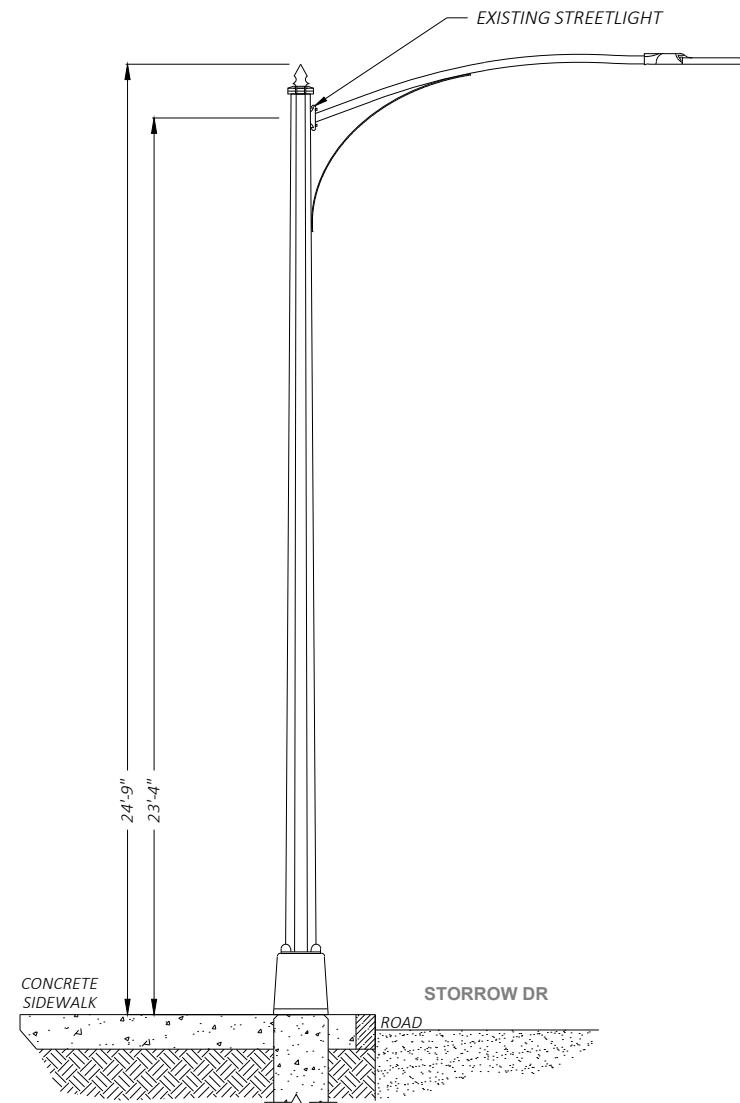
NOTE 1:
40" MIN. WORKER SAFETY ZONE
BETWEEN LOWEST POWER & HIGHEST
COMMUNICATIONS CABLE
IN ACCORDANCE WITH NESC REGULATIONS.

NOTE 2:
PROPOSED FIBER TO BE INSTALLED BY OTHERS.

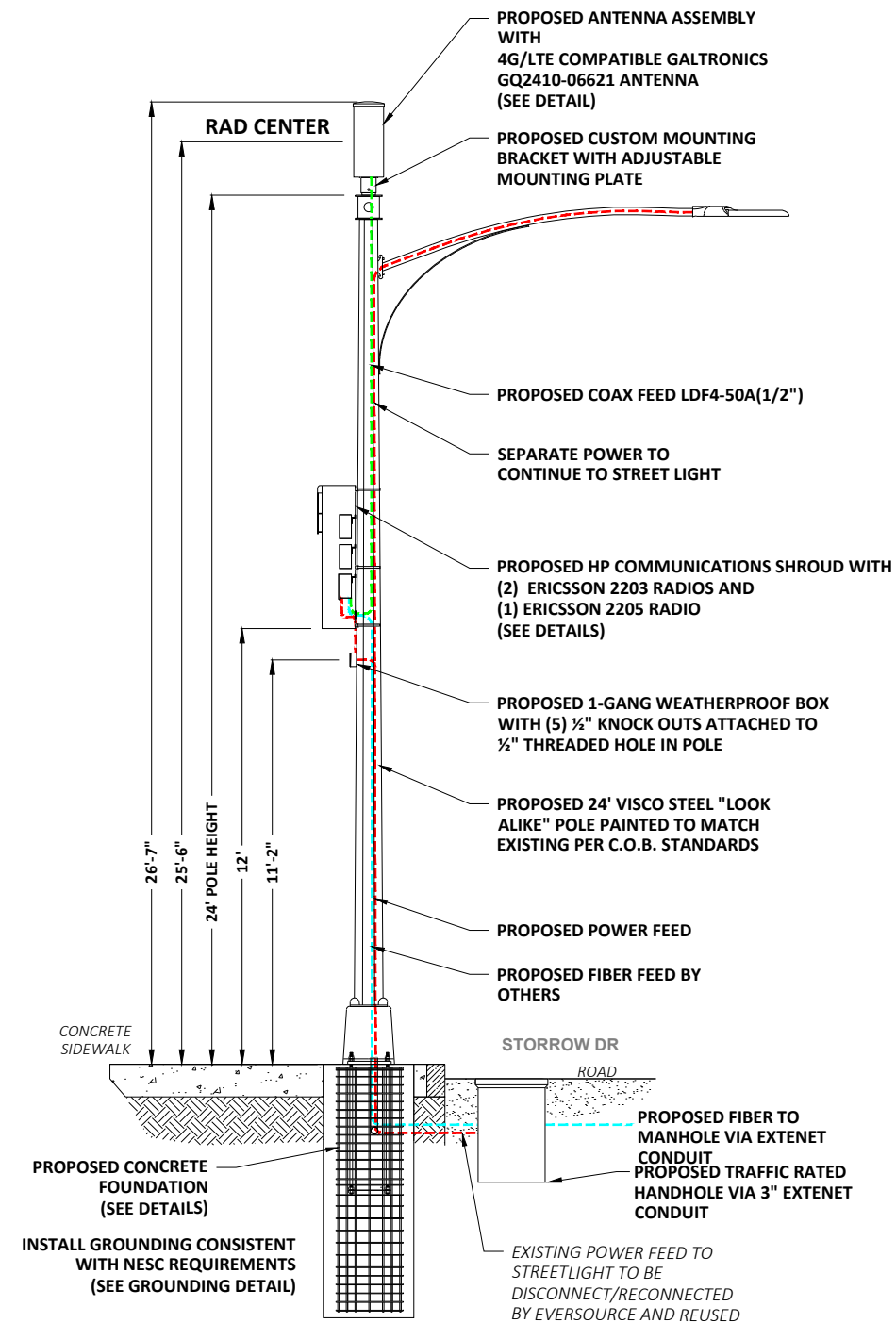
NOTE 3:
PROPOSED EQUIPMENT TO BE PAINTED TO BLEND
WITH POLE.

NOTE 4:
FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE.

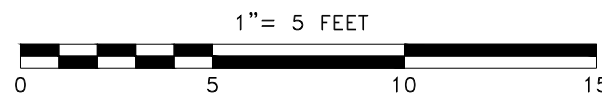
NOTE 5:
PROPOSED EQUIPMENT SHALL BE INSTALLED NO
HIGHER THAN 30" BELOW TELEPHONE UTILITY LINES.



① EXISTING PROFILE - SIDE VIEW
LOOKING NORTHEAST ALONG STORROW DR



① PROPOSED PROFILE - SIDE VIEW
LOOKING NORTHEAST ALONG STORROW DR



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SHEET TITLE:
POLE ELEVATIONS

SHEET NUMBER:
A-2

DRAWINGS NOTES:

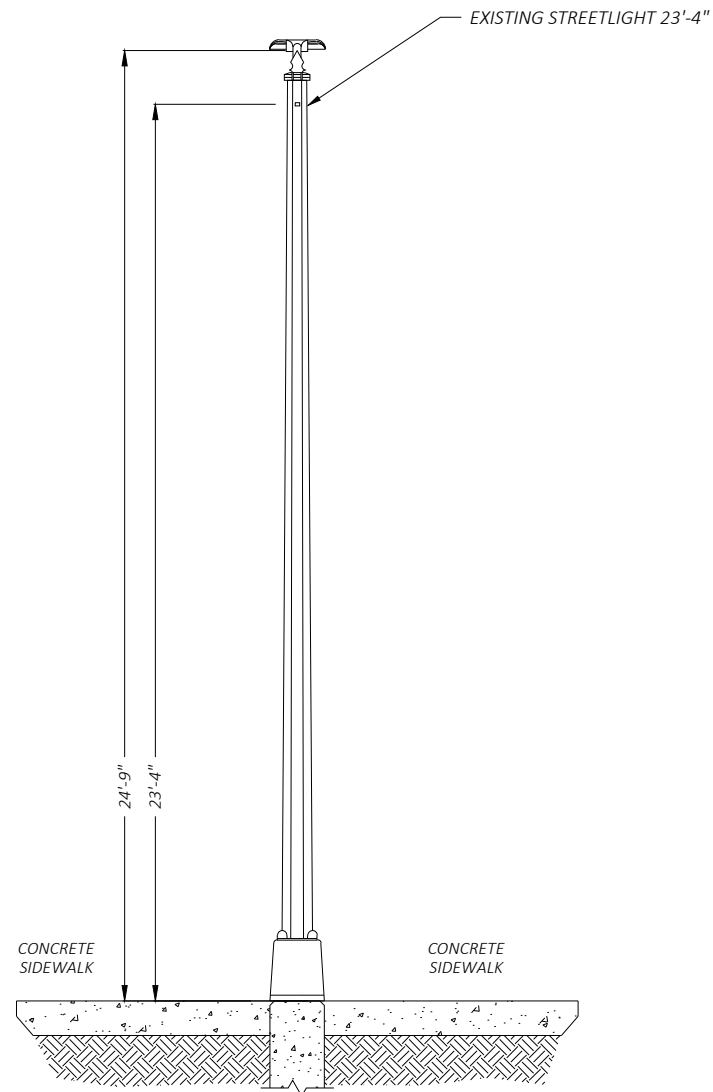
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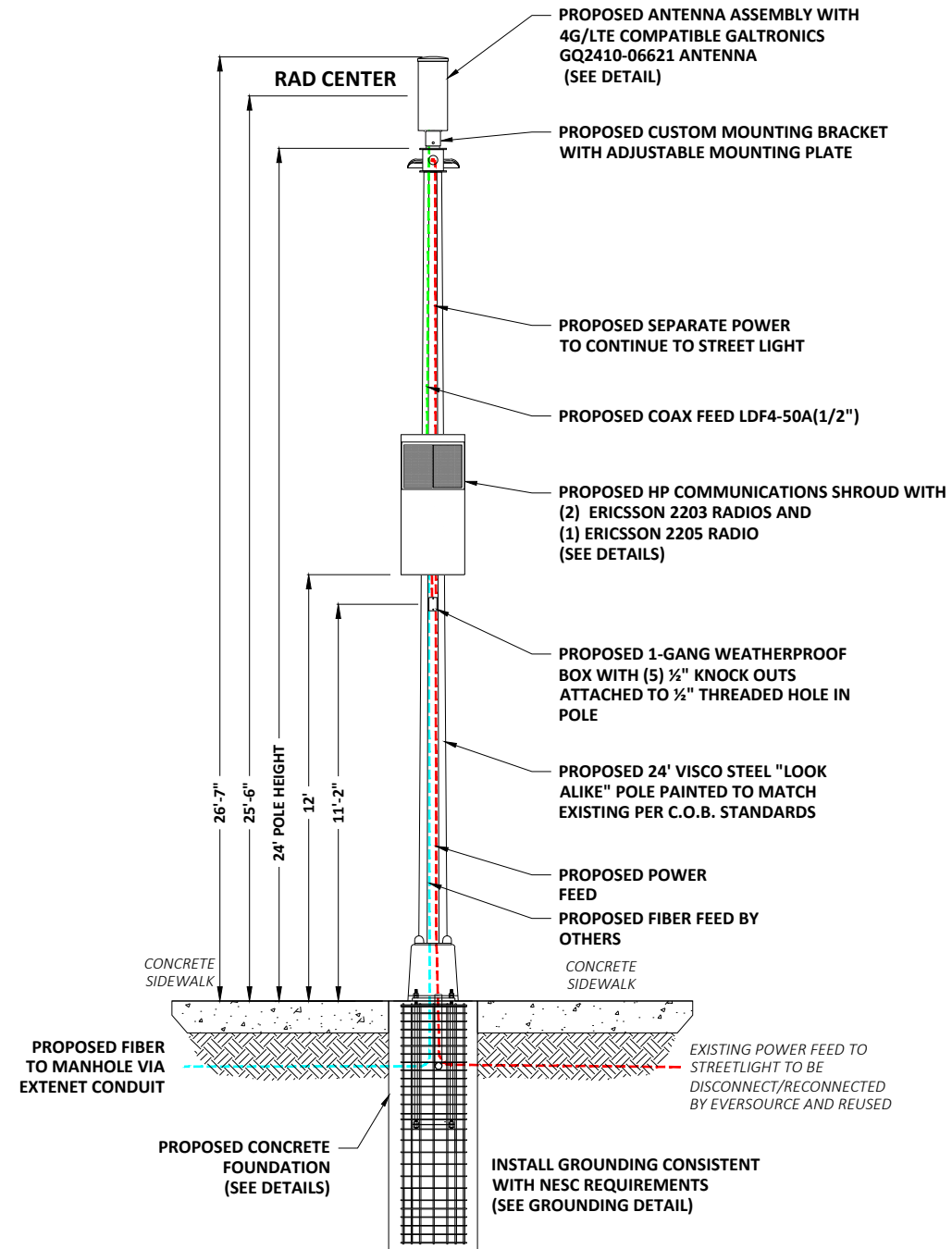
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WITH POLE.

NOTE 4:
FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE.

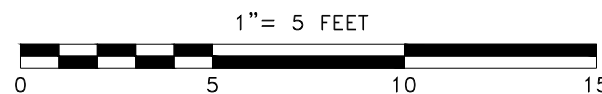
NOTE 5:
PROPOSED EQUIPMENT SHALL BE INSTALLED NO
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② EXISTING PROFILE - REAR VIEW
LOOKING SOUTHEAST TOWARD STORROW DR



② PROPOSED PROFILE - REAR VIEW
LOOKING SOUTHEAST TOWARD STORROW DR



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SHEET TITLE:
POLE ELEVATIONS

SHEET NUMBER:
A-3

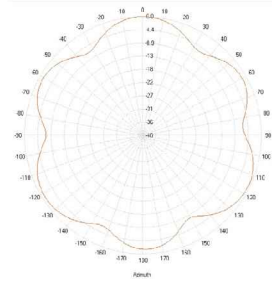


24"x 10" Pseudo Omni 10-Port Canister Antenna [1695-2360, 3550-3700 and 5150-5925 MHz]

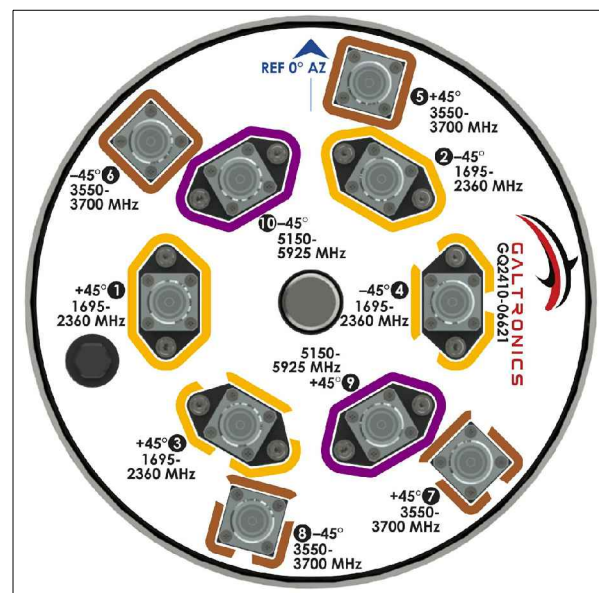
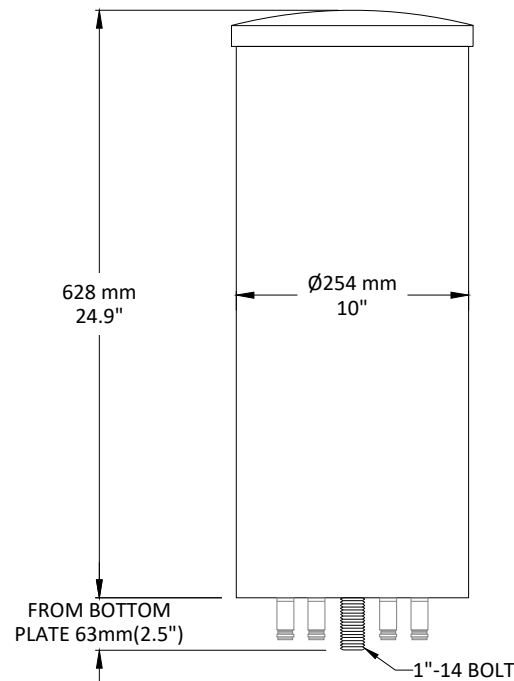
GQ2410-06621

Description:

- Pseudo Omni Canister Antenna for Outdoor DAS and Small Cells.
- 4x ports for AWS/PCS/WCS Band 1695-2360 MHz
- 4x ports for CBRS Band 3550-3700 MHz
- 2x ports for UNII Band 5150-5925 MHz*



1695-2360, 3550-3700 and 5150-5925 MHz Pseudo Omni Canister Antenna

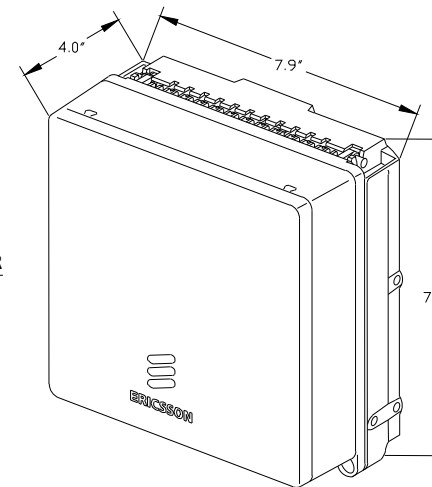


GALTRONICS GQ2410-06621 ANTENNA

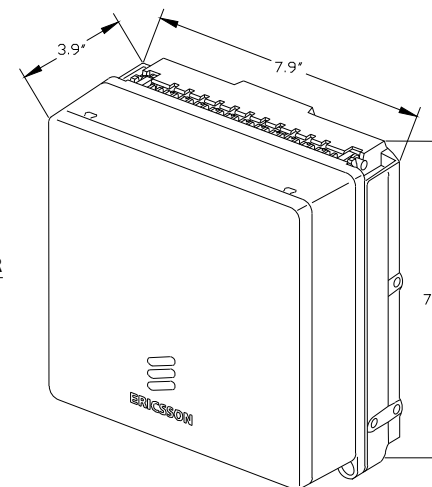
SCALE: NOT TO SCALE

1

ERICSSON RADIO 2205 WITH COVER



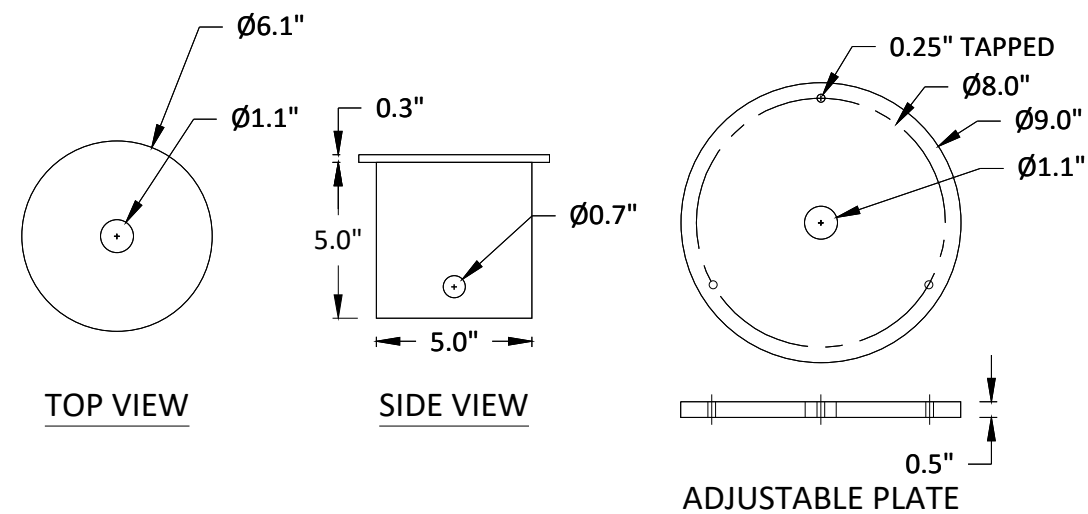
ERICSSON RADIO 2203 WITH COVER



ERICSSON 2203 & 2205 RADIOS WITH COVER
POLE MOUNT REMOTE UNIT

SCALE: NOT TO SCALE

2



CUSTOM MOUNTING BRACKET

SCALE: NOT TO SCALE

3

PLANS PREPARED FOR:

PLANS PREPARED BY:

 Innovative Thinking. Engineered Solutions.
 21 OXFORD RD
 MANSFIELD, MA 02048
 www.uc seng.com 1-508-337-7600

FOR PERMITTING PURPOSES ONLY

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 STORROW DR
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 SUFFOLK COUNTY

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 EXTENET NODE ID:
 NE-MA-BSTBSC01-00070
 SITE ADDRESS:
 STORROW DR
 SHEET TITLE:
 ANTENNA DETAILS

SHEET NUMBER:
D-1

FOR PERMITTING PURPOSES ONLY

LOCATION:
STORROW DR
BOSTON, MA 02114
SUFFOLK COUNTY

P.E. STAMP AREA:

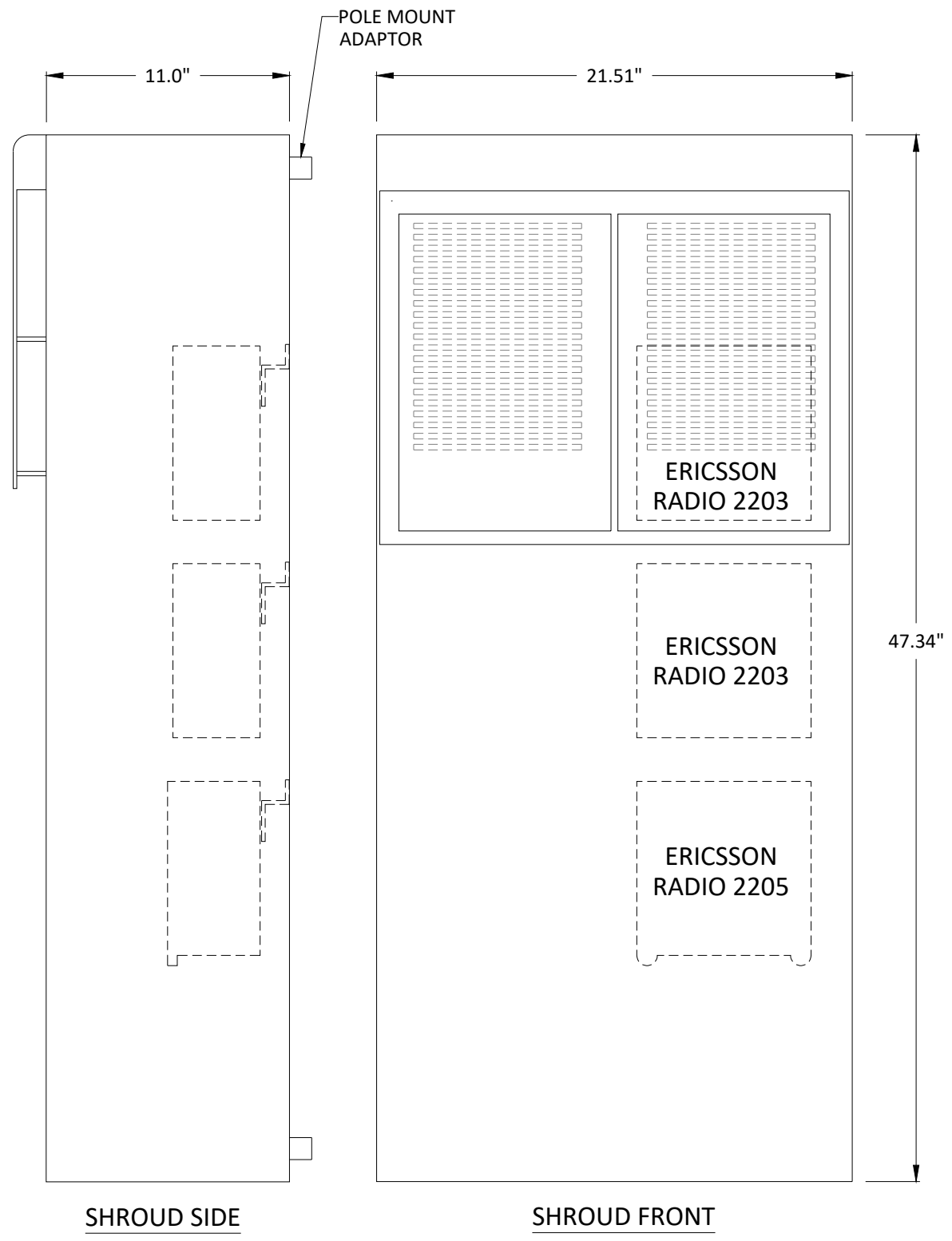
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RADIO SHROUD DETAILS

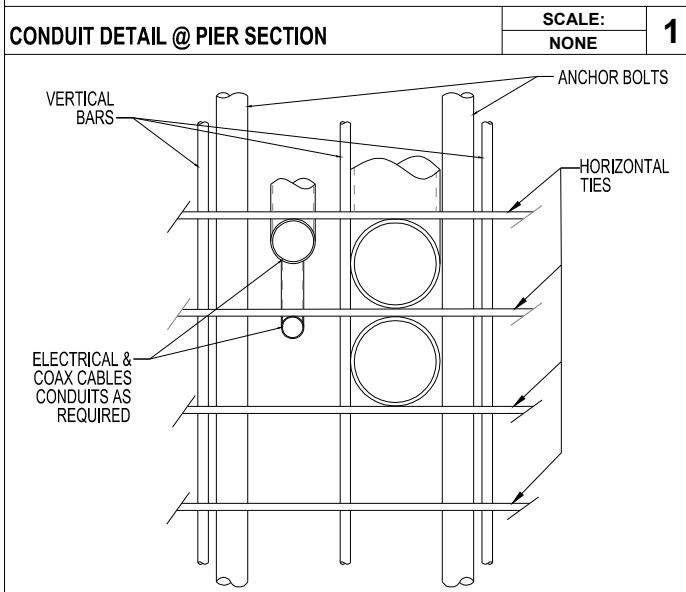
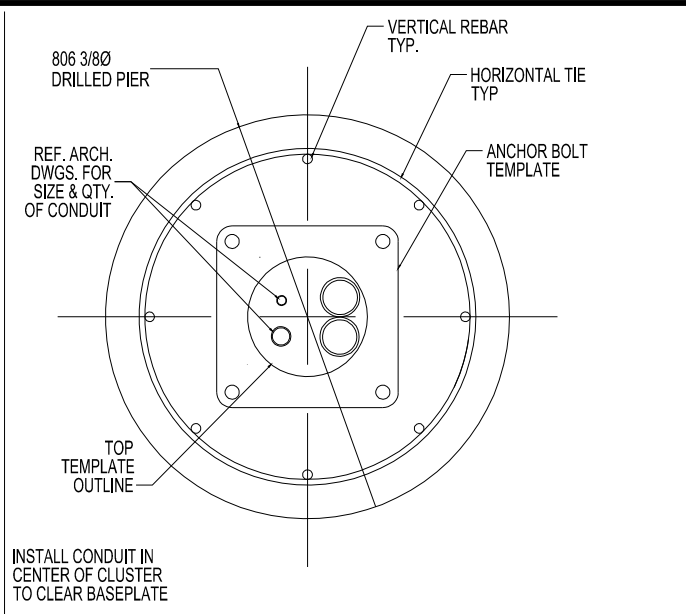
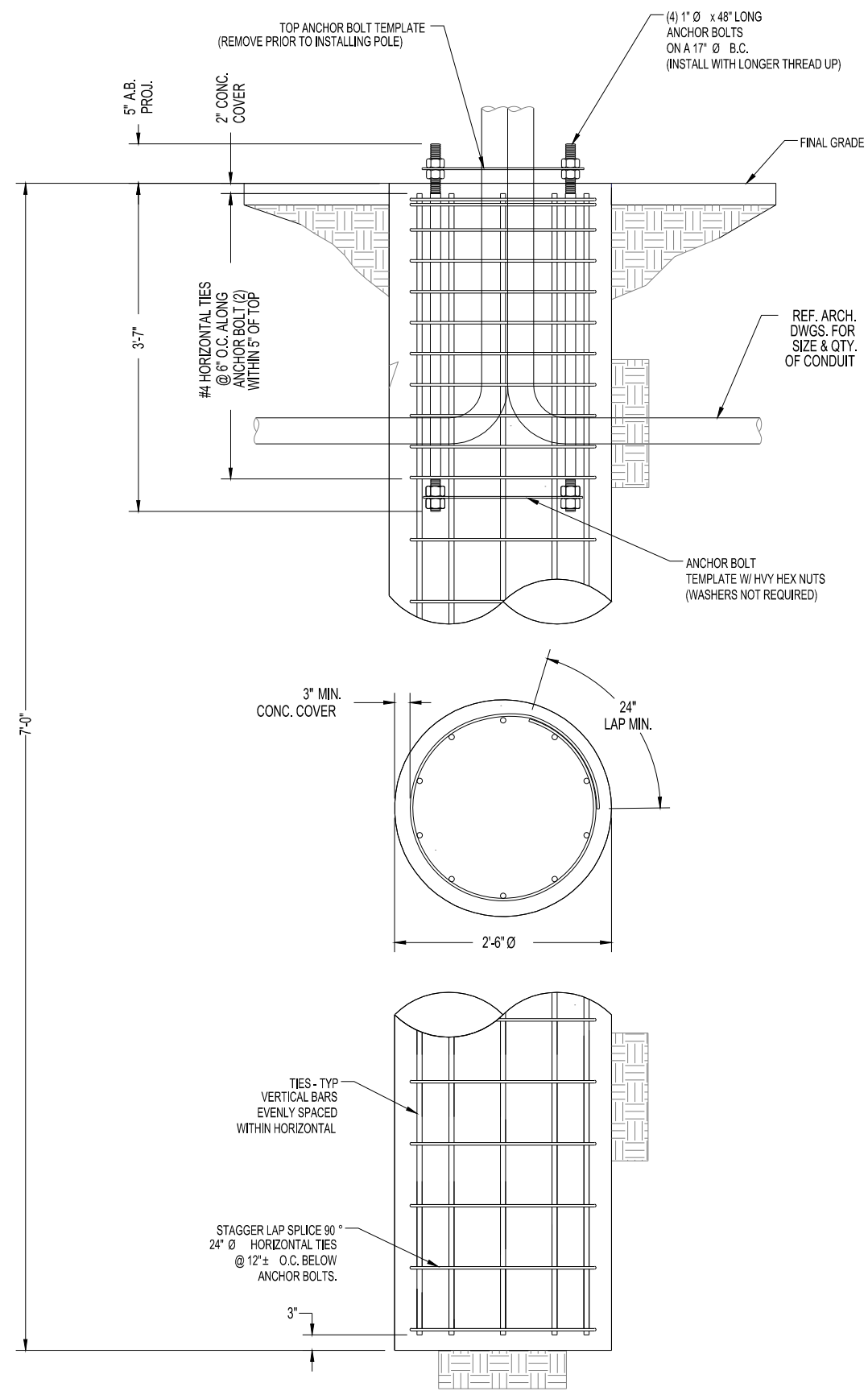
SHEET NUMBER:
D-2



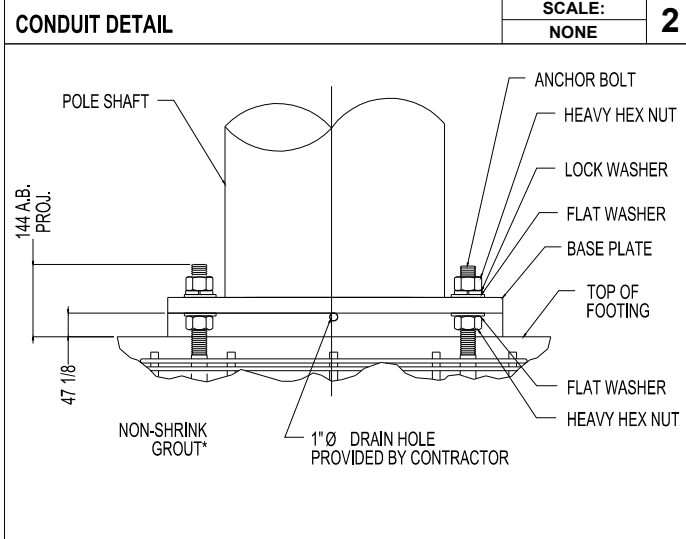
HP COMMUNICATIONS SHROUD
6.48 CUBIC FEET
SCALE: NTS

HP COMMUNICATIONS SHROUD - 6.48 CUBIC FEET
SCALE: NOT TO SCALE

N:\Engineering\Extenet-Systems\ATT 72_Nodes_Boston\00 - AUTOCAD\CRAN_RCTB_2HA4_070.dwg



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



* 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.

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 1.1 CU. YDS.

FACTORED BASE REACTIONS

MOMENT = 30.9 ft-kips
 SHEAR = 2.46 kips
 VERTICAL = 1.67 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

CONDUIT DETAIL @ PIER SECTION SCALE: NONE 1

CONDUIT DETAIL SCALE: NONE 2

BASE GROUTING DETAIL SCALE: NONE 3

DESCRIPTION	QTY.	SIZE	LENGTH	WEIGHT	OVERLAP
VERTICAL BARS	8	#6	5'-6"	66 LBS.	N/A
HORIZONTAL TIES	10	#4	8'-4"	55 LBS.	2'-0"

PLANS PREPARED FOR:

PLANS PREPARED BY:

21 OXFORD RD
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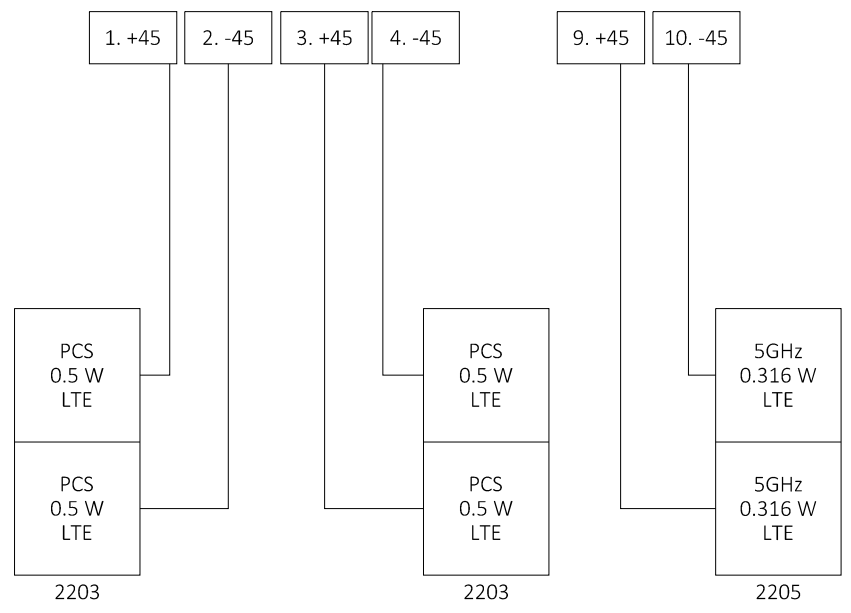
SHEET NUMBER:
D-3



EXISTING POLE
SCALE: NOT TO SCALE

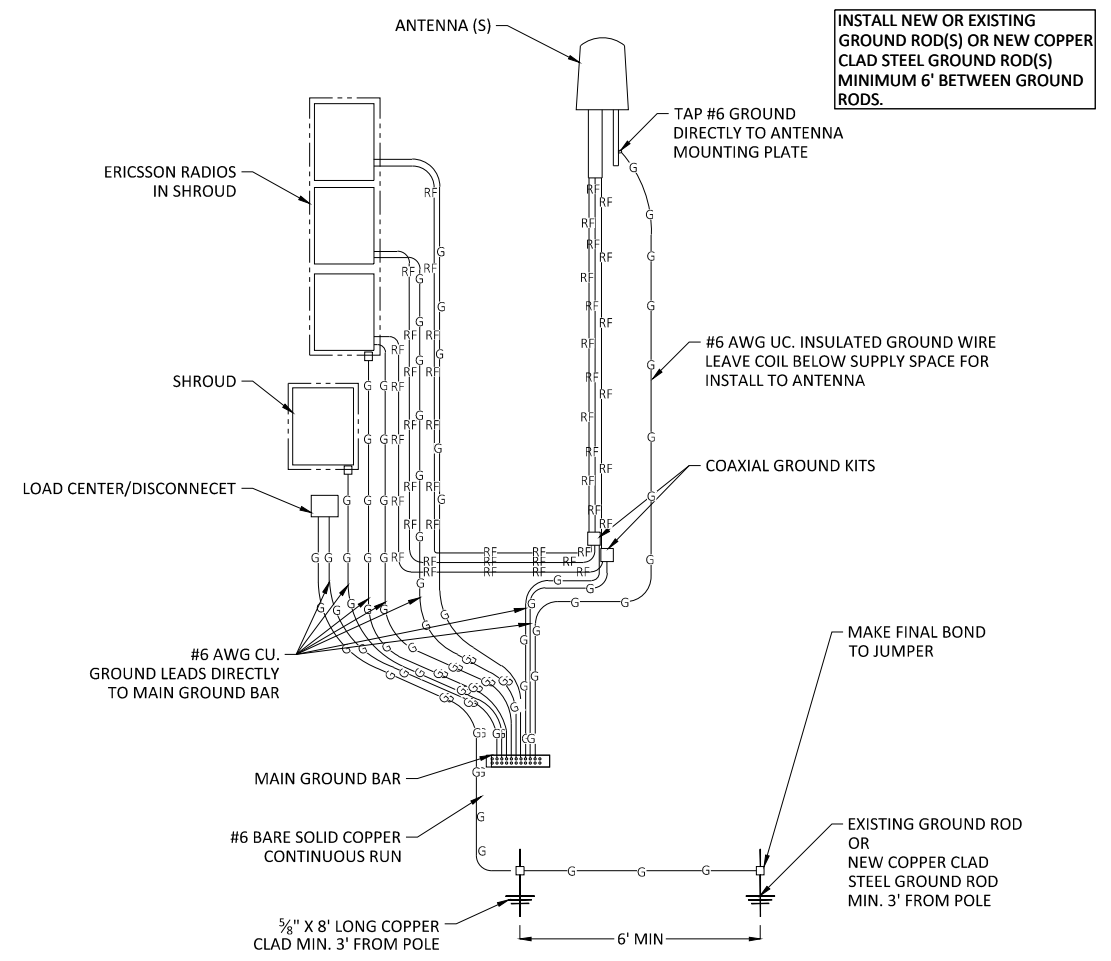
1

GALTRONICS GQ2410-06621 ANTENNA



WIRING DIAGRAM
SCALE: NOT TO SCALE

2



GROUNDING DIAGRAM
SCALE: NOT TO SCALE

3

PLANS PREPARED FOR:

PLANS PREPARED BY:

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GROUNDING & WIRING DIAGRAMS

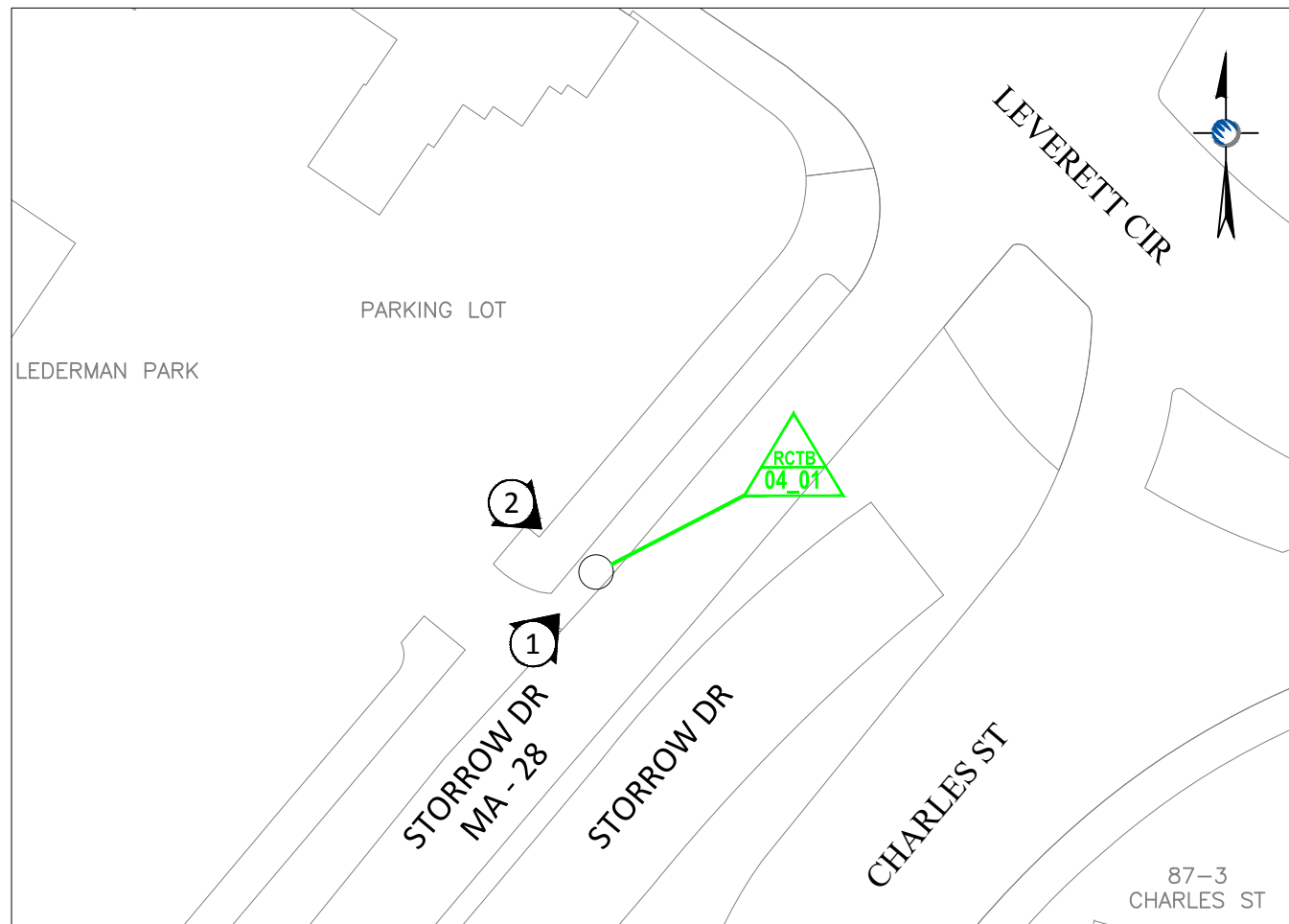
SHEET NUMBER:
D-4

PROJECT DESCRIPTION:

THESE PLANS REPRESENT A PORTION OF A PROPOSED SMALL CELL BUILD INVOLVING THE INSTALLMENT OF AN ANTENNA AND RADIO EQUIPMENT ON AN EXISTING WOODEN UTILITY OR REPLACEMENT METAL STREETLIGHT POLES.

**EXTENET SYSTEMS
384-398 STORROW DR
BOSTON, MA 02114
(NORTHWEST SIDE OF STORROW DR)**

**CRAN_RCTB_00004_01
NE-MA-BOSTD3M1-04001**



LOCATION MAP

LATITUDE: 42.366375° LONGITUDE: -71.068693°
ELEVATION: 16.4' AGL
SCALE: 1" = 50'



LOCUS MAP

PROJECT LOCATION - NODE RCTB-04_01
SCALE: 1" = 500'

PROJECT INFORMATION

INDEX:

1	COVER PAGE
2	SIDE PROFILE
3	REAR PROFILE
4	DETAILS - ANTENNA AND RADIOS
5	DETAILS - RADIO SHROUD
6	DETAILS - CONCRETE FOUNDATION
7	EXISTING PHOTO / WIRING DIAGRAM

POLE OWNER: CITY OF BOSTON

CONTACT: RICK ANGELINI
3030 WARRENVILLE RD
SUITE 340
LISLE, IL 60532
NOC: (866) 892-5327

LOCATION: BOSTON, MA
SUFFOLK COUNTY

NOTES:

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NODE
RCTB-04_01
COVER PAGE

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REV	DESCRIPTION	DATE

DRAFTER: MMS
SCALE: AS SHOWN
ISSUE DATE: 03/27/18
INDEX NAME: RCTB-04_01
SHEET #: 1 OF 7

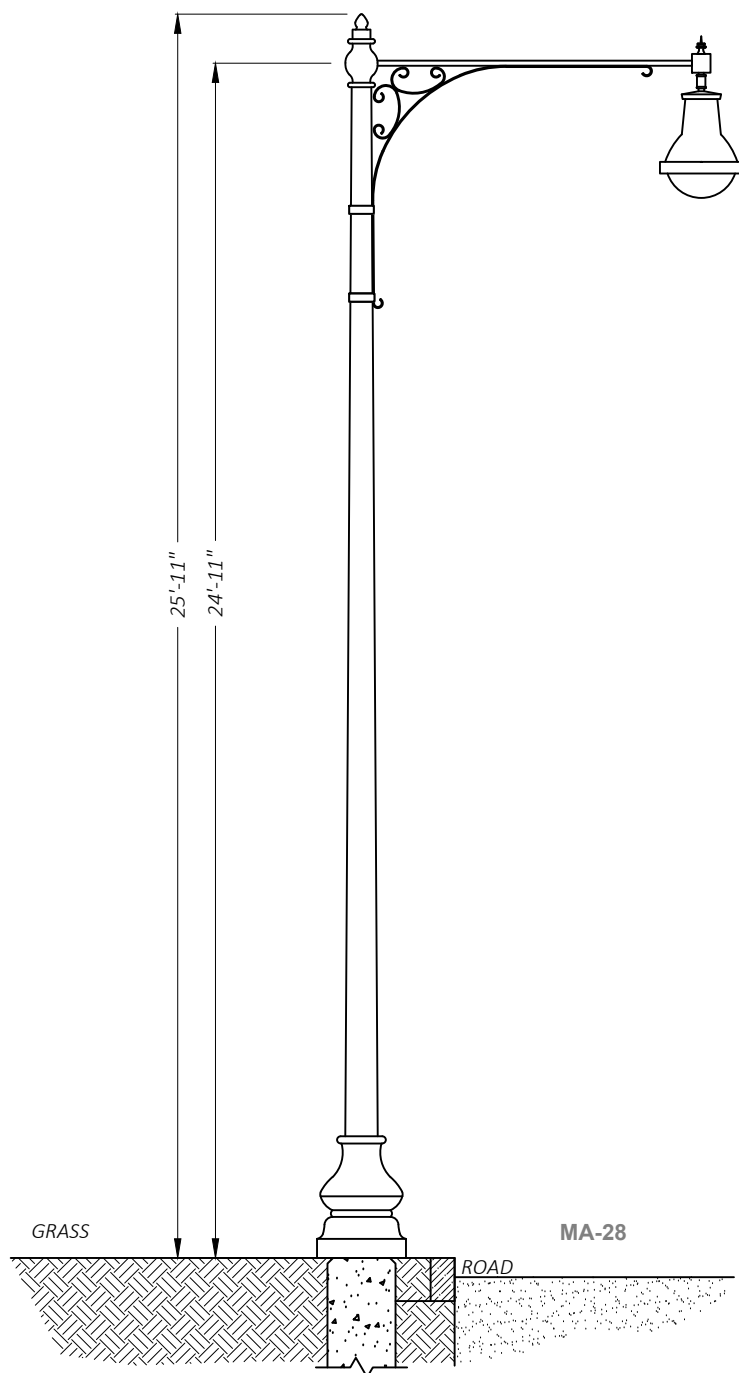
FOR PERMITTING ONLY

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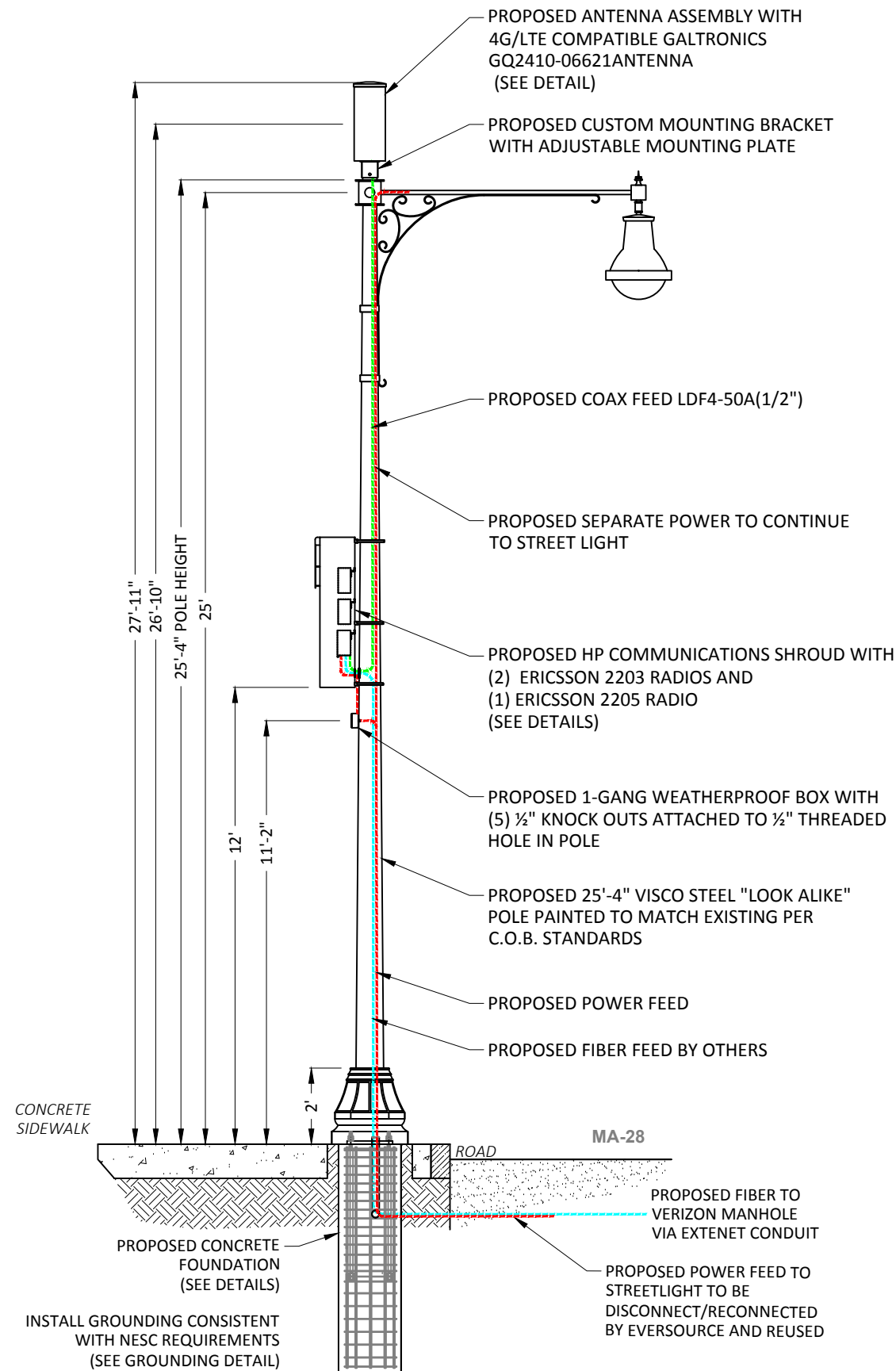
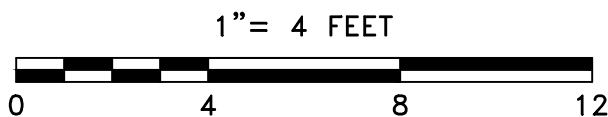
NOTE 1:
PROPOSED EQUIPMENT TO BE PAINTED TO BLEND WITH POLE

NOTE 2:
FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE

NODE RCTB-04_01 384-398 STORROW DR, BOSTON, MA SIDE PROFILE



① **EXISTING PROFILE - SIDE VIEW**
LOOKING NORTHEAST ALONG STORROW DR



① **PROPOSED PROFILE - SIDE VIEW**
LOOKING NORTHEAST ALONG STORROW DR

LOCATION:
BOSTON, MA
SUFFOLK COUNTY

NOTES:

PREPARED FOR:



PREPARED BY:



NODE
RCTB-04_01
SIDE PROFILE

REVISIONS		
REV	DESCRIPTION	DATE

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ISSUE DATE: 03/27/18

INDEX NAME: RCTB-04_01

SHEET #: 2 OF 7

3/27/18 \\MANV-FILE01\Files\Engineering\Extenet_Systems\NE-MA-BOSTON\3M1-ATT\NPPS\AUTOCAD\NPPS\NODE CRAN_RCTB_00004_01.dwg

NODE RCTB-04_01

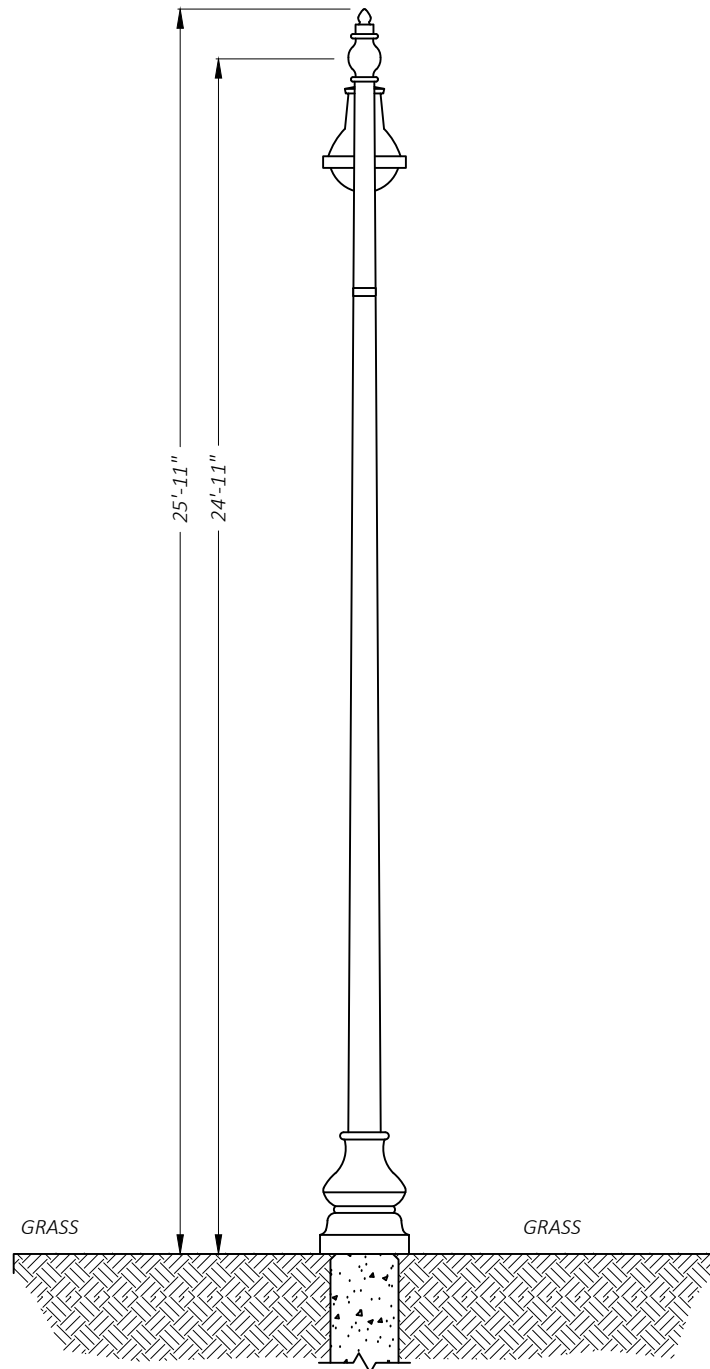
384-398 STORROW DR, BOSTON, MA

REAR PROFILE

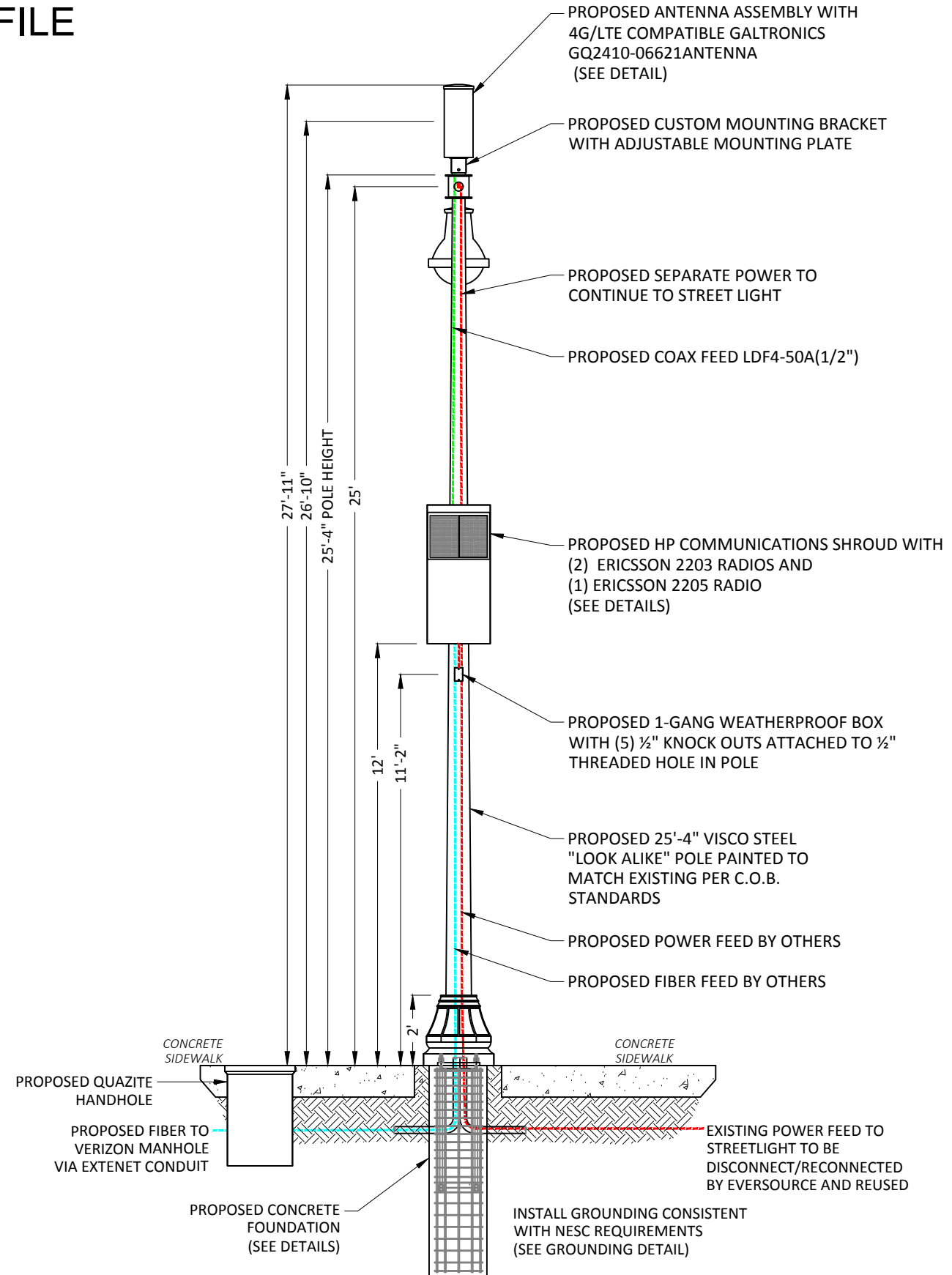
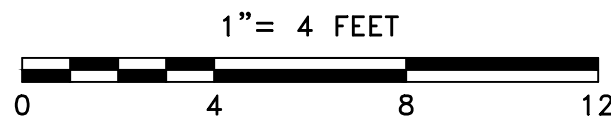
DRAWINGS NOTES:

NOTE 1:
PROPOSED EQUIPMENT TO BE PAINTED TO BLEND WITH POLE

NOTE 2:
FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE



② EXISTING PROFILE - REAR VIEW
LOOKING SOUTHEAST TOWARDS STORROW DR



② PROPOSED PROFILE - REAR VIEW
LOOKING SOUTHEAST TOWARDS STORROW DR

LOCATION:
BOSTON, MA
SUFFOLK COUNTY

NOTES:

PREPARED FOR:



PREPARED BY:



NODE
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REAR PROFILE

REVISIONS		
REV	DESCRIPTION	DATE

DRAFTER: MMS
SCALE: SEE SCALE BAR
ISSUE DATE: 03/27/18
INDEX NAME: RCTB-04_01
SHEET #: 3 OF 7

3/27/18 \\MANV-FILE01\Files\Engineering\Extenet_Systems\NE-MA-BOSTON\3M1-ATT\NPPS\AUTOCAD\NPPS\NODE CRAN_RCTB_00004_01.dwg

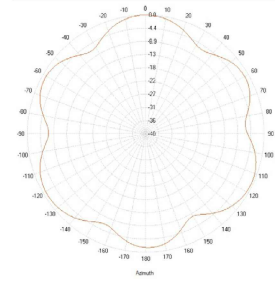


24"x 10" Pseudo Omni 10-Port Canister Antenna [1695-2360, 3550-3700 and 5150-5925 MHz]

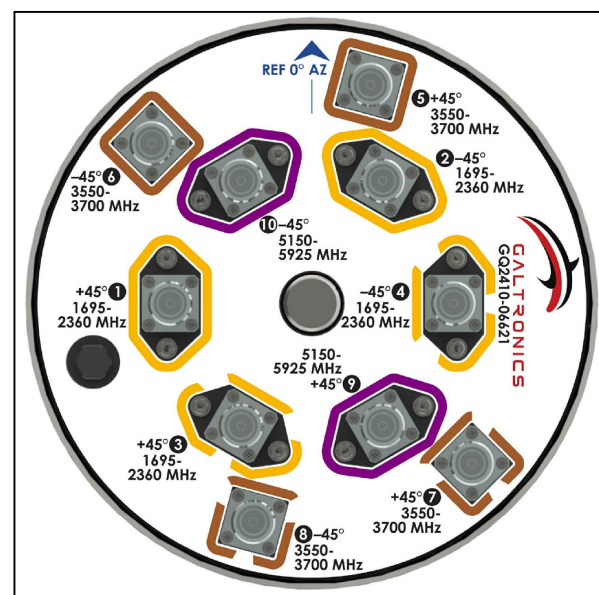
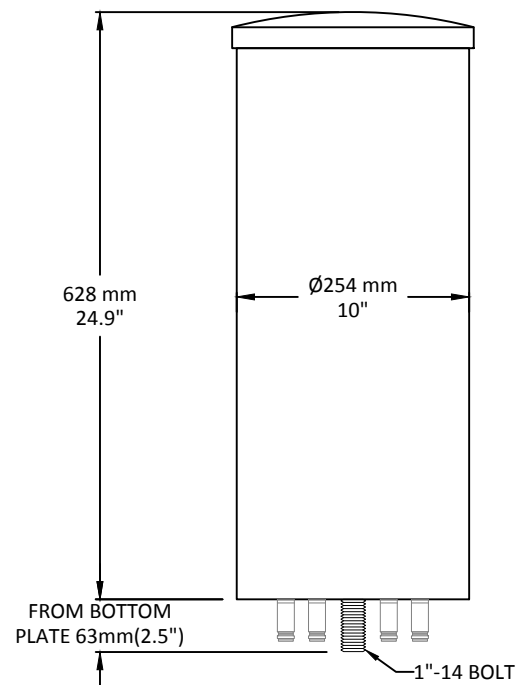
GQ2410-06621

Description:

- Pseudo Omni Canister Antenna for Outdoor DAS and Small Cells.
- 4x ports for AWS/PCS/WCS Band 1695-2360 MHz
- 4x ports for CBRS Band 3550-3700 MHz
- 2x ports for UNII Band 5150-5925 MHz*

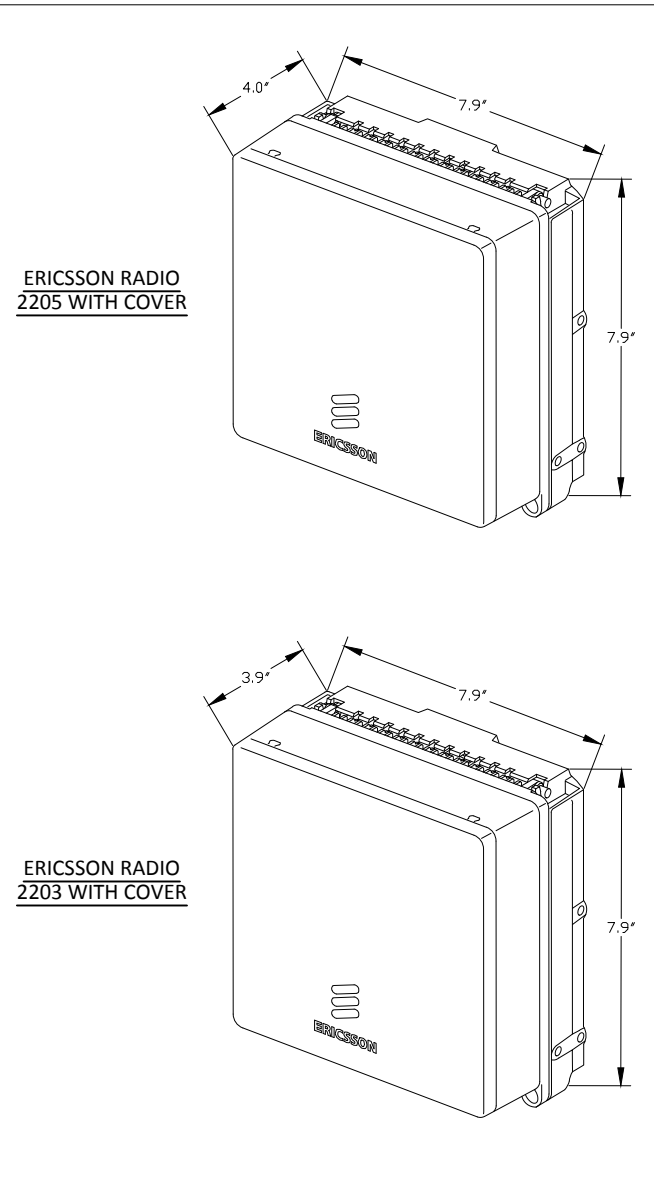


1695-2360, 3550-3700 and 5150-5925 MHz Pseudo Omni Canister Antenna



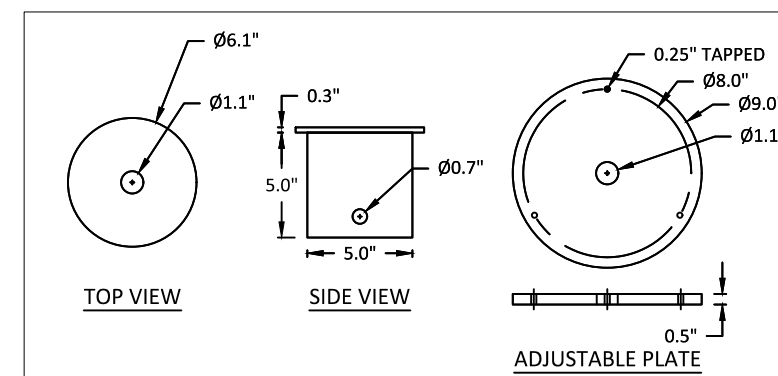
GALTRONICS GQ2410-06621 ANTENNA

SCALE: NTS



**ERICSSON 2203 & 2205 RADIOS WITH COVER
POLE MOUNT REMOTE UNIT**

SCALE: NTS



CUSTOM ANTENNA MOUNTING BRACKET

SCALE: NTS

LOCATION: BOSTON, MA
SUFFOLK COUNTY

NOTES:

PREPARED FOR:



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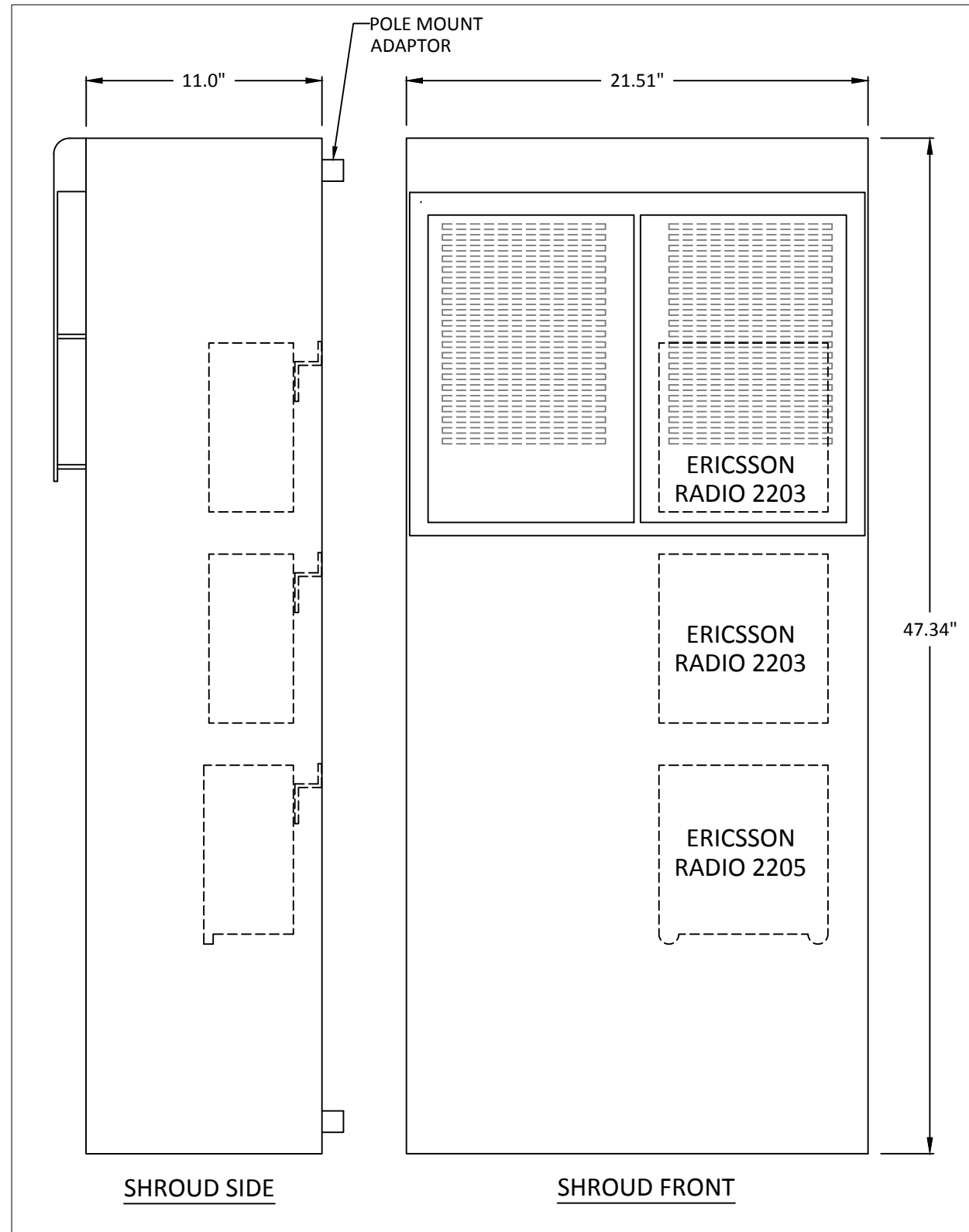


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DETAILS - ANTENNA AND RADIOS

REVISIONS		
REV	DESCRIPTION	DATE

DRAFTER: MMS
SCALE: NTS
ISSUE DATE: 03/27/18
INDEX NAME: RCTB-04_01
SHEET #: 4 OF 7

3/27/18 \\MANV-FILE01\Files\Engineering\Extenet_Systems\NE-MA-BOSTD3M1-ATT\NPPS\AUTOCAD\NPPS\NODE CRAN_RCTB_00004_01.dwg



HP COMMUNICATIONS SHROUD
 6.48 CUBIC FEET
 SCALE: NTS

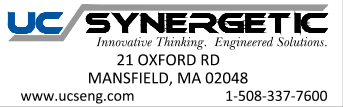
LOCATION: BOSTON, MA
 SUFFOLK COUNTY

NOTES:

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 DETAILS - RADIO SHROUD

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 INDEX NAME: RCTB-04_01
 SHEET #: 5 OF 7

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 1.1 CU. YDS.

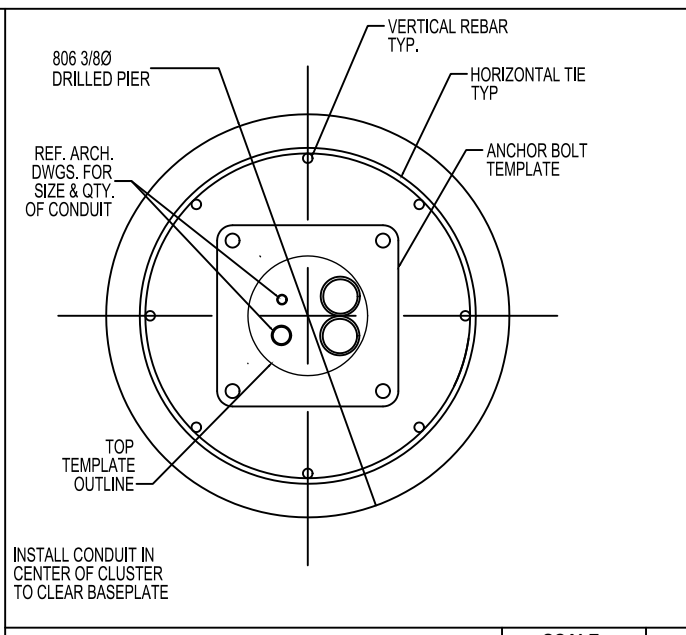
FACTORED BASE REACTIONS

MOMENT = 30.9 ft-kips
 SHEAR = 2.46 kips
 VERTICAL = 1.67 kips

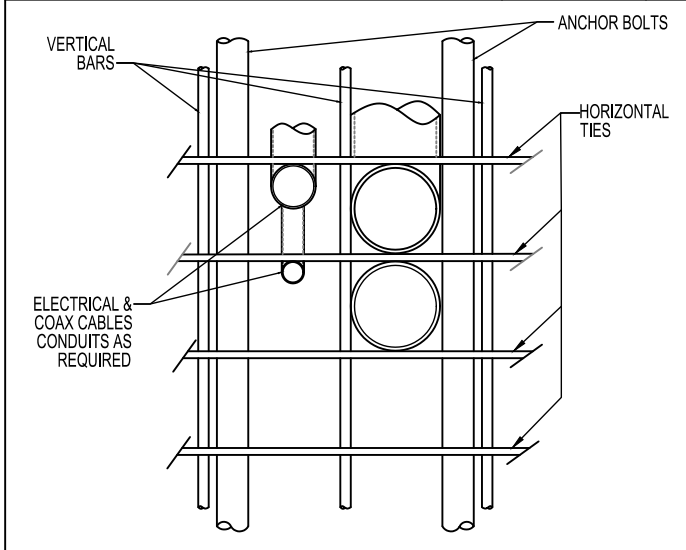
SPECIAL INSPECTIONS

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

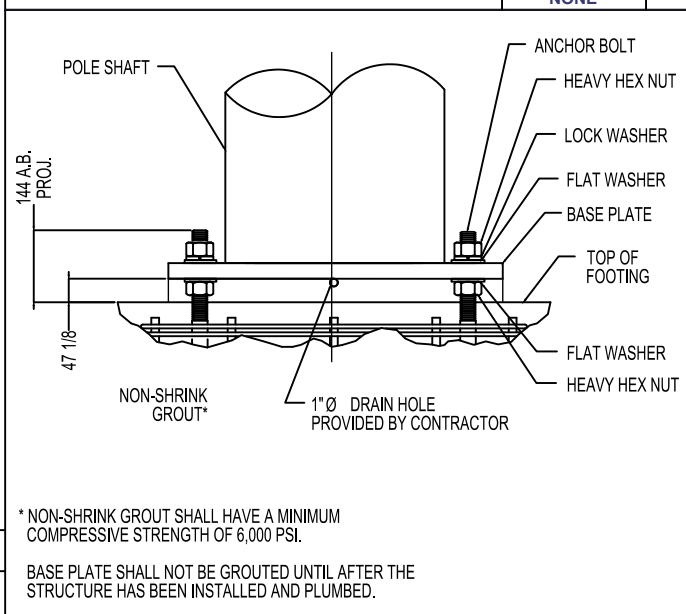


CONDUIT DETAIL @ PIER SECTION SCALE: NONE 1

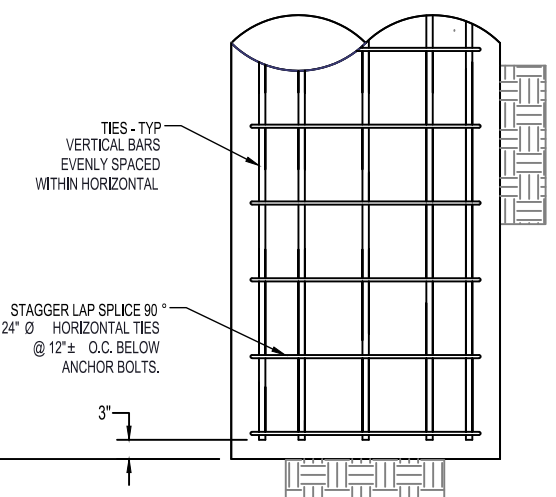
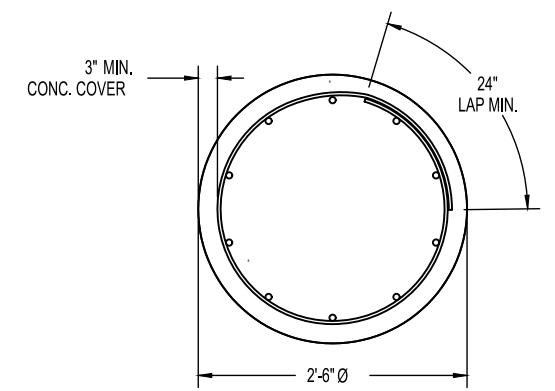
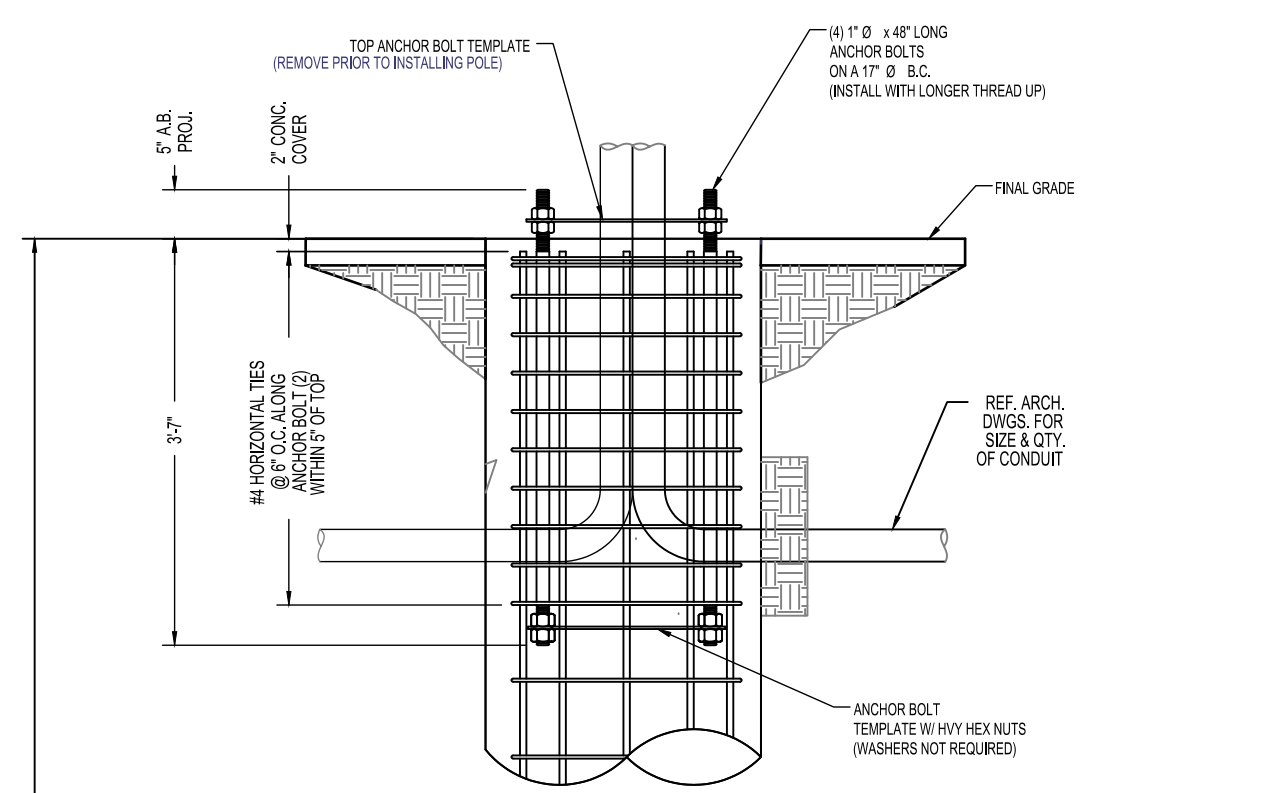


* ADJUST REBAR AS NEEDED TO ACCOMMODATE CONDUIT. SEE REINFORCEMENT SUMMARY FOR SIZE, QUANTITY AND LOCATION OF VERTICAL BARS AND HORIZONTAL TIES.

CONDUIT DETAIL SCALE: NONE 2



BASE GROUTING DETAIL SCALE: NONE 3



PIER FOUNDATION INSTALLATION

DESCRIPTION	QTY.	SIZE	LENGTH	WEIGHT	OVERLAP
VERTICAL BARS	8	#6	5'-6"	66 LBS.	N/A
HORIZONTAL TIES	10	#4	8'-4"	55 LBS.	2'-0"

LOCATION: BOSTON, MA
 SUFFOLK COUNTY

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 DETAILS - CONCRETE FOUNDATION

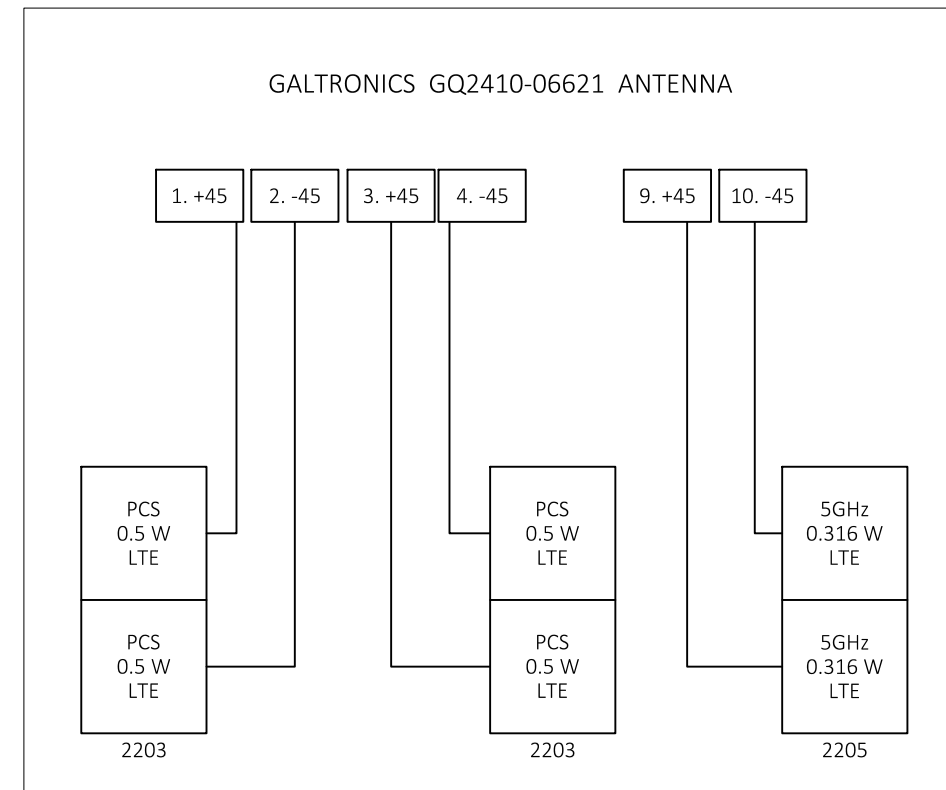
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 SCALE: NTS
 ISSUE DATE: 03/27/18
 INDEX NAME: RCTB-04_01
 SHEET #: 6 OF 7

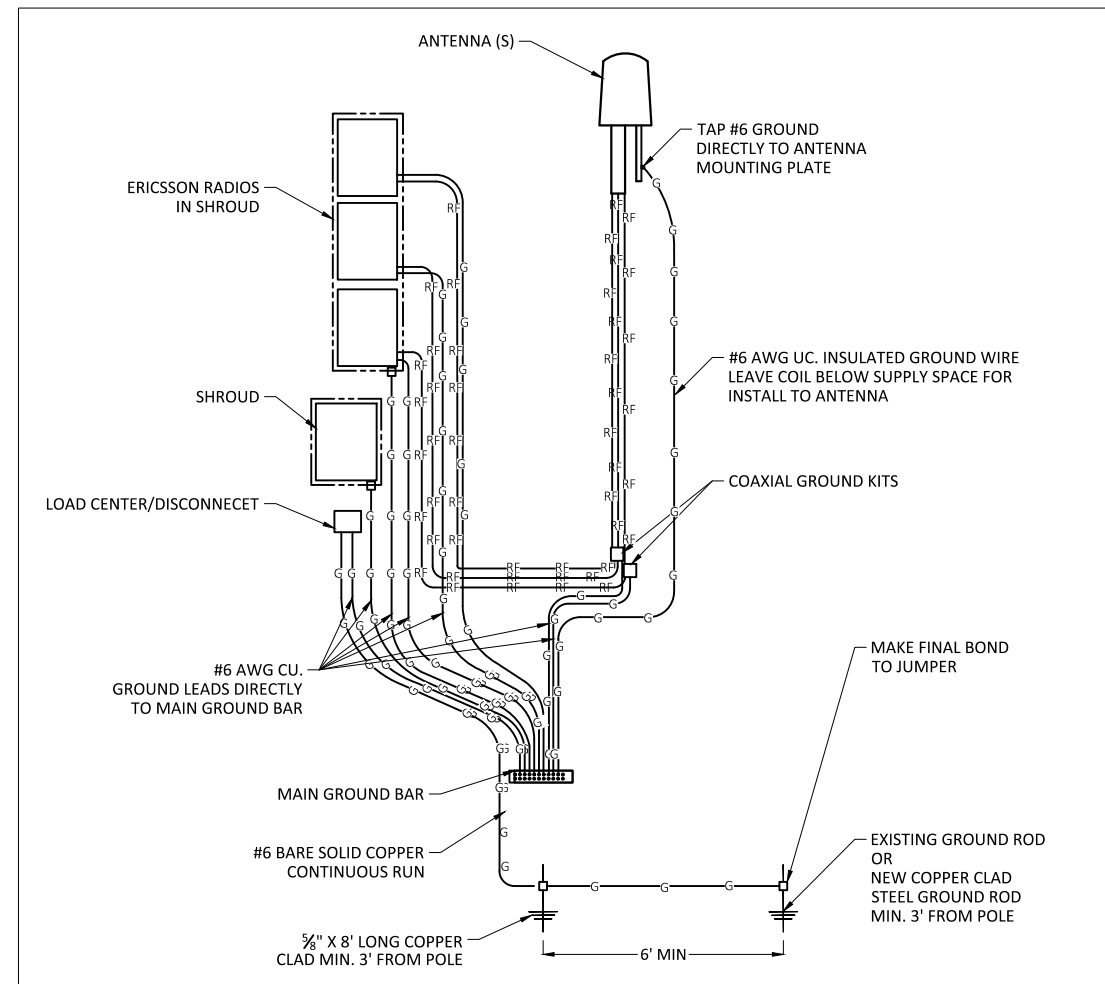
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EXISTING POLE
SCALE: NTS



WIRING DIAGRAM
SCALE: NTS



GROUNDING DIAGRAM
SCALE: NTS

LOCATION: BOSTON, MA
SUFFOLK COUNTY

NOTES:

PREPARED FOR:



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EXISTING PHOTO / WIRING DIAGRAM

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INDEX NAME: RCTB-04_01
SHEET #: 7 OF 7

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