

**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  
355 CHESTNUT HILL AVE  
BOSTON, MA 02135  
(WEST INTERSECTION OF CHESTNUT HILL AVE AND BEACON ST)**

**CRAN\_RCTB\_00014\_05  
NE-MA-ALBRD3M1-14005**

**PROJECT INFORMATION**

**INDEX:**

1	COVER PAGE
2	SIDE PROFILE
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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:

PREPARED FOR:



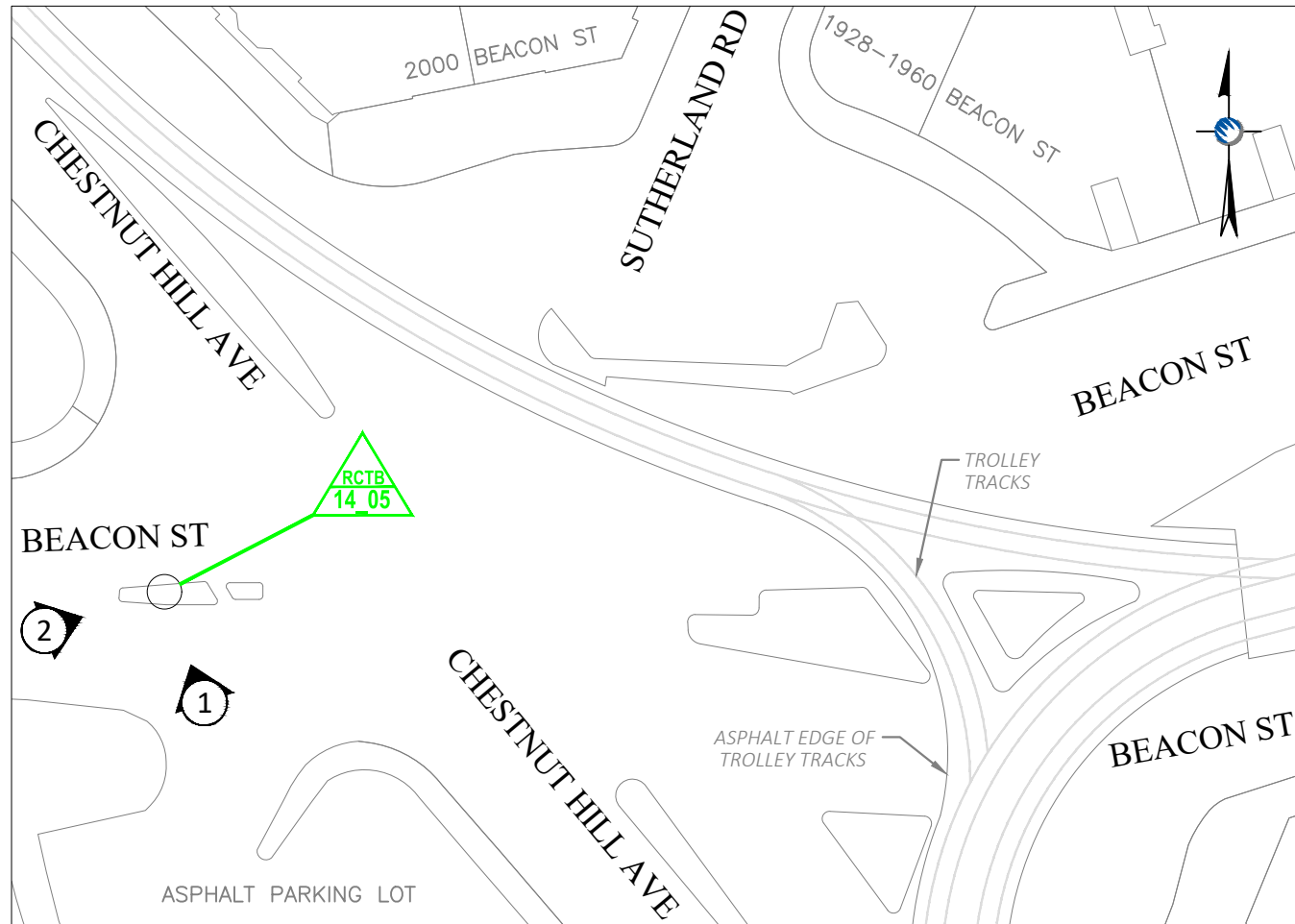
PREPARED BY:



**NODE  
RCTB-14\_05  
COVER PAGE**

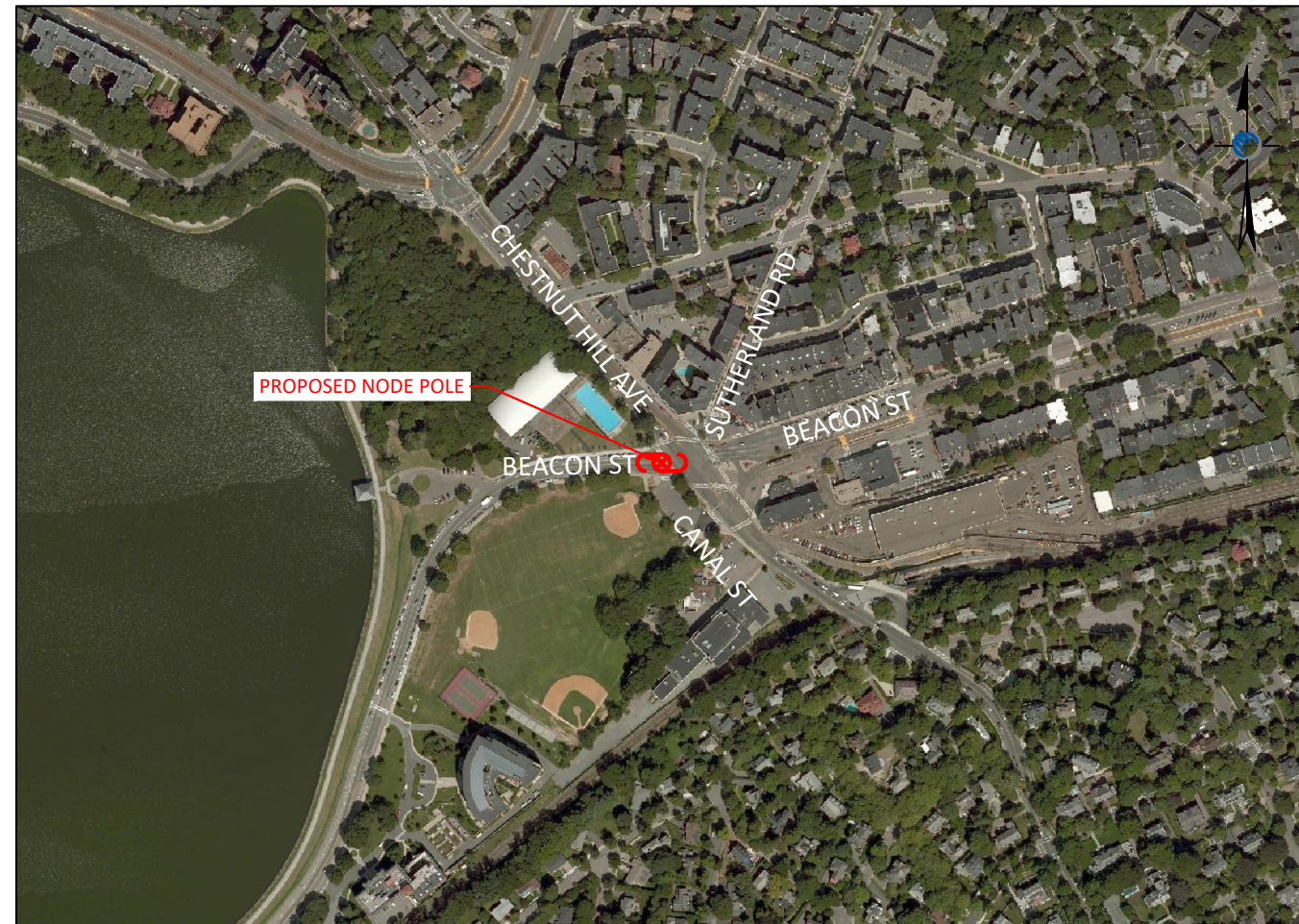
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REV	DESCRIPTION	DATE
1	UPDATED EQUIPMENT & INFO	03/13/18
2	UPDATE PER EXTENET	03/19/18

DRAFTER: MMS/SML  
SCALE: AS SHOWN  
ISSUE DATE: 02/13/18  
INDEX NAME: RCTB-14\_05  
SHEET #: 1 OF 7



**LOCATION MAP**

LATITUDE: 42.335980° LONGITUDE: -71.151166°  
ELEVATION: 111.52' AGL  
SCALE: 1" = 50'



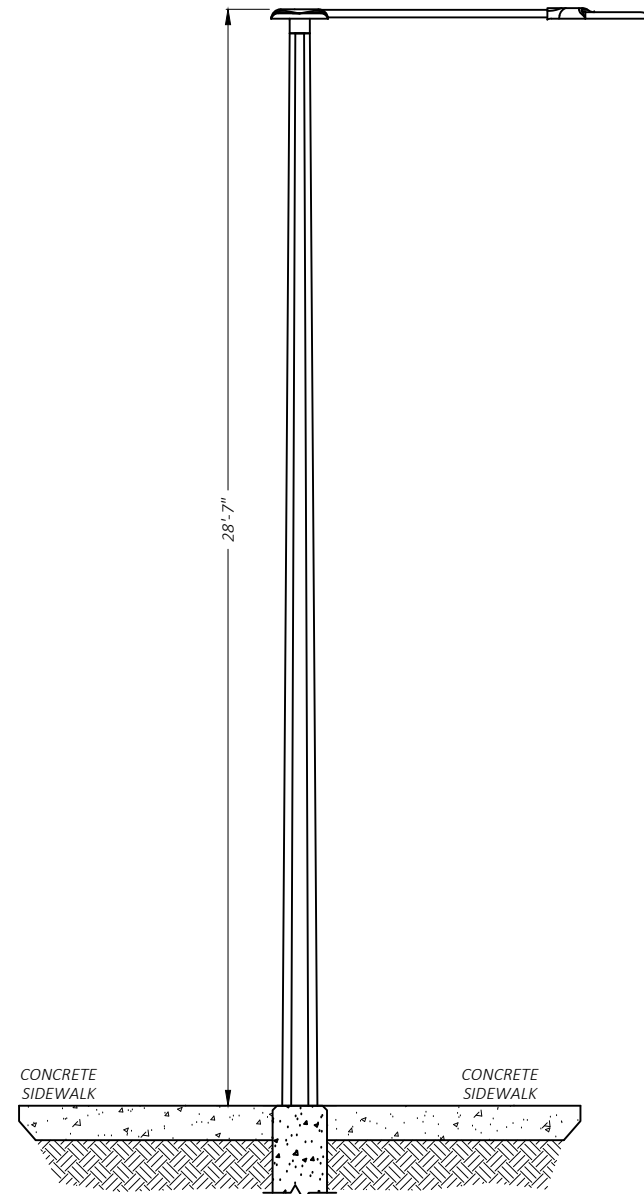
**LOCUS MAP**

PROJECT LOCATION - NODE RCTB-14\_05  
SCALE: 1" = 500'

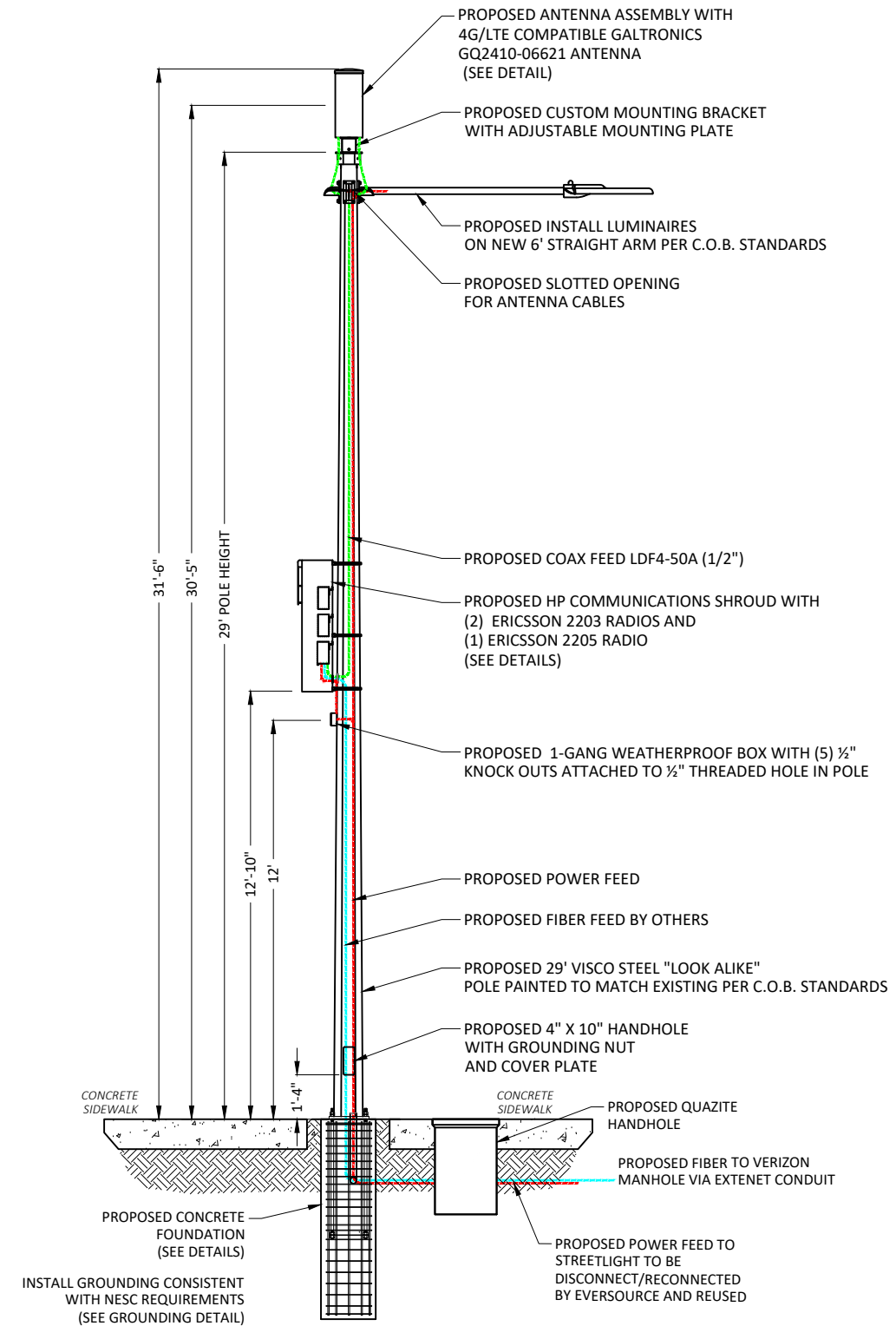
# NODE RCTB-14\_05 355 CHESTNUT HILL AVE, BOSTON, MA SIDE PROFILE

**DRAWINGS NOTES:**

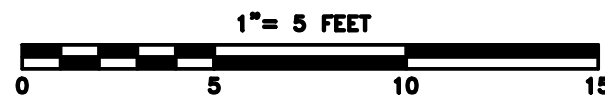
- NOTE 1:**  
PROPOSED FIBER TO BE INSTALLED BY OTHERS
- NOTE 2:**  
PROPOSED EQUIPMENT TO BE PAINTED TO BLEND WITH POLE
- NOTE 3:**  
FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE



① EXISTING PROFILE - SIDE VIEW  
LOOKING NORTHWEST ALONG BEACON ST



① PROPOSED PROFILE - SIDE VIEW  
LOOKING NORTHWEST ALONG BEACON ST



LOCATION:  
BOSTON, MA  
SUFFOLK COUNTY

NOTES:

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PREPARED BY:



NODE  
RCTB-14\_05  
SIDE PROFILE

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SCALE: SEE SCALE BAR  
ISSUE DATE: 02/13/18  
INDEX NAME: RCTB-14\_05  
SHEET #: 2 OF 7

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# NODE RCTB-14\_05

## 355 CHESTNUT HILL AVE, BOSTON, MA

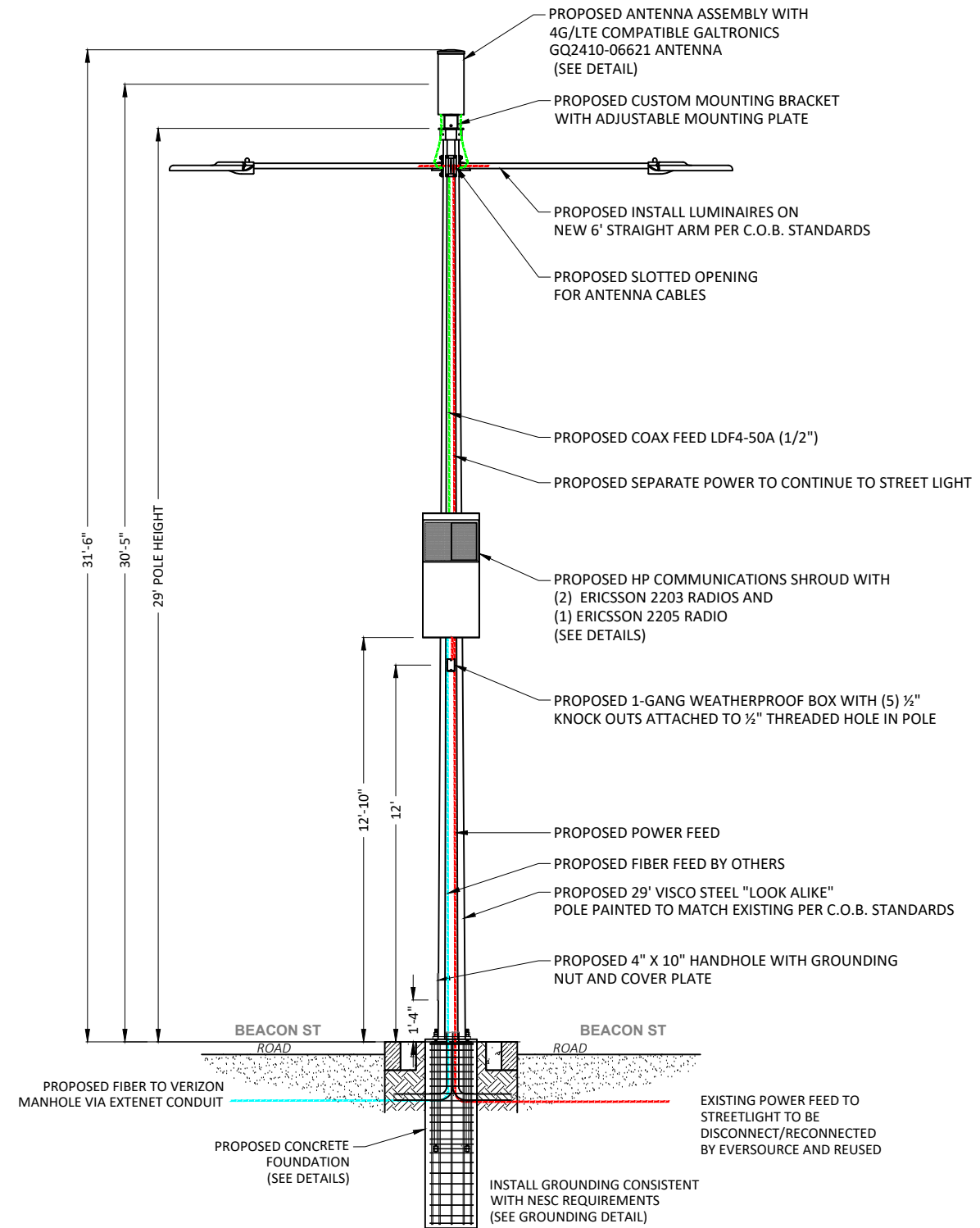
### REAR PROFILE

**DRAWINGS NOTES:**

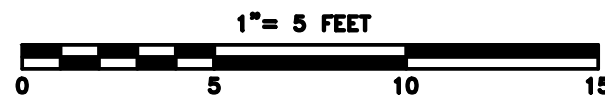
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FCC MANDATED SIGNAGE TO BE ATTACHED TO POLE



② EXISTING PROFILE - REAR VIEW  
LOOKING NORTHEAST TOWARDS BEACON ST



② PROPOSED PROFILE - REAR VIEW  
LOOKING NORTHEAST TOWARDS BEACON ST



LOCATION:  
BOSTON, MA  
SUFFOLK COUNTY

NOTES:

PREPARED FOR:



PREPARED BY:

**UC SYNERGETIC**  
Innovative Thinking. Engineered Solutions.  
21 OXFORD RD  
MANSFIELD, MA 02048  
www.ucsceng.com 1-508-337-7600

NODE  
RCTB-14\_05  
REAR PROFILE

REVISIONS		
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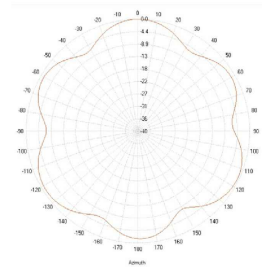


**24"x 10" Pseudo Omni 10-Port Canister Antenna [1695-2360, 3550-3700 and 5150-5925 MHz]**

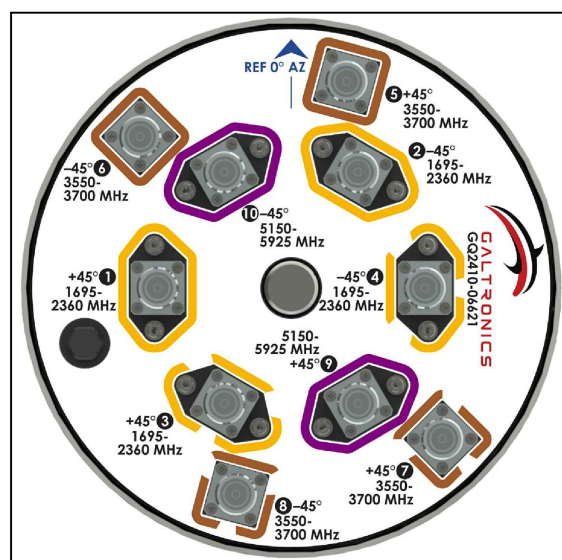
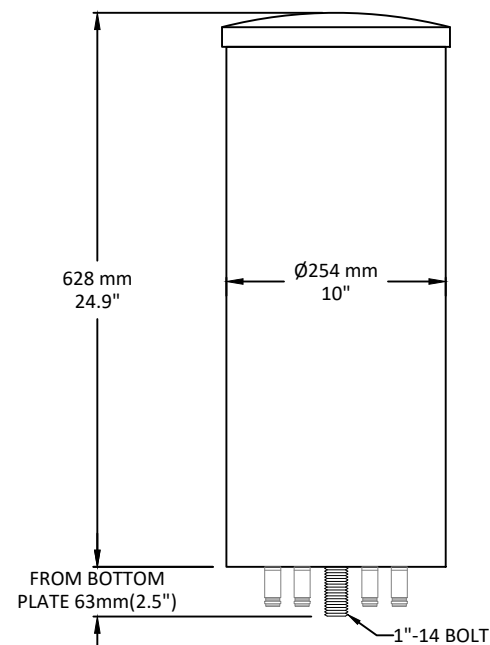
**GQ2410-06621**

**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\*



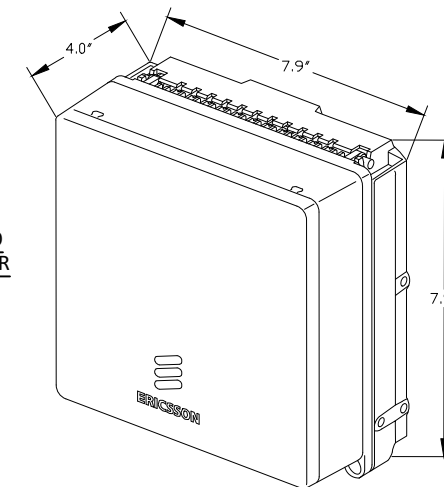
1695-2360, 3550-3700 and 5150-5925 MHz Pseudo Omni Canister Antenna



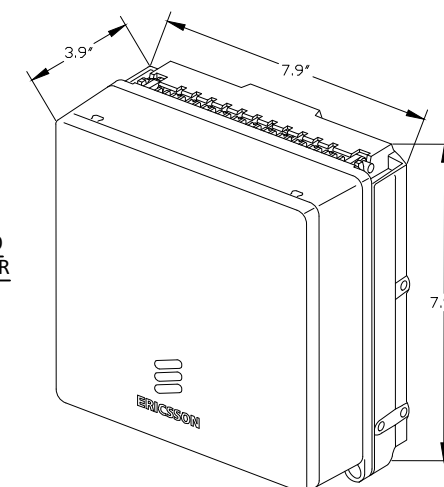
**GALTRONICS GQ2410-06621 ANTENNA**

SCALE: NTS

ERICSSON RADIO 2205 WITH COVER

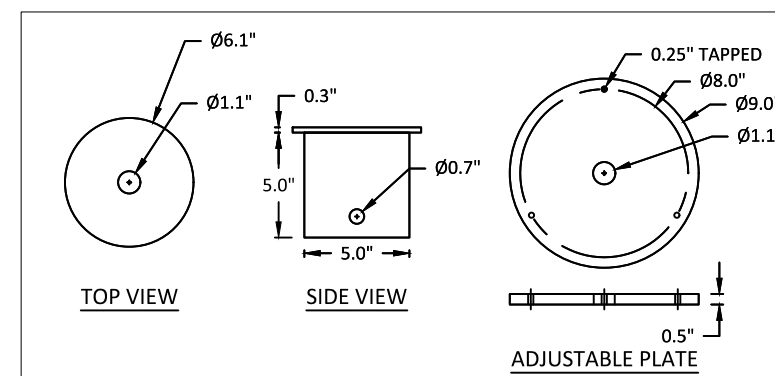


ERICSSON RADIO 2203 WITH COVER



**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:



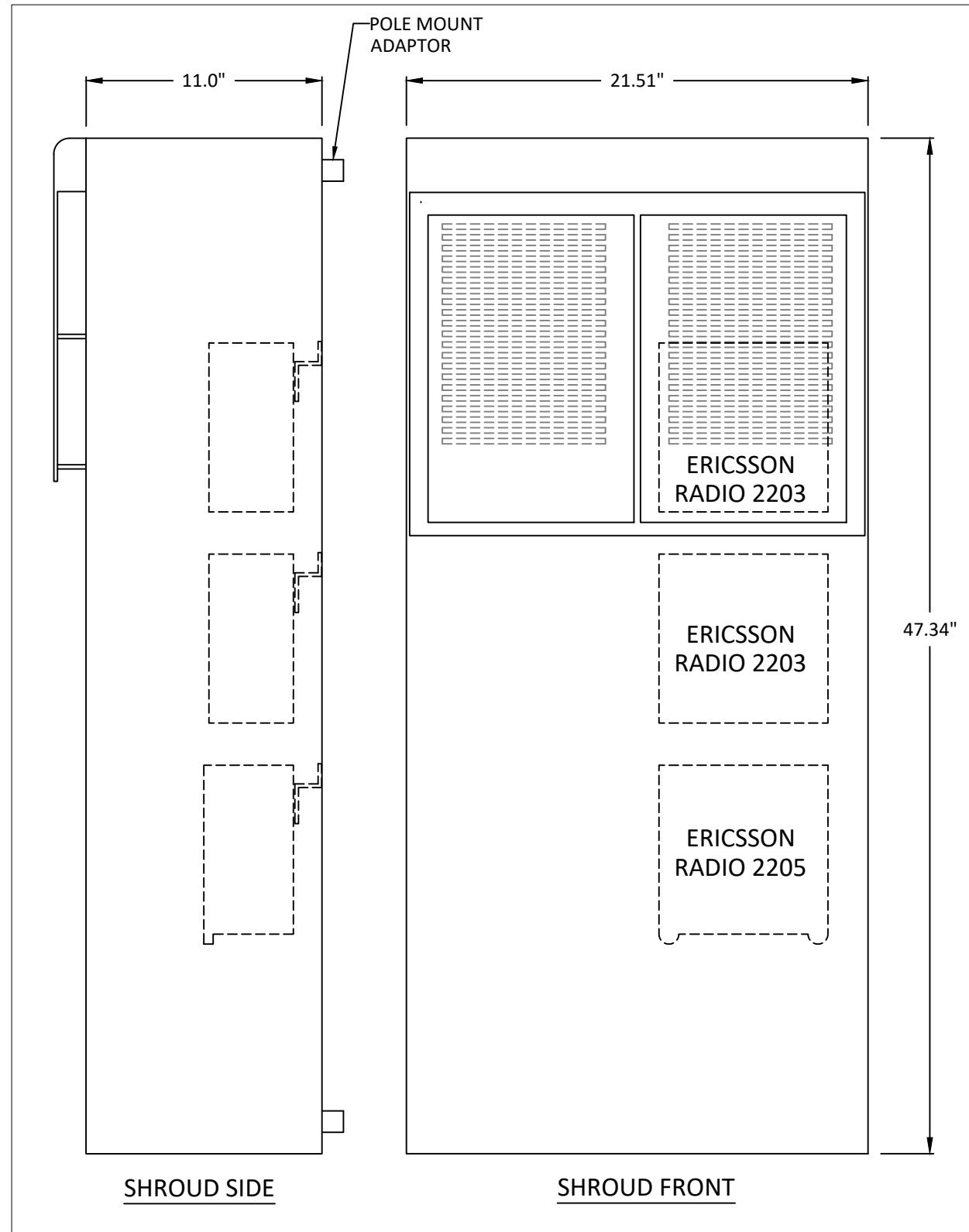
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NODE  
RCTB-14\_05  
DETAILS - ANTENNA AND RADIOS

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED EQUIPMENT & INFO	03/13/18
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**HP COMMUNICATIONS SHROUD**  
 6.48 CUBIC FEET  
 SCALE: NTS

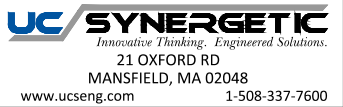
LOCATION:  
 BOSTON, MA  
 SUFFOLK COUNTY

NOTES:

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 RCTB-14\_05  
 DETAILS - RADIO SHROUD

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 SCALE: NTS  
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**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.

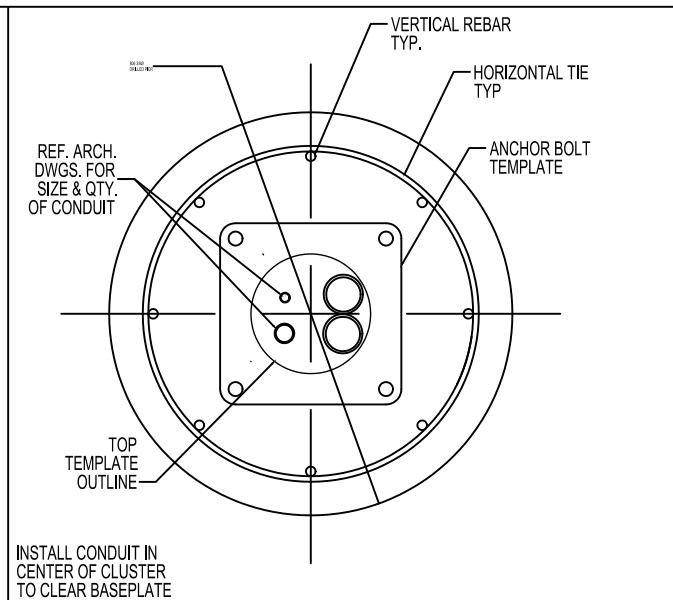
**FACTORED BASE REACTIONS**

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

**SPECIAL INSPECTIONS**

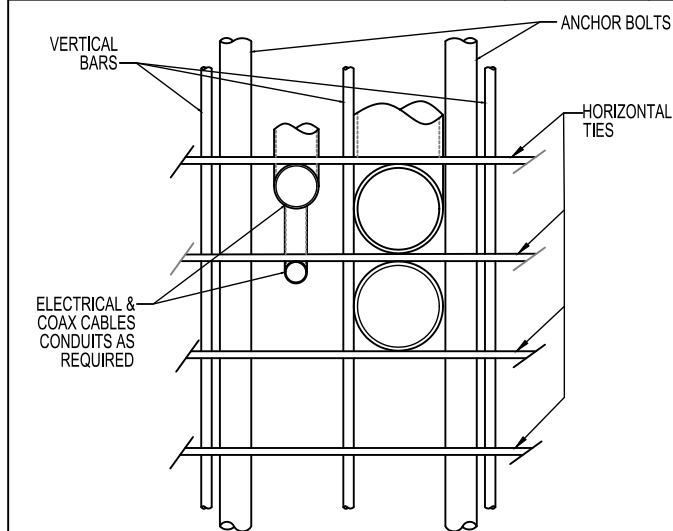
SPECIAL INSPECTION:  
 THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER 2009/2012 IBC, SECTION 1704

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 <sub>c</sub> = 4,000 PSI TYPE II CEMENT



**CONDUIT DETAIL @ PIER SECTION**

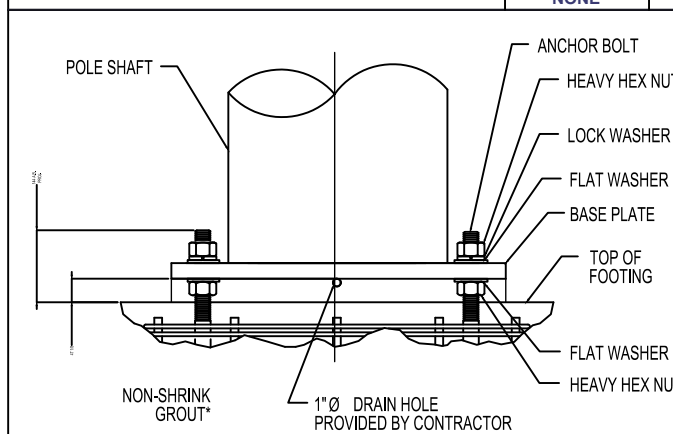
SCALE: NONE 1



\* 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

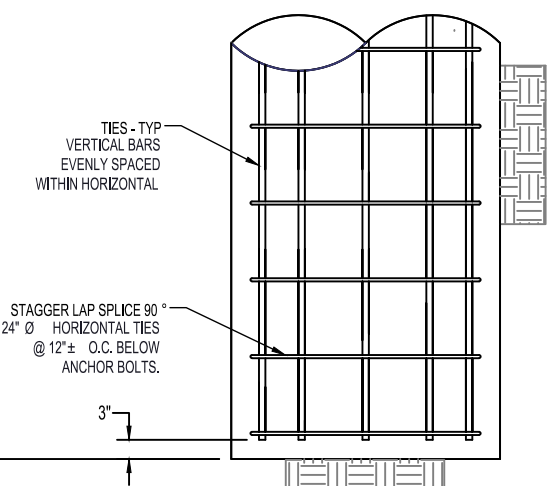
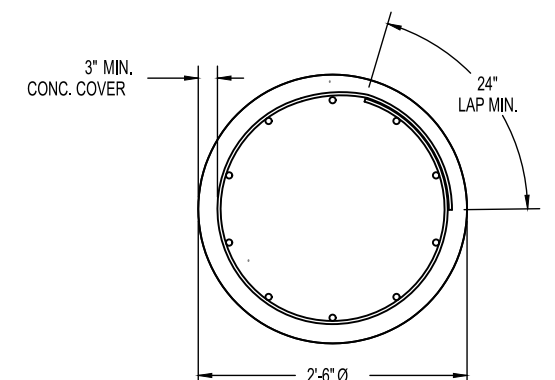
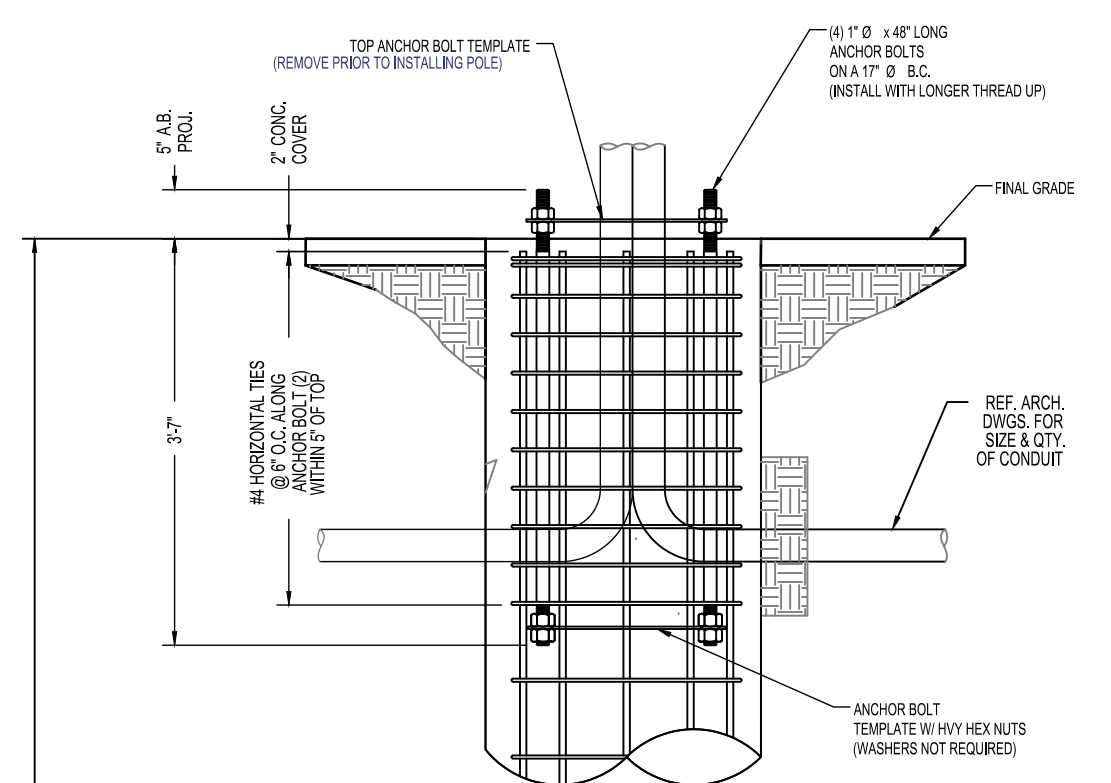


\* NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI.

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

**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

NOTES:

PREPARED FOR:



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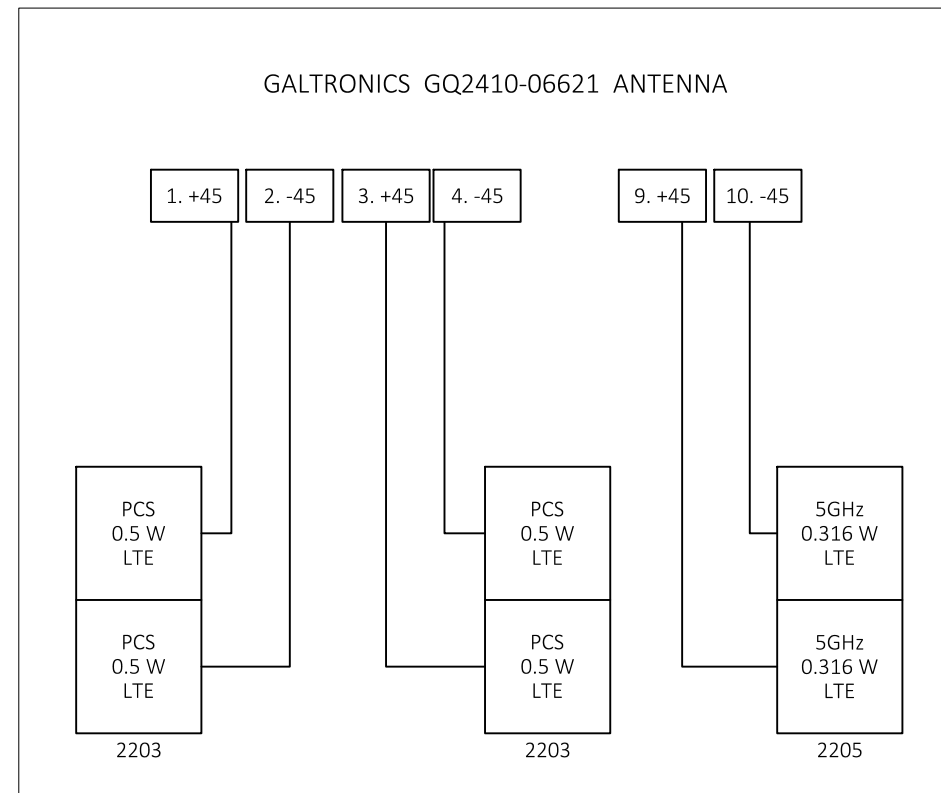
NODE  
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 DETAILS - CONCRETE FOUNDATION

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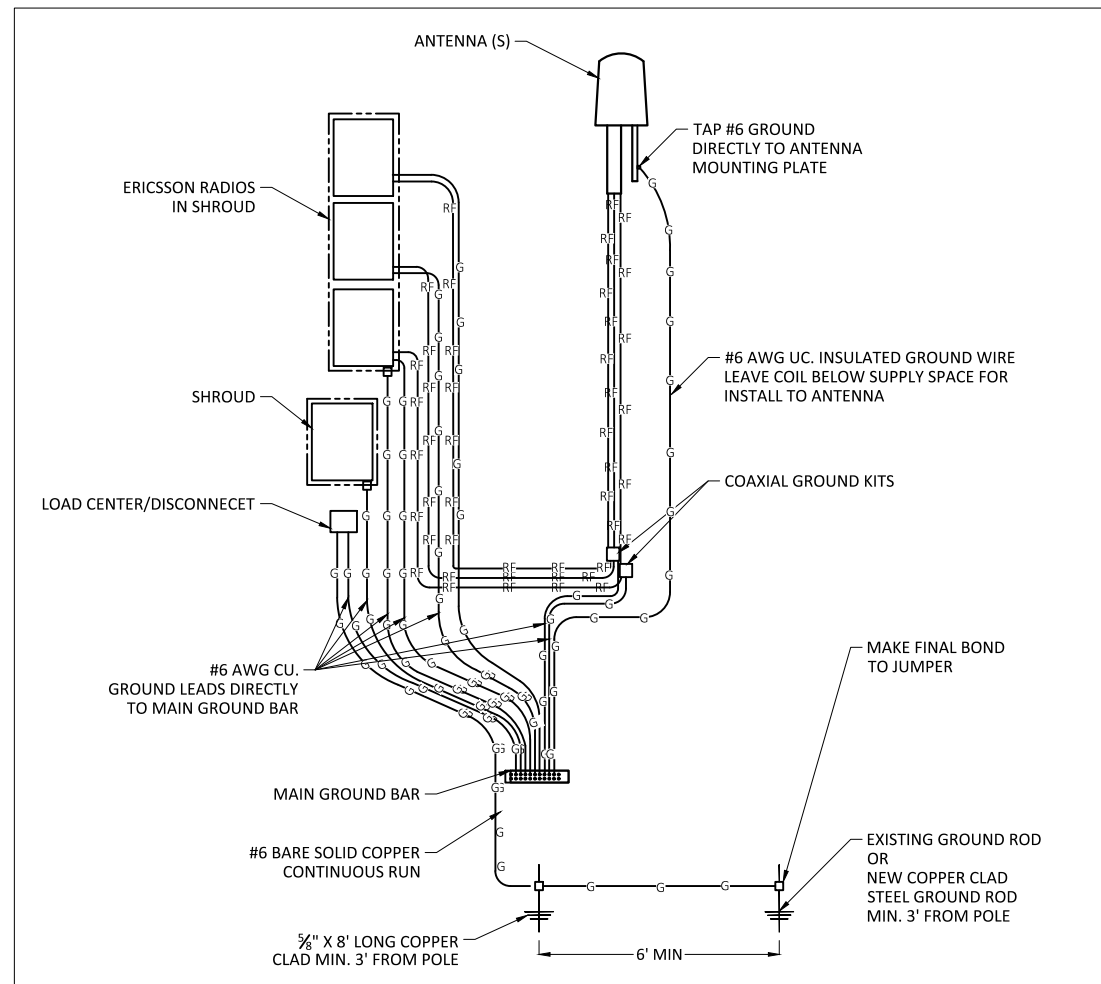
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**EXISTING POLE**  
SCALE: NTS



**WIRING DIAGRAM**  
SCALE: NTS



**GROUNDING DIAGRAM**  
SCALE: NTS

LOCATION: BOSTON, MA  
SUFFOLK COUNTY

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NODE  
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