SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	REAR VIEW
3	SIDE VIEW
4	PHOTO SIMULATION
5	PHOTO SIMULATION
6	PHOTO SIMULATION
7	WIRING DIAGRAM
8	POLE DETAIL
9	FOUNDATION DETAILS
10	ANTENNA DETAILS
11	ENCLOSURE DETAILS
12	BRACKET DETAILS
13	TRAFFIC MANAGEMENT PLAN
14	TRAFFIC MANAGEMENT PLAN DETAILS

CROWN CASTLE

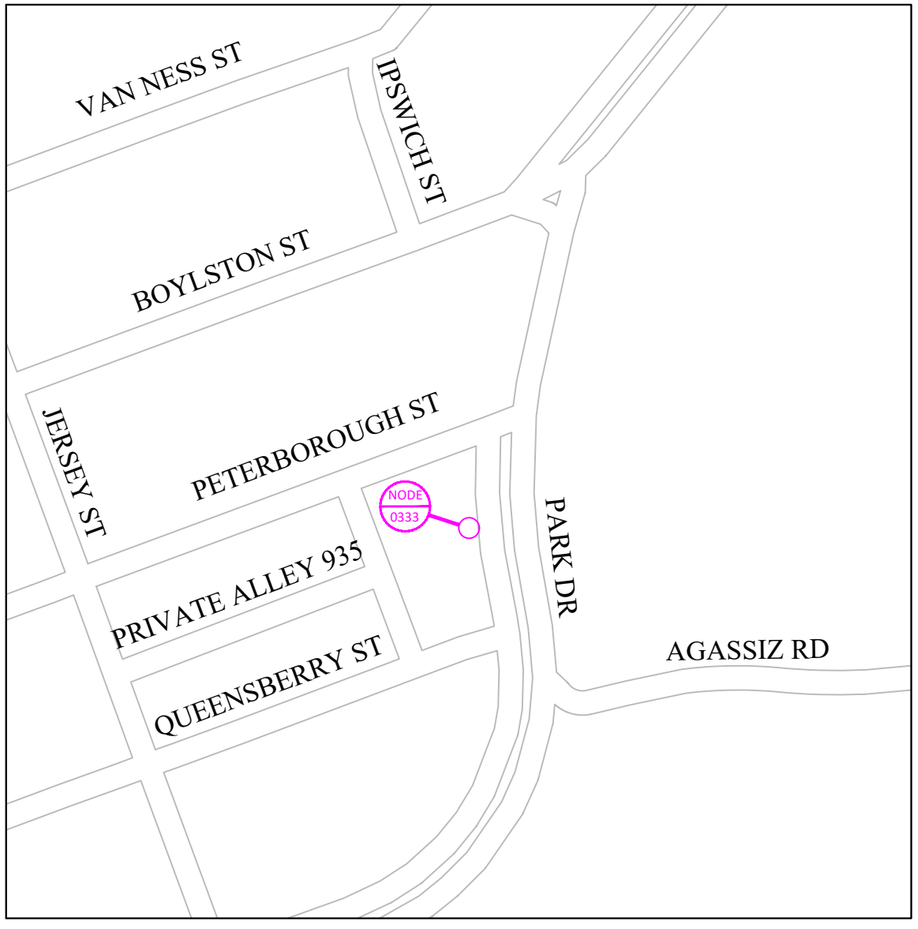
DEPARTMENT OF CONSERVATION AND RECREATION

SMALL CELL

CRAN_RCTB_00011_40

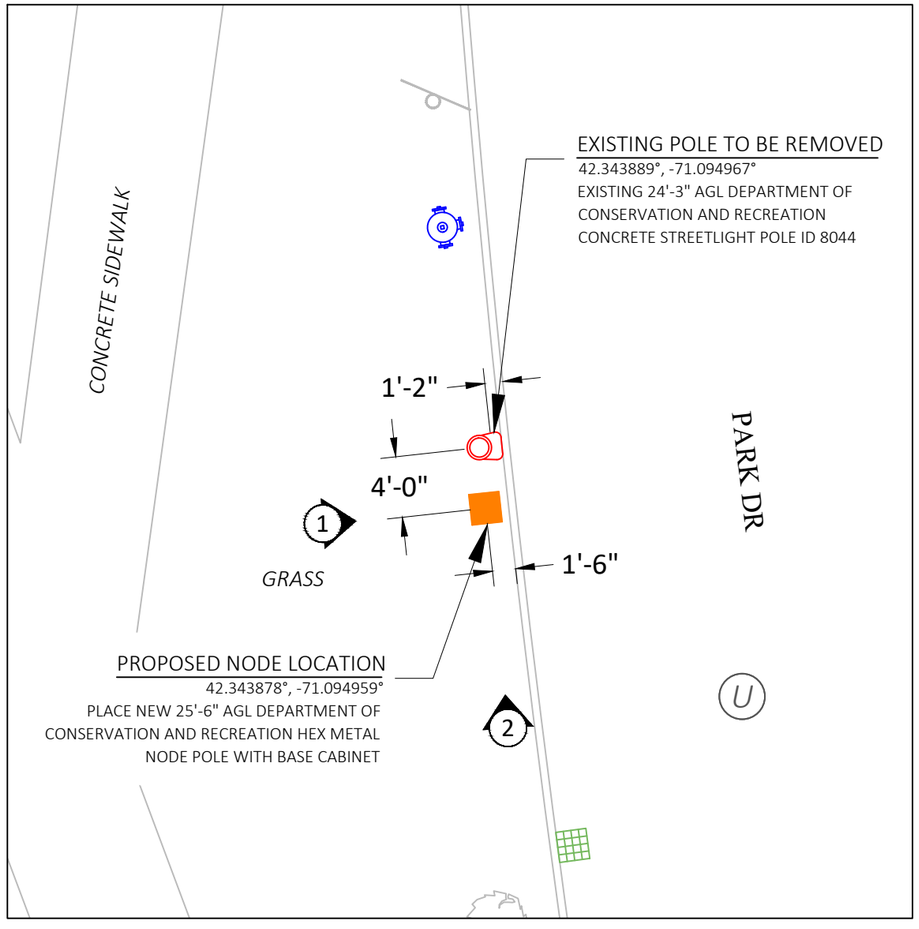
PROPOSED NODE SC-MA 0333 LOCATION

BOSTON, MASSACHUSETTS



VICINITY MAP

1" = 250'



NODE PLACEMENT

1" = 10'

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

SITE INFORMATION:

LEGEND	
	PROPOSED NODE
	JOINT UTILITY POLE
	LAMP POST
	STREETLIGHT
	TRAFFIC/PEDESTRIAN SIGNAL
	HYDRANT
	PARKING METER
	SIGN
	CATCH BASIN
E	ELECTRIC MANHOLE
U	UNKNOWN MANHOLE
U	UNKNOWN HANDHOLE

BOSTON, MASSACHUSETTS

DCR LOCATION:
42.34°, -71.09°

EXISTING LOCATION:
42.343889°, -71.094967°

PROPOSED LOCATION:
42.343878°, -71.094959°

POLE OWNER:
DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

PIKE TELECOM

21 Oxford Rd
Mansfield, MA 02048
www.piketelecom.org
1-508-337-7600

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED RADIO CAGE	10/17/18
2	REVISED ANTENNA	11/15/19
3	ADDED POLE STRUCTURAL ELEV. VIEWS & DETAILS	02/27/20

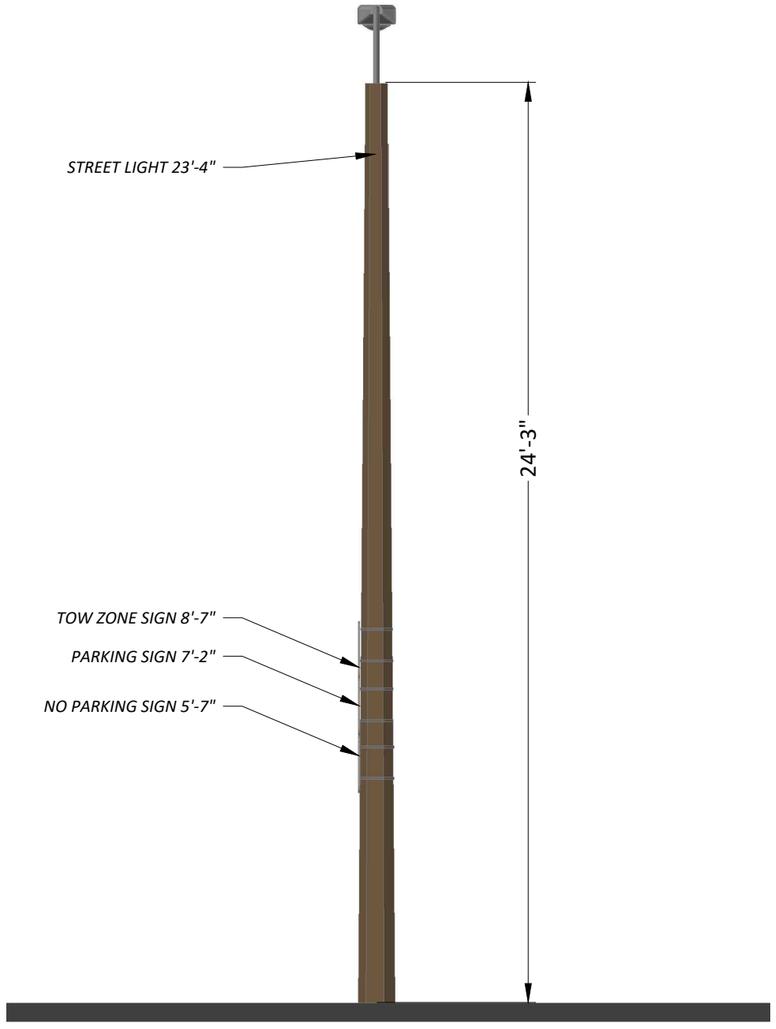
DRAWING TITLE:

COVER SHEET

DRAFTER: DTB	DRAWING NO.
SCALE: AS NOTED	1
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	

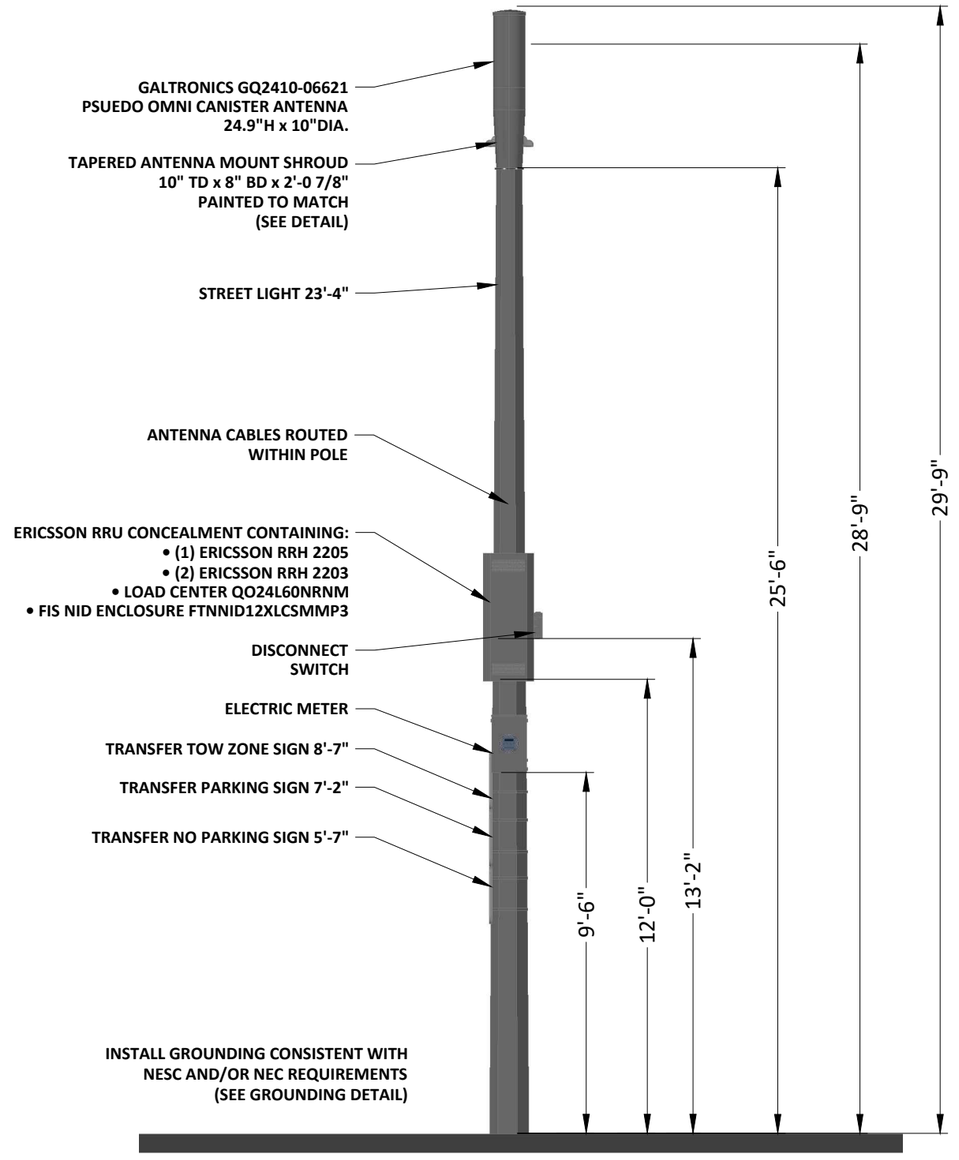
NO FIELD CORING/DRILLING OR CUTTING OF METALLIC POLE PERMITTED.

NOTE:
REPLACE EXISTING 24'-3" AGL DCR CONCRETE STREETLIGHT POLE ID 8044 WITH NEW 25'-6" AGL DCR METAL HEX NODE POLE.



1 EXISTING PROFILE - REAR VIEW
LOOKING NORTHEAST TOWARDS PARK DR

SCALE IN FEET
4 0 4



1 PROPOSED PROFILE - REAR VIEW
LOOKING NORTHEAST TOWARDS PARK DR

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:
CROWN CASTLE

PREPARED BY:
PIKE TELECOM
21 Oxford Rd
Mansfield, MA 02048
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DRAWING TITLE:
REAR VIEWS

DRAFTER: DTB	DRAWING NO.
SCALE: 1" = 4'	2
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	

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NOTE:
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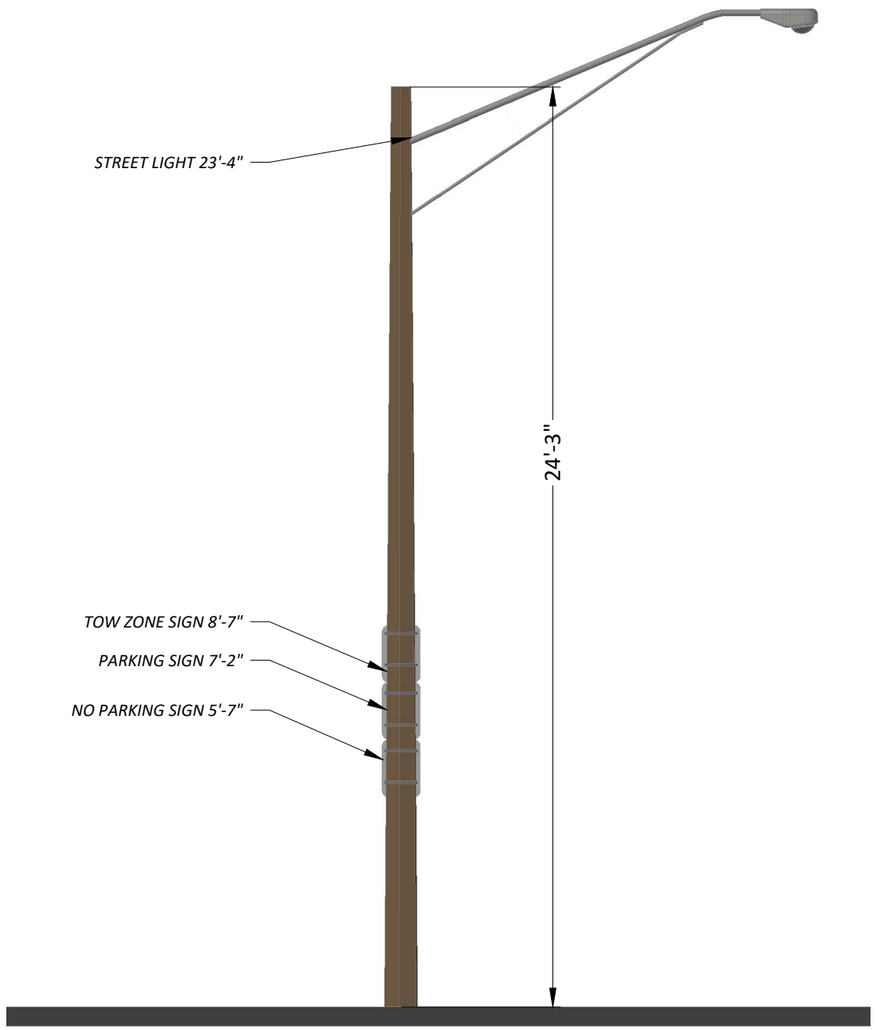
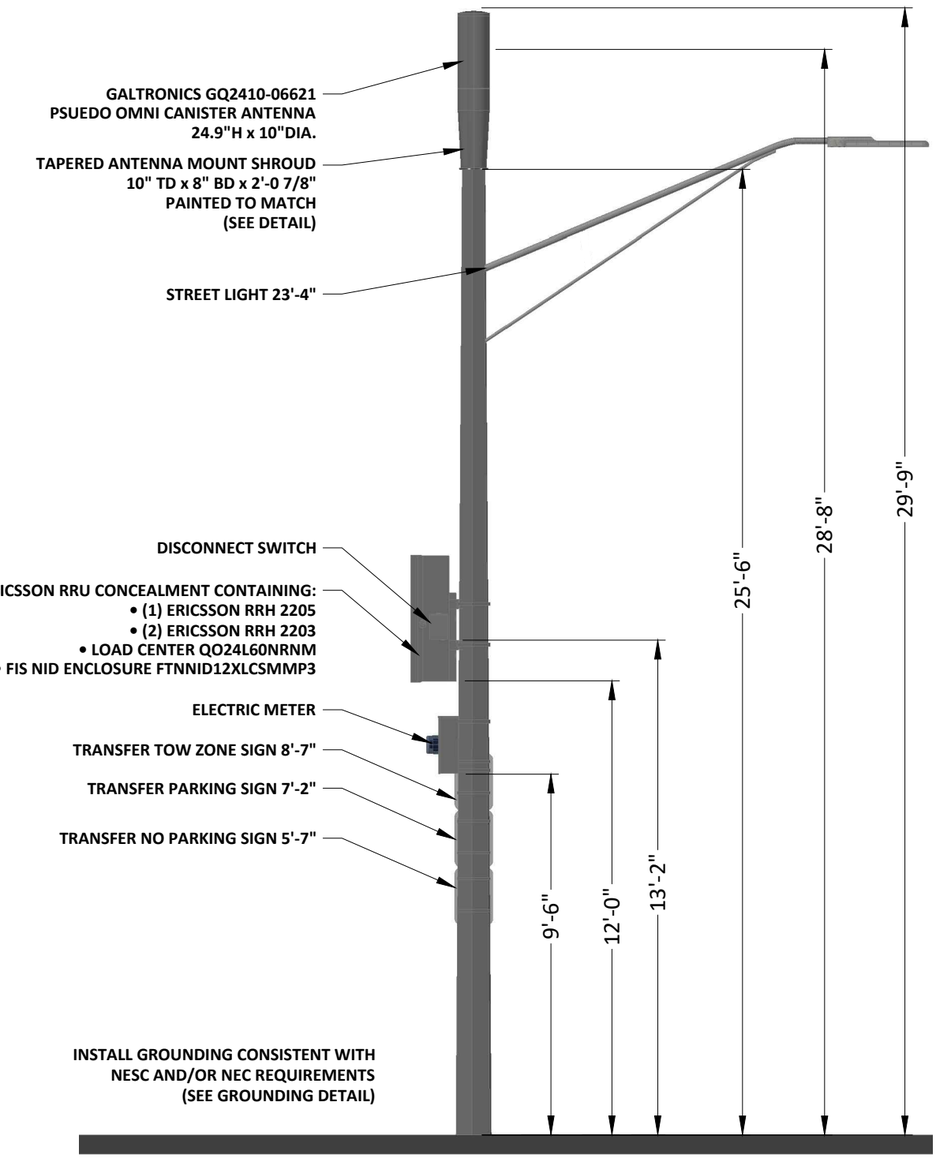


② EXISTING PROFILE - SIDE VIEW
LOOKING NORTHWEST ALONG PARK DR

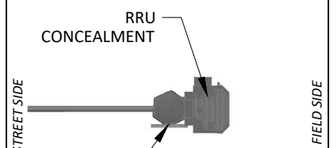
SCALE IN FEET

4 0 4

NO FIELD CORING/DRILLING OR CUTTING OF METALLIC POLE PERMITTED.



② PROPOSED PROFILE - SIDE VIEW
LOOKING NORTHWEST ALONG PARK DR



PROPOSED TOP VIEW

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR: CROWN CASTLE

PREPARED BY:
PIKE TELECOM
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REVISIONS

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DRAWING TITLE:
SIDE VIEWS

DRAFTER: DTB
SCALE: 1" = 4'
ISSUE DATE: 08/15/17
INDEX NAME: SC-MA 0333

DRAWING NO. 3

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

LOOKING WEST FROM PARK DR

EXISTING PHOTOGRAPHIC VIEW

42.343889°, -71.094967°

NOTE:
REPLACEMENT POLE PAINT COLOR TO BE BENJAMIN MOORE GREY.
(VARIATIONS IN PHOTO SIMULATION COLOR MAY BE DUE TO LIGHTING OR PRINTER & SCREEN SETTINGS.)

PROPOSED PHOTOGRAPHIC SIMULATION

42.343878°, -71.094959°

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

PIKE TELECOM
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Mansfield, MA 02048
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REVISIONS

REV	DESCRIPTION	DATE
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3	ADDED POLE STRUCTURAL ELEV. VIEWS & DETAILS	02/27/20

DRAWING TITLE:

PHOTOSIM

DRAFTER: DTB	DRAWING NO.
SCALE: NTS	4
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	

LOOKING SOUTH ALONG PARK DR

EXISTING PHOTOGRAPHIC VIEW

42.343889°, -71.094967°

PROPOSED PHOTOGRAPHIC SIMULATION

42.343878°, -71.094959°

NOTE:
REPLACEMENT POLE PAINT COLOR TO BE BENJAMIN MOORE GREY.
(VARIATIONS IN PHOTO SIMULATION COLOR MAY BE DUE TO LIGHTING OR PRINTER & SCREEN SETTINGS.)

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

PIKE TELECOM
21 Oxford Rd
Mansfield, MA 02048
www.piketelecom.org
1-508-337-7600

REVISIONS		
REV	DESCRIPTION	DATE
1	UPDATED RADIO CAGE	10/17/18
2	REVISED ANTENNA	11/15/19
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DRAWING TITLE:

PHOTOSIM

DRAFTER: DTB	DRAWING NO.
SCALE: NTS	5
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	

LOOKING NORTH ALONG PARK DR

EXISTING PHOTOGRAPHIC VIEW

42.343889°, -71.094967°

PROPOSED PHOTOGRAPHIC SIMULATION

42.343878°, -71.094959°

NOTE:
REPLACEMENT POLE PAINT COLOR TO BE BENJAMIN MOORE GREY.
(VARIATIONS IN PHOTO SIMULATION COLOR MAY BE DUE TO LIGHTING OR PRINTER & SCREEN SETTINGS.)

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

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CROWN CASTLE

PREPARED BY:

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REVISIONS		
REV	DESCRIPTION	DATE
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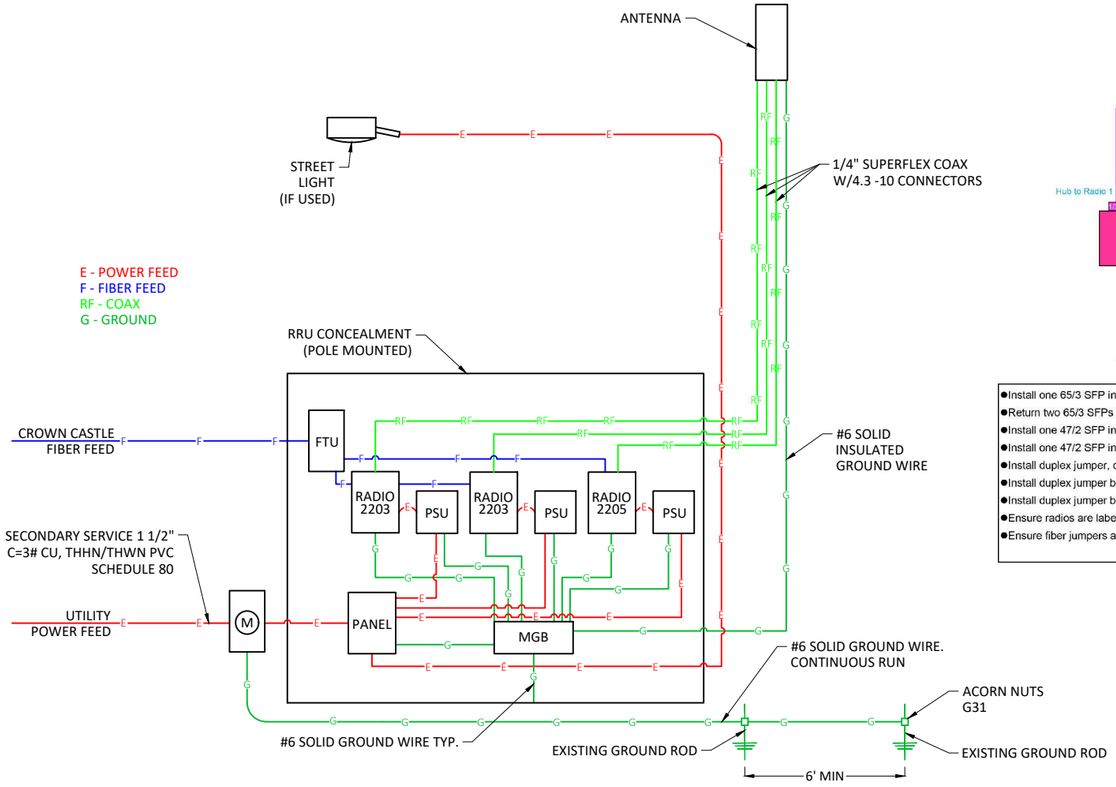
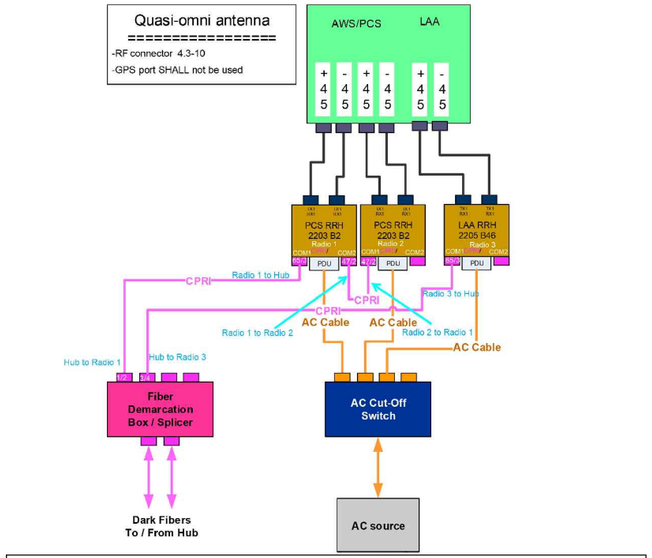
DRAWING TITLE:

PHOTOSIM

DRAFTER: DTB	DRAWING NO.
SCALE: NTS	6
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	



WIRING DIAGRAM



- Install one 65/3 SFP in Radio 1 and one 65/3 SFP in Radio 3, Data / Com 1, facing the hub
- Return two 65/3 SFPs to Vinny at the AT&T hub at 250 Bent St. Cambridge
- Install one 47/2 SFP in the first radio Data / Com 2, facing the 2nd radio
- Install one 47/2 SFP in the second radio, Data / Com 1 facing the 1st radio
- Install duplex jumper, daisy chaining radios 1 and 2, into the 47/2 SFPs
- Install duplex jumper between the first fiber pair (Blue and Orange fibers) on the OSP facing panel and Data / Com 1 on Radio 1
- Install duplex jumper between the second fiber pair (Green and Brown fibers) on the OSP facing panel and Data / Com 1 on Radio 3
- Ensure radios are labeled Radio 1, Radio 2, and Radio 3 with Radio 1 being the radio with 2 SFPs installed
- Ensure fiber jumpers are labeled as shown above in Blue

PLUMBING DIAGRAM

NOTES:

1.) ALL WIRING TO BE STRANDED COPPER THHN; ALL GROUND WIRING TO BE GREEN JACKETED.

2.) ALL GROUND WIRE TO BE CONNECTED TO MGB AND MVG IN A 'DOWN-HILL' FASHION, NO DRIP LOOP OR SLACK IN GROUND.

3.) ALL GROUND WIRE CONNECTIONS TO MVG AND TO GROUND RODS ARE TO BE IRREVERSIBLE AND PERMANENT.

4.) GROUND LUGS TO BE 4pt CRIMP, USE CLEAR HEAT SHRINK, UP TO $\frac{1}{16}$" SHINER; USE NO-OX ON ALL GROUND BUSSES.

5.) BREAKER TO BE SIZED BASED ON EQUIPMENT TO BE INSTALLED AND CONDUCTOR SIZE.

6.) FOLLOW APPLICABLE NEC, UTILITY COMPANY, AND MUNICIPAL REGULATIONS.

GENERAL NOTES:

1.) METAL TO METAL CONTACT IS NOT ALLOWED WITHOUT AN INTENTIONAL BOND.

2.) DISSIMILAR METALS IN DIRECT CONTACT, CAUSE CHEMICAL REACTION BETWEEN THE METALS, LEADING TO CORROSION.

3.) ALL ABOVE GROUND CONNECTIONS TO THE VERTICAL GROUND RISER (VGR) SHALL BE IRREVERSIBLE CLAMP TYPE AND WEATHER PROOFED.

4.) WHERE APPLICABLE EARTH GROUND RESISTANCE OF 5 OHMS OR LESS IS PREFERRED. 25 OHMS IS ACCEPTABLE SEE NEC 250.53

5.) ALL METALLIC SURFACES AND/OR GROUND COMPONENTS INSTALLED W/IN 6" OF EACH OTHER MUST BE PROPERLY BONDED TO VGR, INCLUDING BUT NOT LIMITED TO, RADIO SHROUD, ANTENNA BRACKETS, STREET LIGHTS AND THE METER/DISCONNECT OF THE AC SERVICE.

6.) WHEN GROUNDING EQUIPMENT INSIDE A SHROUD, CONNECT TO THE SHROUD MANUFACTURER S GROUND BUSS BAR, AND WATERFALL THE GROUND WIRE FROM THE SHROUD IN A DOWNWARD SWEEPING MOTION TO THE VGR. AVOID GROUND LOOPS THROUGH THE EQUIPMENT CHASSIS TO THE METALLIC SHROUD.

7.) WHEN SITE IS POWER UP, BEFORE ACCEPTANCE, TEST FOR OBJECTIONABLE CURRENT AND FOREIGN VOLTAGE.

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

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21 Oxford Rd
Mansfield, MA 02048
www.piketelecom.org
1-508-337-7600

REVISIONS

REV	DESCRIPTION	DATE
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DRAWING TITLE:

WIRING DIAGRAMS

DRAFTER: DTB

SCALE: NTS

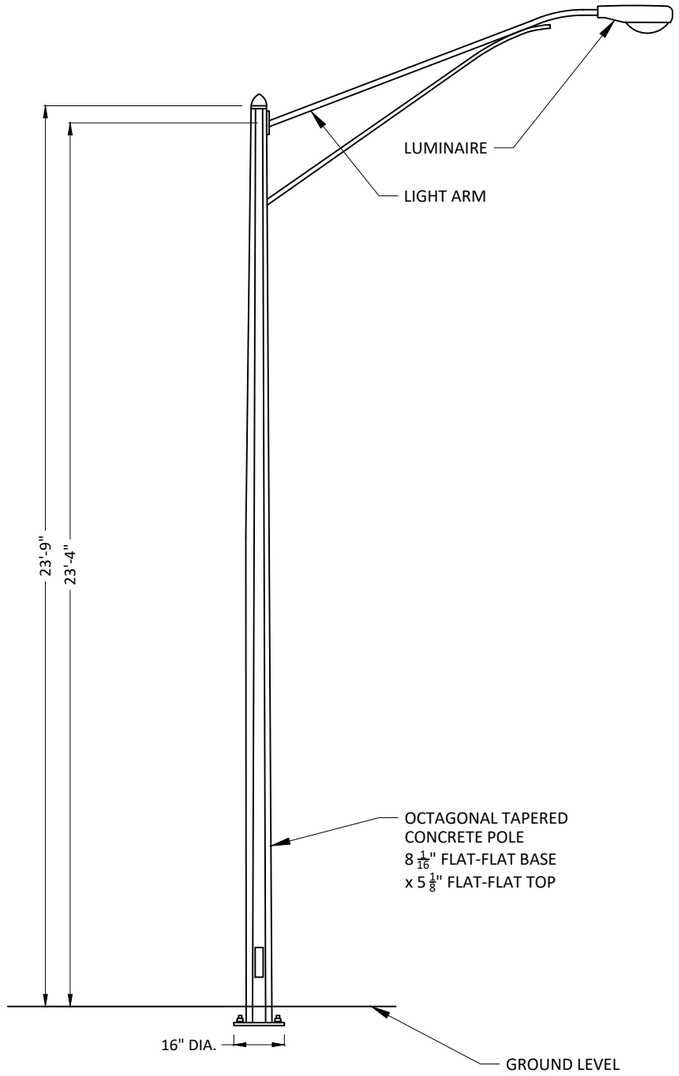
ISSUE DATE: 08/15/17

INDEX NAME: SC-MA 0333

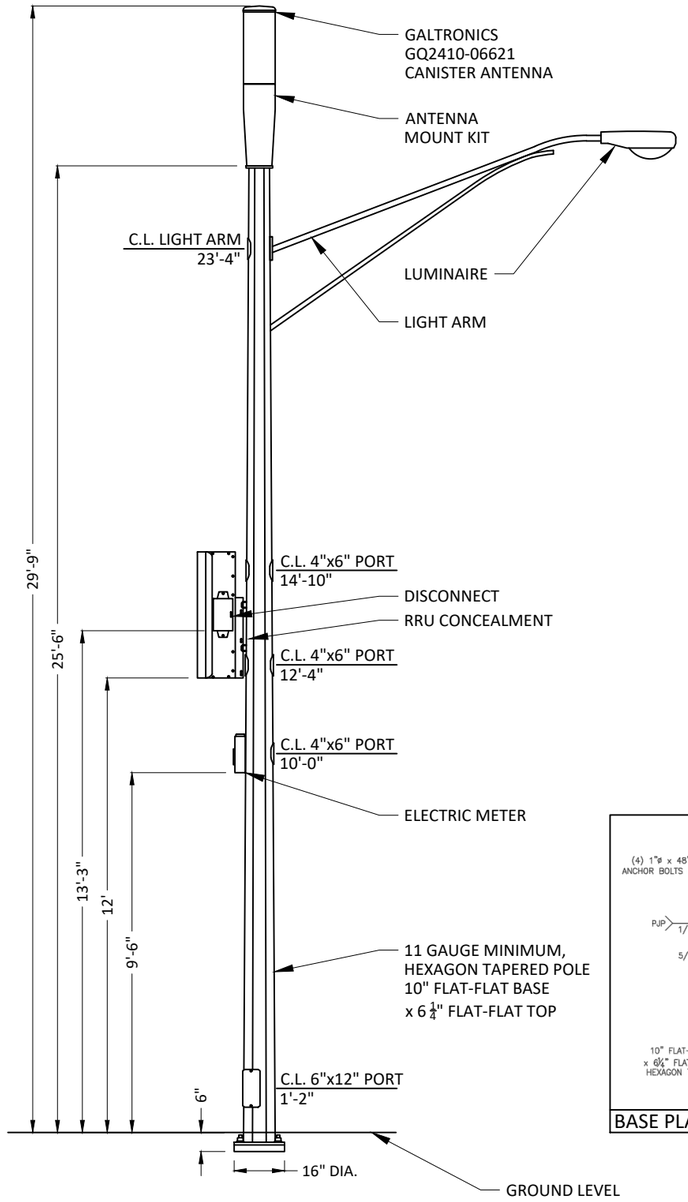
DRAWING NO.

7

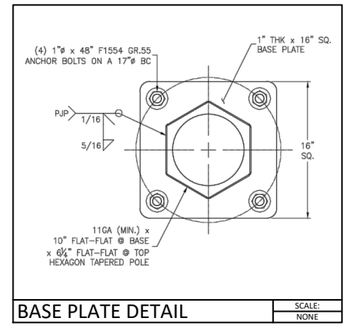
FOR PERMITTING ONLY-NOT FOR CONSTRUCTION



EXISTING POLE - SIDE VIEW



PROPOSED POLE- SIDE VIEW



BASE PLATE DETAIL | SCALE: NONE

SCALE IN FEET

4 0 4

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

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DRAWING TITLE:

POLE DETAIL

DRAFTER: DTB

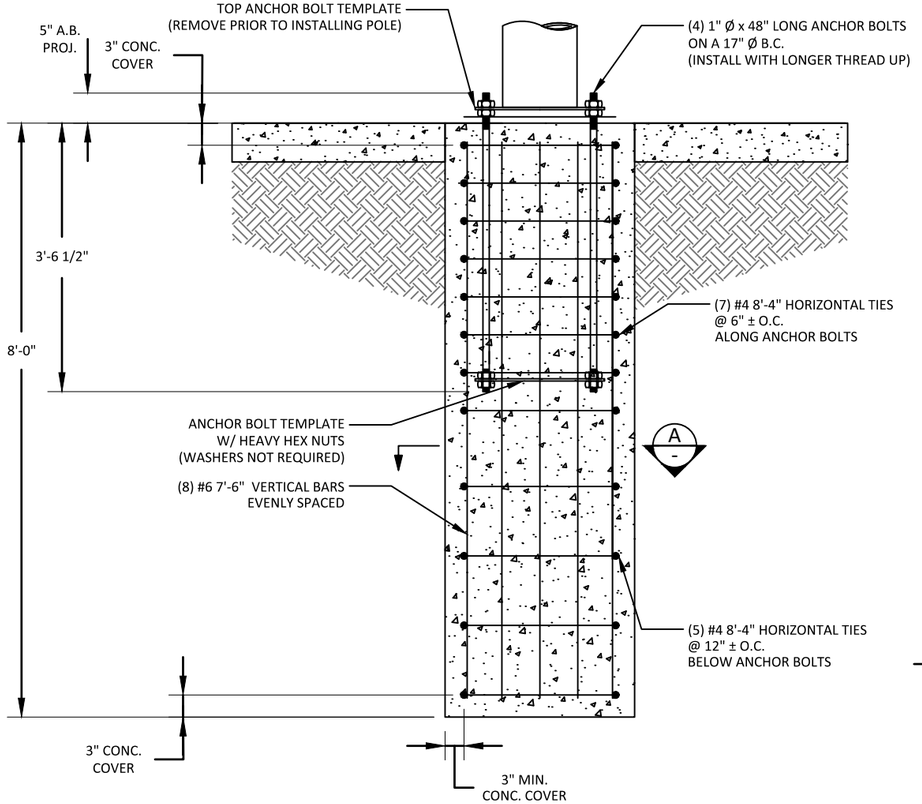
SCALE: 1" = 4'

ISSUE DATE: 08/15/17

INDEX NAME: SC-MA 0333

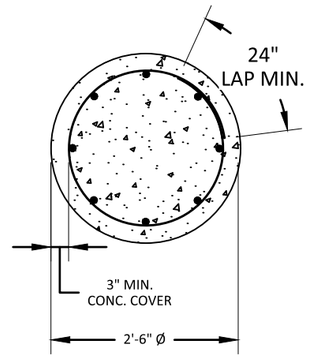
DRAWING NO.

8



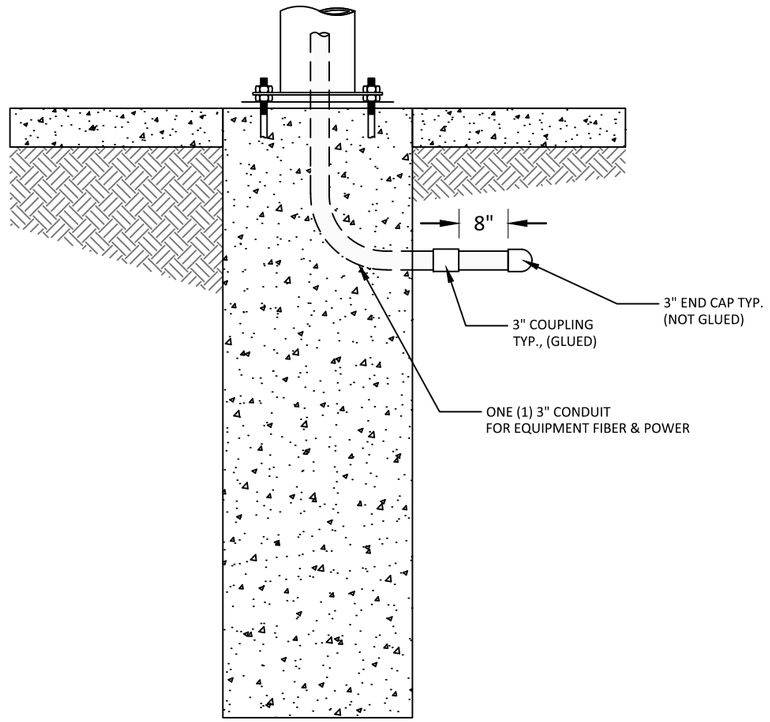
FOUNDATION ELEVATION

SCALE: 1" = 2'



FOUNDATION SECTION A-

SCALE: 1" = 2'



CONDUIT ELEVATION DETAIL

SCALE: 1" = 2'

FOUNDATION 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 IBC, TABLE 1806.2, CLASS 5 MATERIAL.
11. TOTAL VOLUME OF CONCRETE REQUIRED FOR THIS FOUNDATION IS APPROXIMATELY 1.5 CU. YDS.

CONDUIT NOTES:

1. FIBER AND POWER CONDUIT ORIENTATION/DIRECTION SHOWN IS FOR PICTORIAL REFERENCE ONLY. PLEASE CONTACT THE CROWN CASTLE FIBER CONSTRUCTION ENGINEER (FCE) FOR ACTUAL ORIENTATION/DIRECTION PRIOR TO CONSTRUCTION.
2. POLE FOUNDATION/CONDUIT INSTALLER TO ADD A 3"-PVC COUPLING, MINIMUM 8"-LONG SECTION OF 3"-PVC PIPE, AND 3"-PVC PIPE CAP (CAP NOT TO BE GLUED/CEMENTED) OR OTHER MEANS TO EACH SWEEP ELBOW COMING OF OF THE FOUNDATION BELOW GROUND LEVEL AND TO EXTEND PAST CONCRETE FOUNDATION TO INSURE NO CONCRETE RE-ENTERS THE PIPE EXTENSION OR SWEEP ELBOW.
3. POLE FOUNDATION/CONDUIT INSTALLER TO PLACE MULE/PULL TAPE IN ALL CONDUITS.
4. ALL CONDUIT SHALL BE PLACED UP AND THROUGH CENTER/INTERIOR OF POLE (NOT EXTERIOR) UNLESS OTHERWISE SPECIFIED.

MATERIAL REQUIREMENTS

ASTM STANDARD

DESCRIPTION	QTY	SIZE	LENGTH
VERTICAL BARS	8	#6	7'-6"
HORIZONTAL TIES	12	#4	8'-4"
CONCRETE	1.5 CUBIC YARDS		

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

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DRAWING TITLE:

FOUNDATION DETAILS

DRAFTER: DTB

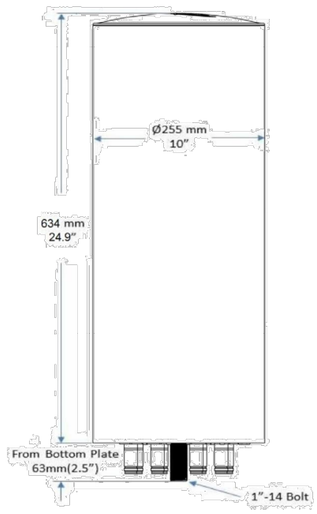
SCALE: 1" = 2'

ISSUE DATE: 08/15/17

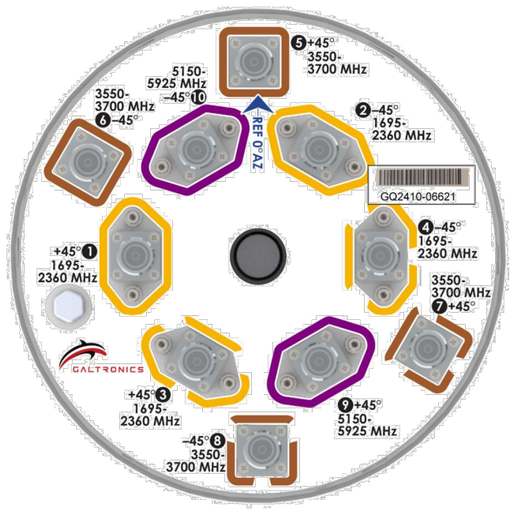
INDEX NAME: SC-MA 0333

DRAWING NO.

9



SIDE VIEW



BOTTOM VIEW

2' 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 U-NII Band 5150-5925 MHz*

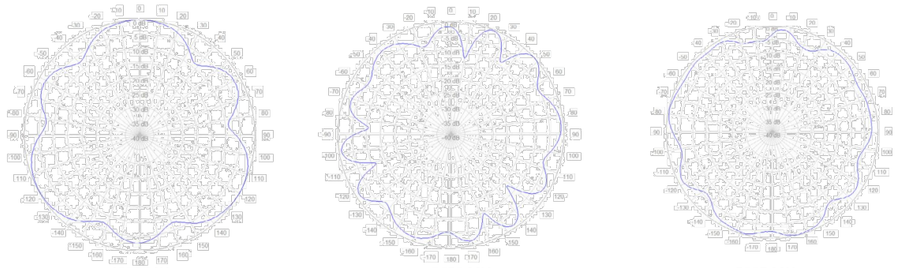
1695-2360, 3550-3700 and 5150-5925 MHz
Pseudo Omni Canister Antenna

*Compliant to 789033 D02 General U-NII Test Procedures New Rules v01r04: The antenna meets current U-NII-1 requirements for gain and upper side-lobe performance. Guidelines for Compliance Testing of Unlicensed National Information

Electrical Specifications

Frequency Band [MHz]	1695-2180	2305-2360	3550-3700	5150-5925
Input Connector Type	4x 4.3-10 (F)		4x 4.3-10 (F)	2x 4.3-10 (F)
Isolation (Typ.)	20 dB			
VSWR/Return Loss (Typ.)	1.5:1 / 14.0 dB			
Impedance	50 Ω			
Polarization	Dual slant 45° (±45°)			
Horizontal Beamwidth	Omni (360°)			
Vertical Beamwidth	19°	15.4°	18.7°	23.0°
Max. Gain	8.9 dBi	8.3 dBi	8.0 dBi	5.5 dBi
Avg. Gain	7.7 dBi	7.9 dBi	7.6 dBi	4.7 dBi
Downtilt	0° Fixed			
Max Power / Port	100 Watts		50 Watts	1 Watt
PIM @ 2x43 dBm	<-153 dBc		N/A	N/A

2D Antenna Patterns



1930 MHz | 3650 MHz | 5825 MHz

Mechanical Specifications

Operating Temperature	-40° to 158°F (-40° to +70°C)
Antenna Weight	16.3 lbs (7.4 kg)
Antenna Dimension (Diameter x Height)	10.0" (255 mm) x 24.9" (634 mm)
Radome Material	ASA
Radome Color	Gray, Brown, Black, 3M™ Conceal Film
Ingress Protection	Outdoor (IP65)
Wind Survival Rating	150 mph (241 km/h)

GALTRONICS GQ2410-06621 PSEUDO OMNI
SMALL CELL CANISTER ANTENNA

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

PIKE TELECOM
21 Oxford Rd
Mansfield, MA 02048
www.piketelecom.org
1-508-337-7600

REVISIONS

REV	DESCRIPTION	DATE
1	UPDATED RADIO CAGE	10/17/18
2	REVISED ANTENNA	11/15/19
3	ADDED POLE STRUCTURAL ELEV. VIEWS & DETAILS	02/27/20

DRAWING TITLE:

ANTENNA DETAILS

DRAFTER: DTB

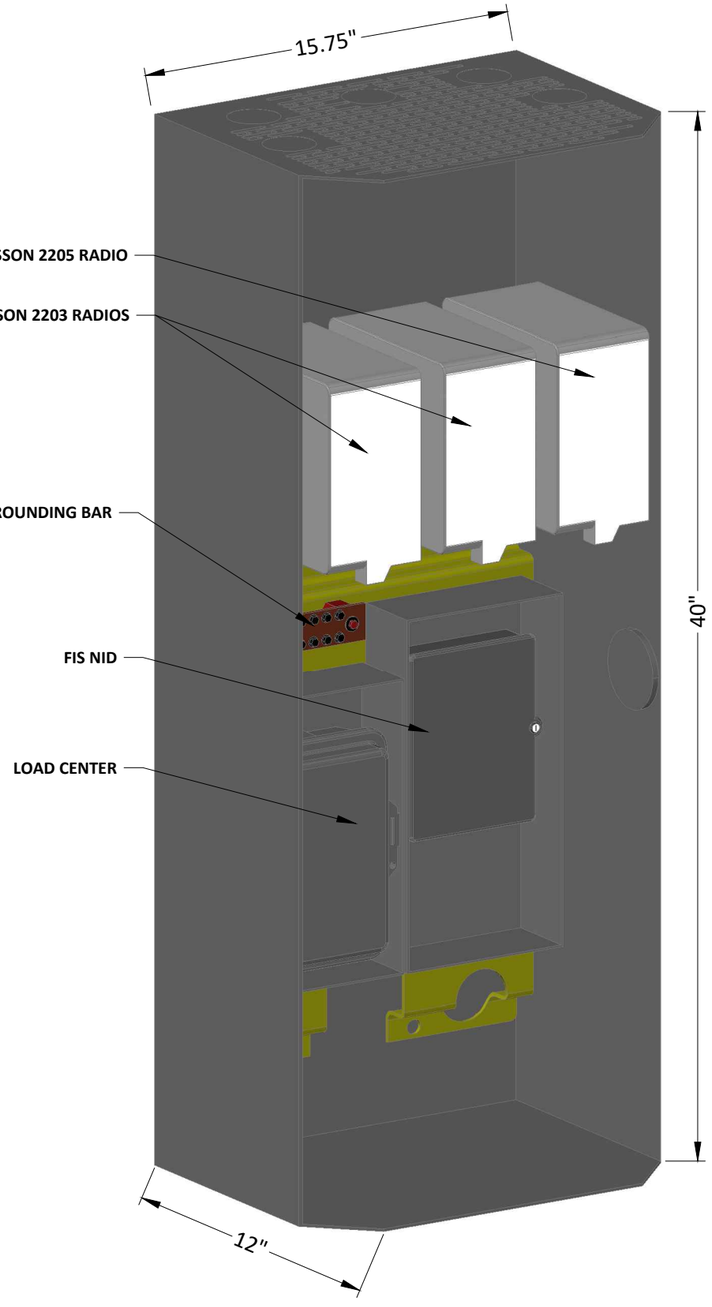
SCALE: NTS

ISSUE DATE: 08/15/17

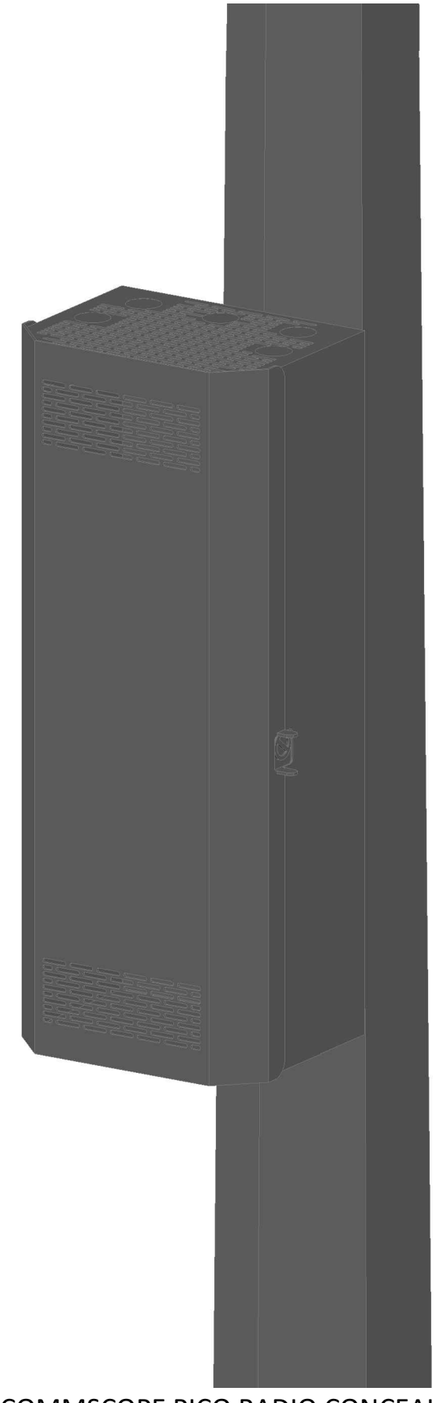
INDEX NAME: SC-MA 0333

DRAWING NO.

10



COMMSCOPE PICO RADIO CONCEALMENT
SSC-760236114
CONCEPTUAL VIEW



COMMSCOPE PICO RADIO CONCEALMENT
SSC-760236114
CONCEPTUAL VIEW

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BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

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REVISIONS		
REV	DESCRIPTION	DATE
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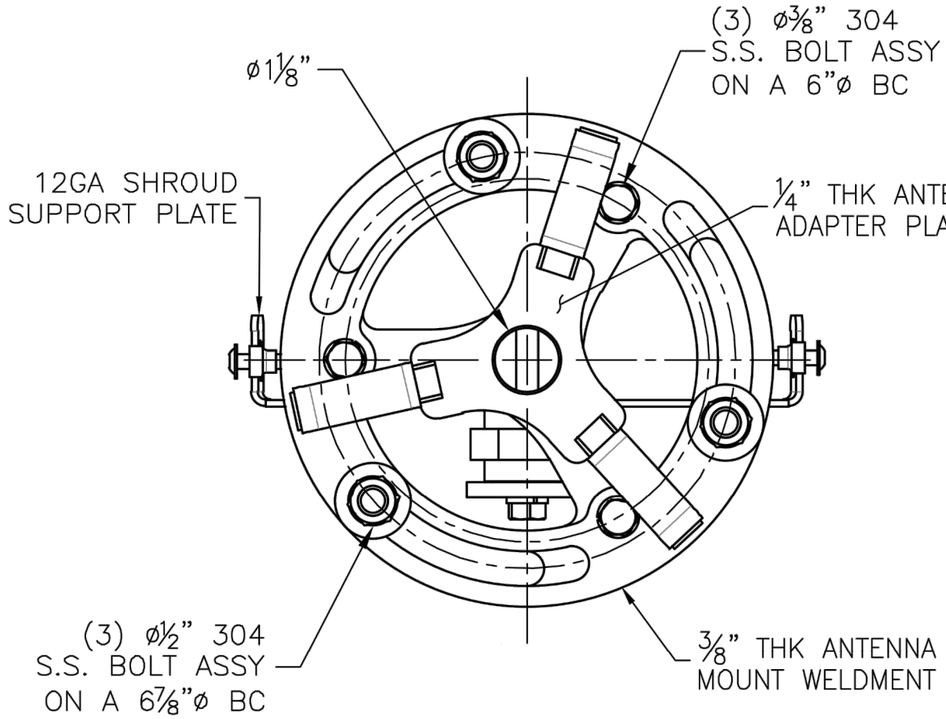
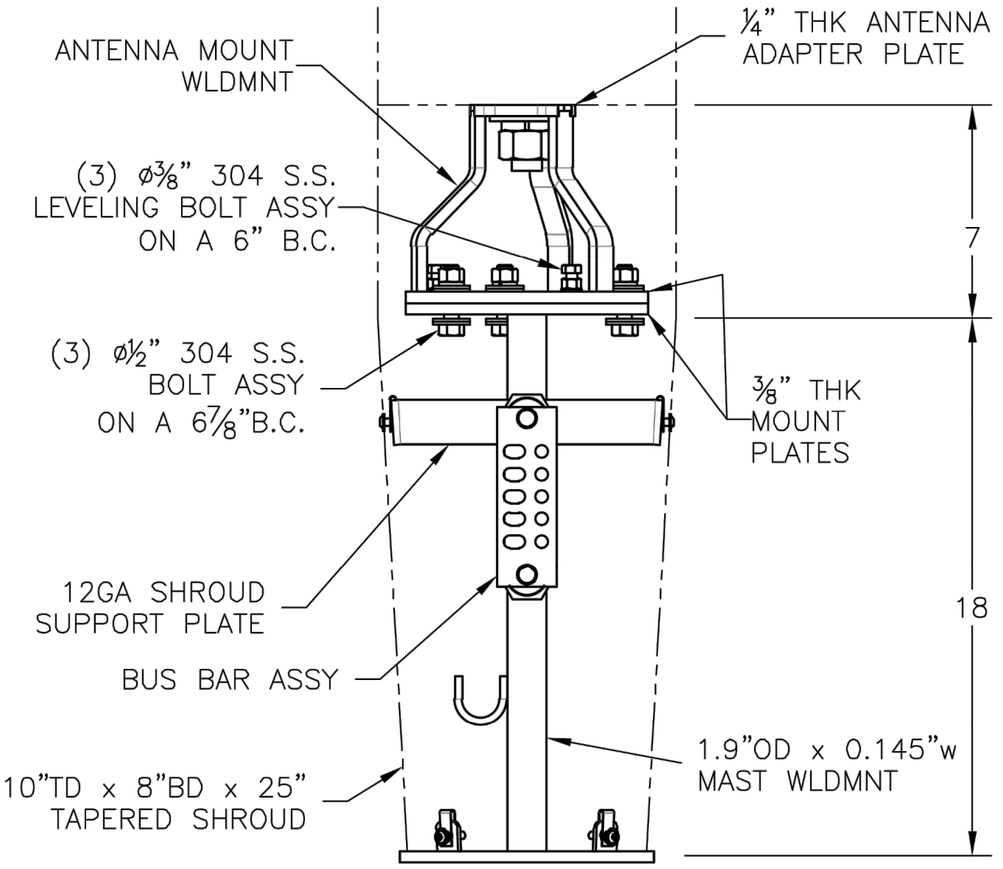
DRAWING TITLE:

RRU CONCEALMENT

DRAFTER: DTB	DRAWING NO.
SCALE: NTS	11
ISSUE DATE: 08/15/17	
INDEX NAME: SC-MA 0333	



TOP VIEW



SIDE VIEW

ANTENNA MOUNT ASSEMBLY & SHROUD

FOR PERMITTING ONLY-NOT FOR CONSTRUCTION

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR: CROWN CASTLE

PREPARED BY: PIKE TELECOM
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REV	DESCRIPTION	DATE
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DRAWING TITLE: BRACKET DETAILS

DRAFTER: DTB

SCALE: NTS

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INDEX NAME: SC-MA 0333

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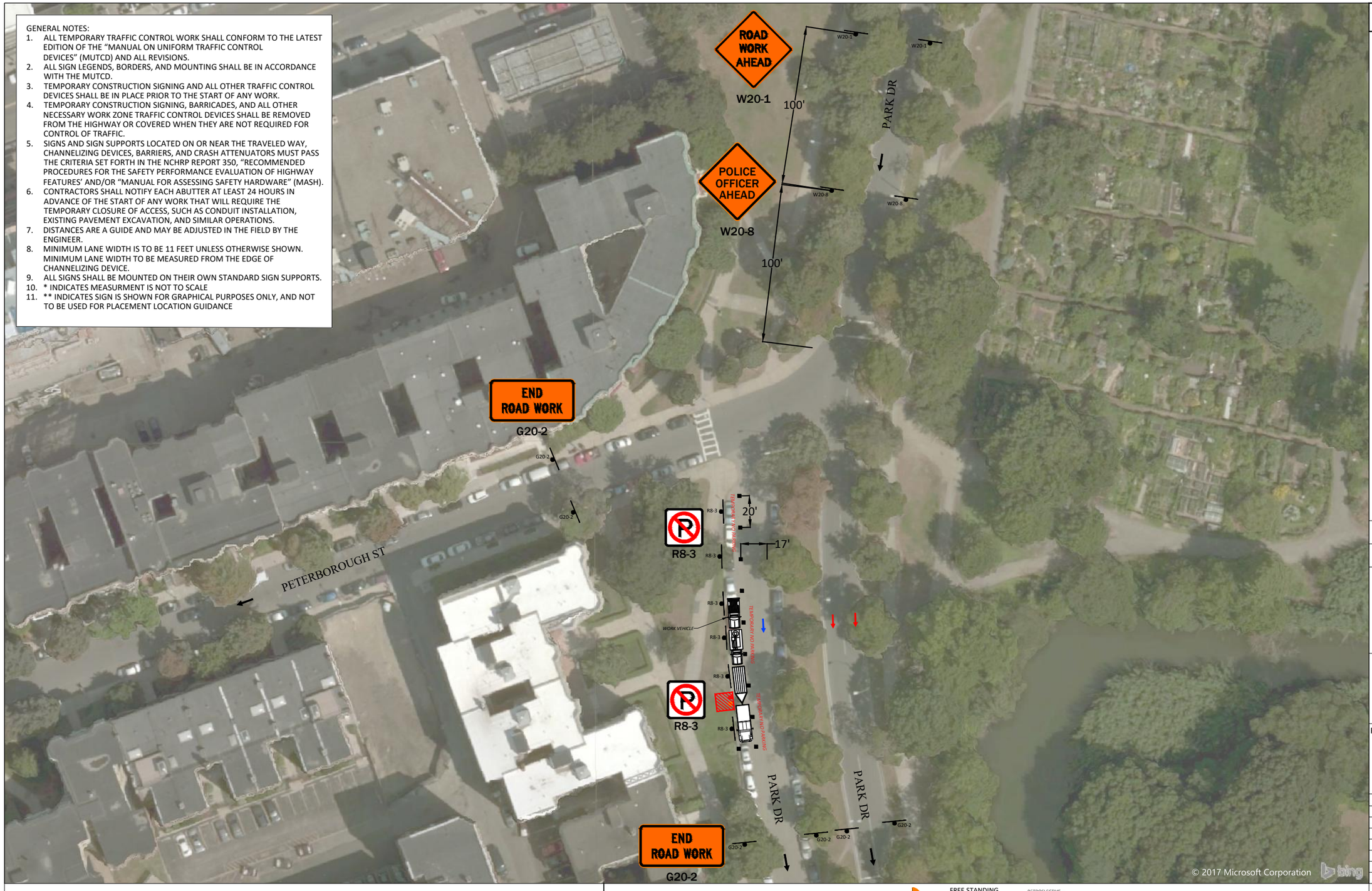
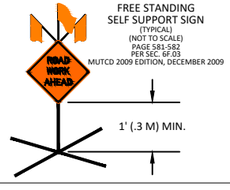
GENERAL NOTES:

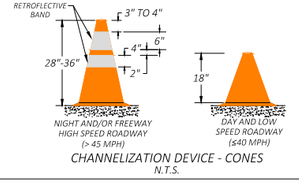
1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN THE NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES' AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, AND SIMILAR OPERATIONS.
7. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
8. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF CHANNELIZING DEVICE.
9. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
10. * INDICATES MEASURMENT IS NOT TO SCALE
11. ** INDICATES SIGN IS SHOWN FOR GRAPHICAL PURPOSES ONLY, AND NOT TO BE USED FOR PLACEMENT LOCATION GUIDANCE



1"= 60 FEET

0 60 120 180 240





CHANNELIZATION DEVICE - CONES
N.T.S.

PHASE I

TRAFFIC LEGEND	
	WORK ZONE
	PROPOSED TRENCH
■	CHANNELIZING DEVICE (CONE)
	DRUM
	SIGN
	POLICE DETAIL
	SINGLE PARKING METER
	DOUBLE PARKING METER
V	VARIABLE MESSAGE BOARD
	ARROW BOARD
	TYPE 3 BARRICADE
	HIGH LEVEL WARNING DEVICE
	CONSTRUCTION TRUCK
	TRUCK MOUNTED ATTENUATOR
	TRAFFIC FLOW
	TRAFFIC FLOW
	TRAFFIC FLOW
	TRAFFIC FLOW
	2 WAY TRAFFIC
Ⓣ	EXISTING MBTA BUS STOP
Ⓡ	RELOCATED MBTA BUS STOP

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR:

CROWN CASTLE

PREPARED BY:

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21 Oxford Rd
Mansfield, MA 02048
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1-508-337-7600

REVISIONS

REV	DESCRIPTION	DATE
1	UPDATED RADIO CAGE	10/17/18
2	REVISED ANTENNA	11/15/19
3	ADDED POLE STRUCTURAL ELEV. VIEWS & DETAILS	02/27/20

DRAWING TITLE:

TRAFFIC MANAGMENT PLAN

DRAFTER: JR	DRAWING NO.
SCALE: 1" = 60'	13
ISSUE DATE: 08/22/17	
INDEX NAME: SC-MA 0333	

08/20/2020 N:\Engineering\Fibertech\City of Boston\MA - Boston 186\AA-AutoCAD\TMP\SC-MA 0333 - TMP.dwg

Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

Guidance:

1. *All lanes should be a minimum of 10 feet in width as measured to the near face of the channelizing devices.*
2. *The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.*

Option:

3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

11. Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

12. Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.

13. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

TABLE 6H-3. MEANING OF LETTER CODES ON TYPICAL DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN (LOW SPEED)*	100 FEET	100 FEET	100 FEET
URBAN (HIGH SPEED)*	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET
EXPRESSWAY / FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET

* SPEED CATAGORY TO BE DETERMINED BY HIGHWAY AGENCY

** THE COLUMN HEADINGS A, B AND C ARE THE DIMENSIONS SHOWN IN FIGURES 6H-1 THROUGH 6H-6. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "FIRST SIGN" IS THE SIGN IN A THREE SIGN SERIES THAT IS CLOSEST TO THE TTC ZONE. THE "THIRD SIGN" IS THE SIGN THAT IS FURTHEST UPSTREAM FROM THE TTC ZONE.)

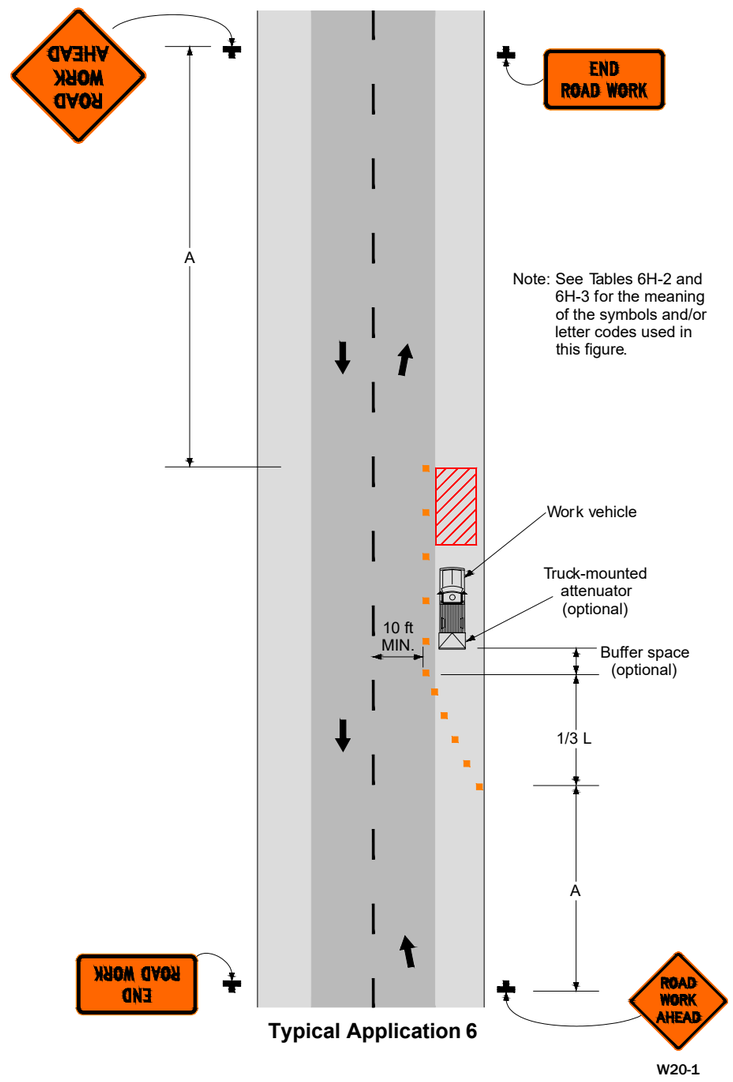
TABLE 6H-4. FORMULAS FOR DETERMINING TAPER LENGTH

CTRL+CLICK TO GO TO ACPA TAPER LENGTH CALCULATOR WEB PAGE

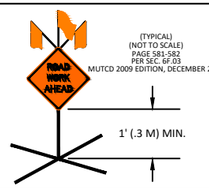
SPEED (S)	
40 MPH OF LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	L= WS

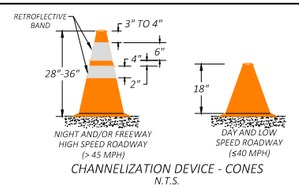
WHERE L= TAPER LENGTH IN FEET
W= WIDTH OF OFFSET IN FEET
S= POSTED SPEED LIMIT, OR OFF PEAK 85TH-PERCENTILE SPEED PROIR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Typical Application 6





CHANNELIZATION DEVICE - CONES
N.T.S.

TA-6

TRAFFIC LEGEND	
	WORK ZONE
	PROPOSED TRENCH
■	CHANNELIZING DEVICE (CONE)
◉	DRUM
	SIGN
	POLICE DETAIL
	SINGLE PARKING METER
	DOUBLE PARKING METER
V	VARIABLE MESSAGE BOARD
	ARROW BOARD
	TYPE 3 BARRICADE
	HIGH LEVEL WARNING DEVICE
	CONSTRUCTION TRUCK
	TRUCK MOUNTED ATTENUATOR
	TRAFFIC FLOW
	TRAFFIC FLOW
	TRAFFIC FLOW
	TRAFFIC FLOW
	2 WAY TRAFFIC
T	EXISTING MBTA BUS STOP
T	RELOCATED MBTA BUS STOP

BOSTON, MA

POLE OWNER: DCR

NOTES:

PREPARED FOR: CROWN CASTLE

PREPARED BY:

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