

PROJECT INFORMATION: 3C/4C/5C/LTE BWE

SCOPE OF WORK: REPLACE EXISTING LTE ANTENNAS WITH HEX ANTENNAS POSITION 1 & 3. INSTALL C BAND AIR 6449 ANTENNA IN POSITION 2. REPLACE (3) GSM & (3) LTE ANTENNAS WITH (6) CCI OCTOPORT ANTENNAS. REMOVE (3) EXISTING RRU-11 B4 & (3) EXISTING RRU-11 B12. RELOCATE (3) EXISTING 4478 B14 FROM POSITION 2 TO POSITION 1. DECOM UMTS & REMOVE UNUSED LINE ELEMENTS. ADD FRONTHAUL GATEWAY 6648 WITH XCEDE CABLE. INSTALL (6) Y-CABLES FOR DUALBAND RRHS. REPLACE EXISTING 9E/10E FOR (3) DC6 WITH DC FIBER CABLES. REPLACE DUS FOR RBS6630 & XMU, INSTALL SECOND RBS6630 & IDLE. REMOVE & REPLACE EXISTING TYCO CABINET WITH (1) POWER PLANT, BATTERY CABINET, (1) FLEX21 & (1) FLEX 12.

SITE ADDRESS: 285 COLUMBUS AVENUE
BOSTON, MA 02116

LATITUDE: 42° 20' 49.96" (NAD 83)*
LONGITUDE: 71° 04' 24.96" (NAD 83)*
* PER EXISTING AT&T PLAN

NAME OF APPLICANT: AT&T MOBILITY
550 COCHITUATE ROAD
SUITES 13&14
FRAMINGHAM, MA 01701



at&t
Mobility

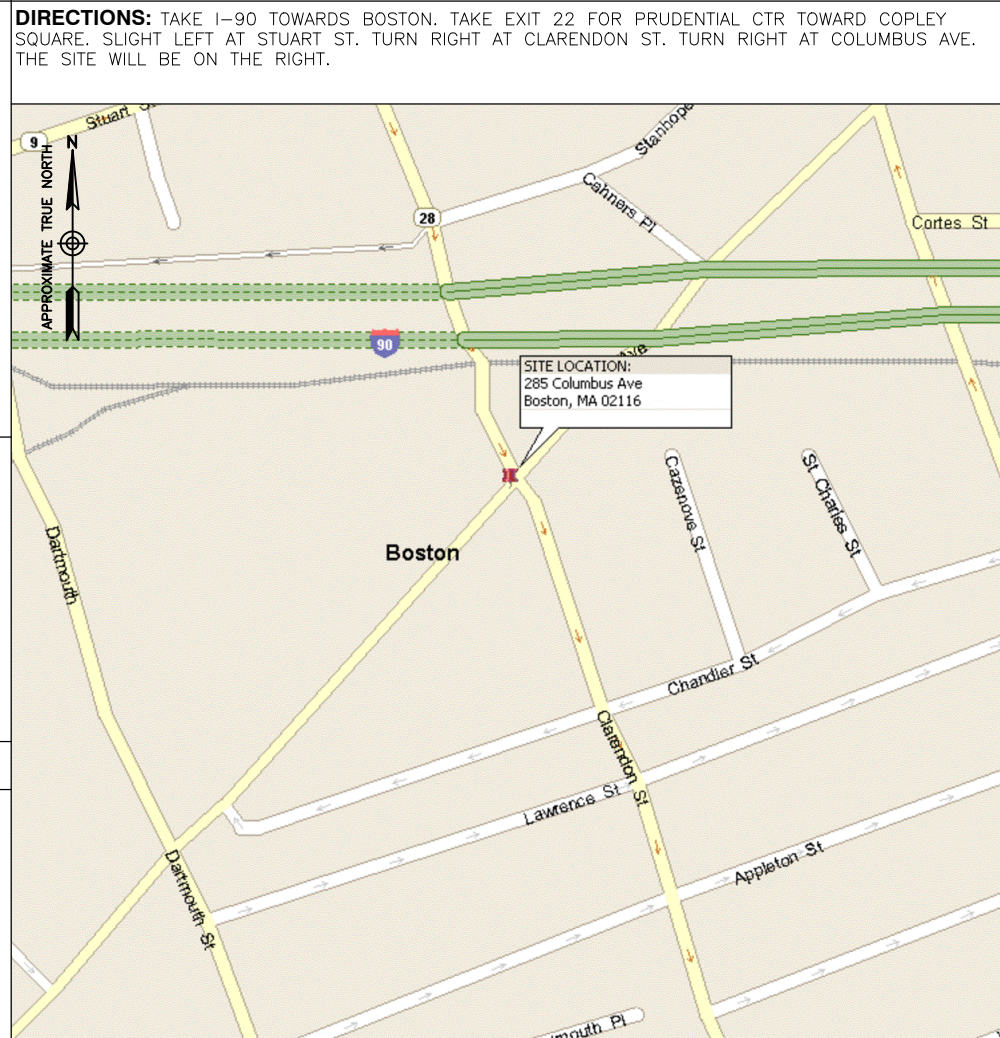
SITE NAME: BOSTON 285 COLUMBUS AVENUE
SITE NO.: MA2224 5G/6C/7C/RETRO/BBU RECONFIGURATION
**PACE NO.: MRCTB051186/MRCTB062565/MRCTB024136/MRCTB023911/
MRCTB018762/MRCTB022126/MRCTB015675**
FA NO.: 10072098

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VICINITY MAP



APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARD NOTES, SYMBOLS AND DETAILS (SEE DRAWING INDEX FOR STANDARD NOTES AND DETAILS INCLUDED WITH TYPICAL DRAWING PACKAGE). CONTRACTOR WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
MASSACHUSETTS STATE BUILDING CODE (780 CMR)

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE (NEC 2014)
MASSACHUSETTS ELECTRICAL CODE (527 CMR 12.00)

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

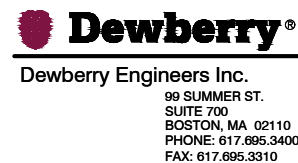
ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

CONTACT INFORMATION

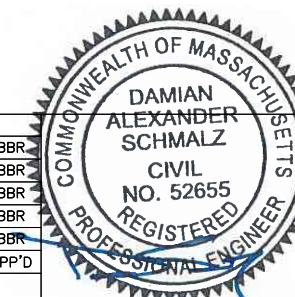
<u>CONTACT</u>	<u>CONTACT</u>	<u>COMPANY</u>	<u>PHONE NO.</u>
ENGINEERING:	DAMIAN SCHMALZ, P.E.	DEWBERRY	(617) 531-0823
SAC:	TARAH NOLAN	SAI COMMUNICATIONS	(603) 401-8990



BOSTON 285 COLUMBUS AVENUE
SITE NO. MA2224
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RECONFIGURATION
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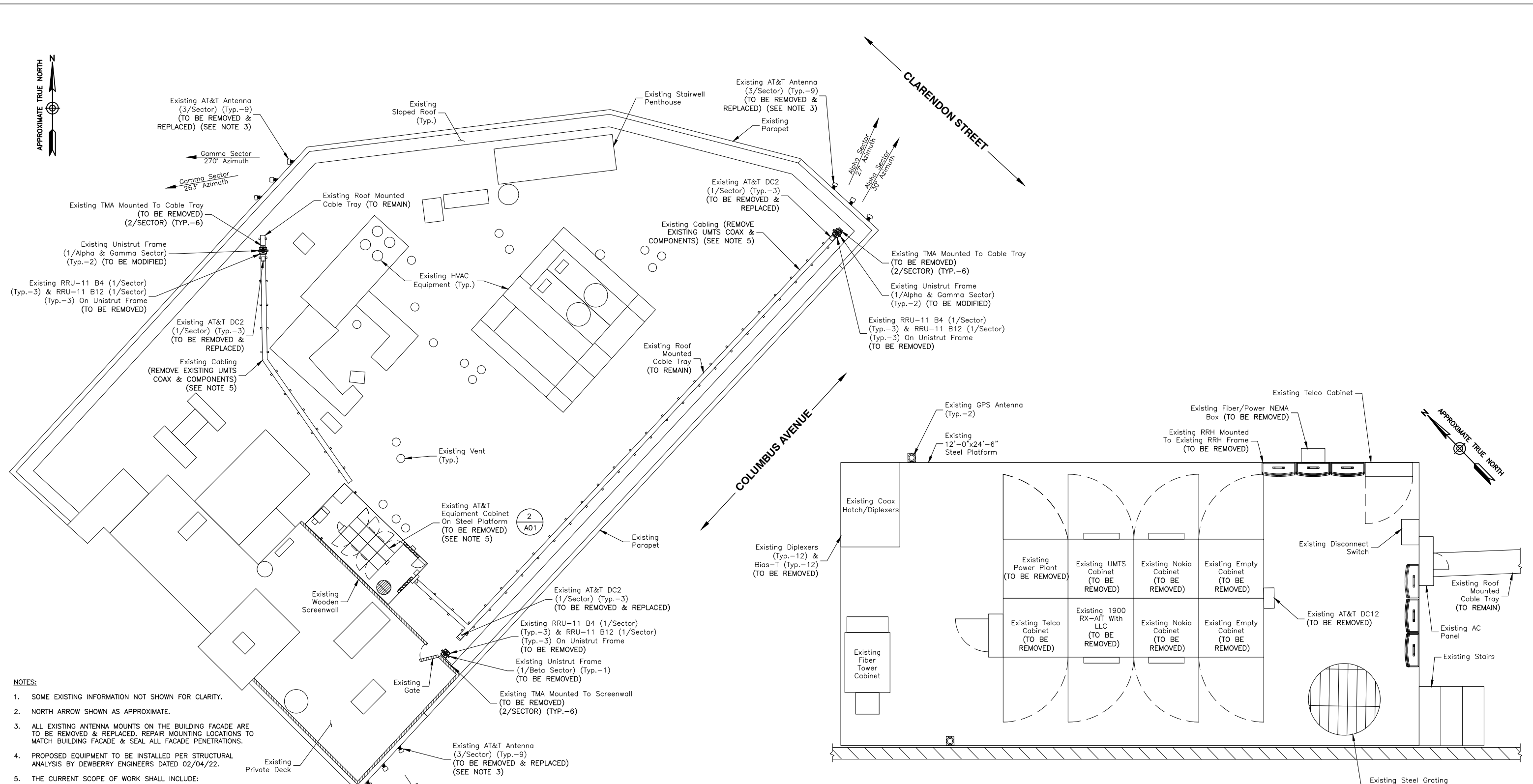
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A	03/12/21	ISSUED FOR REVIEW	JG	DAS	BBR
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: JG	DRAWN BY: JG		



AT&T MOBILITY
FRAMINGHAM, MA 01701

TITLE SHEET

DEWBERRY NO.	DRAWING NUMBER	REV
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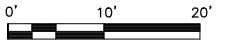


- NOTES:**
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 - ALL EXISTING ANTENNA MOUNTS ON THE BUILDING FACADE ARE TO BE REMOVED & REPLACED. REPAIR MOUNTING LOCATIONS TO MATCH BUILDING FACADE & SEAL ALL FACADE PENETRATIONS.
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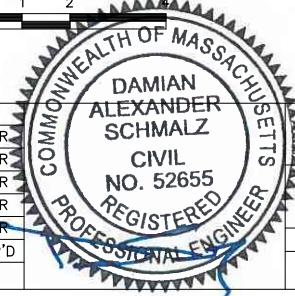
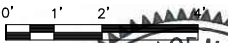
EXISTING ROOF PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"



EXISTING EQUIPMENT PLATFORM PLAN

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"



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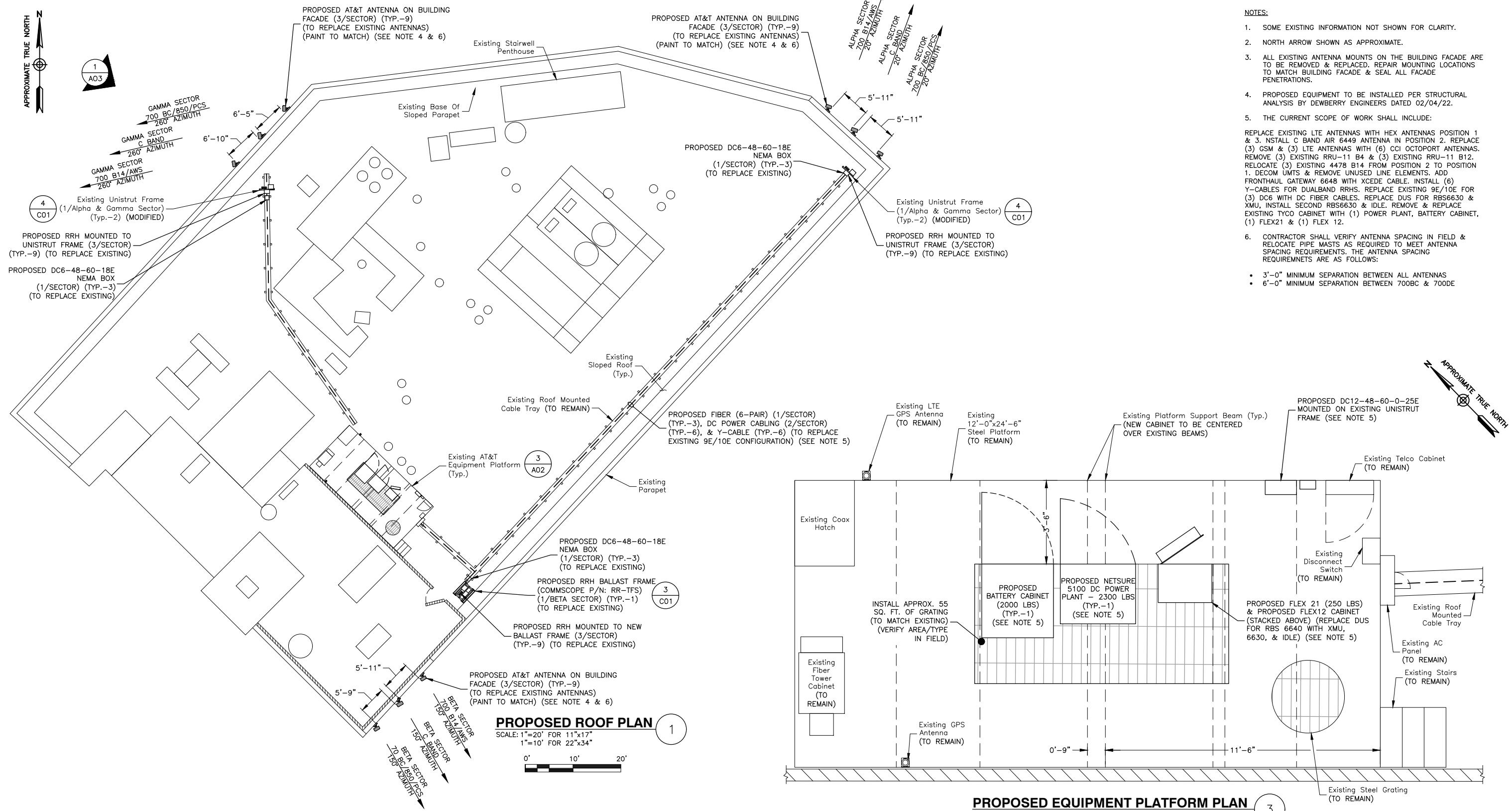
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SCALE: AS SHOWN DESIGNED BY: JG DRAWN BY: JG

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FRAMINGHAM, MA 01701

EXISTING ROOF & EQUIPMENT PLATFORM PLANS

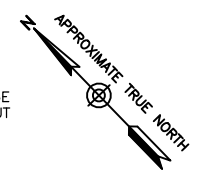
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PROPOSED ROOF PLAN
 SCALE: 1"=20' FOR 11"x17"
 1"=10' FOR 22"x34"
 1

PROPOSED EQUIPMENT PLATFORM PLAN
 SCALE: 1/4"=1' FOR 11"x17"
 1/2"=1' FOR 22"x34"
 3

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 - 3'-0" MINIMUM SEPARATION BETWEEN ALL ANTENNAS
 - 6'-0" MINIMUM SEPARATION BETWEEN 700BC & 700DE



Dewberry
 Dewberry Engineers Inc.
 99 SUMMER ST.
 SUITE 700
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 FAX: 617.695.3310

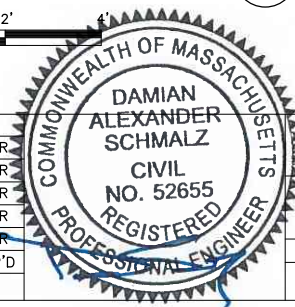
SAI
 12 INDUSTRIAL WAY
 SALEM, NH 03079

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at&t
 Mobility
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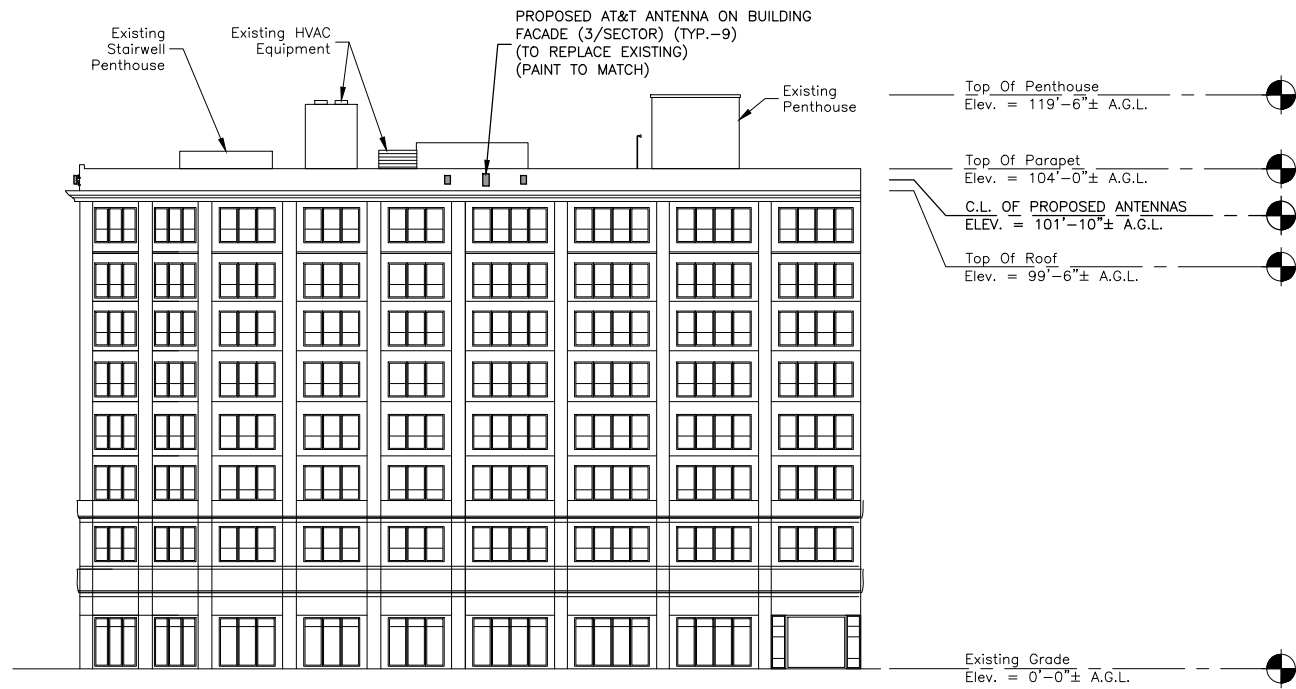
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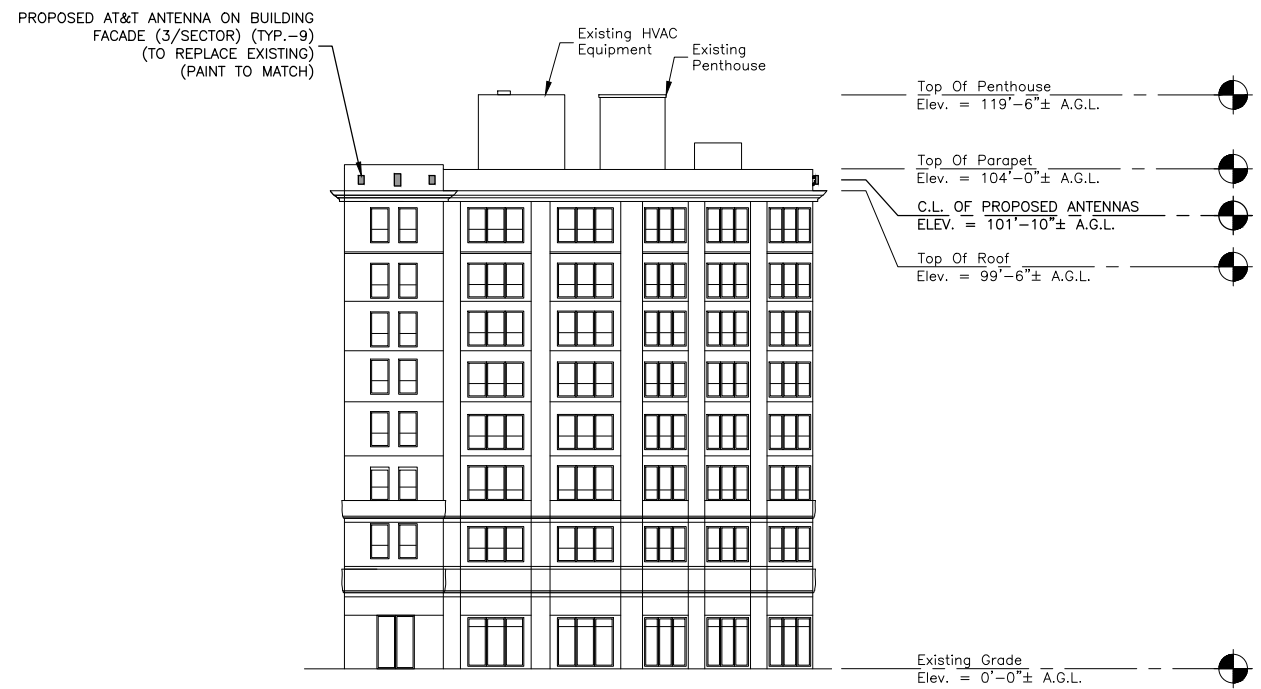
PROPOSED ROOF & EQUIPMENT PLATFORM PLANS

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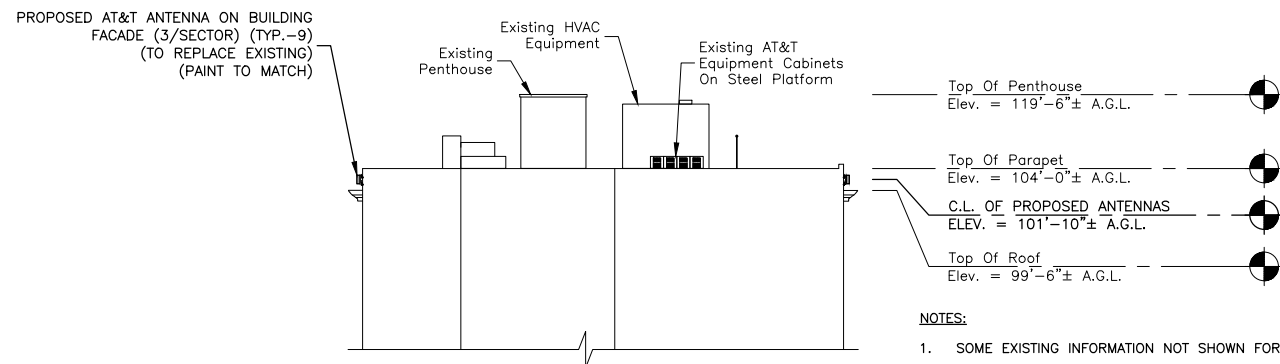
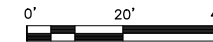
WEST ELEVATION

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"



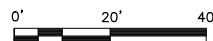
NORTH ELEVATION

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"



PARTIAL SOUTH ELEVATION

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"



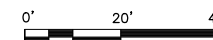
LEGEND:

A.R.L.	ABOVE ROOF LINE
A.G.L.	ABOVE GROUND LEVEL
C.L.	CENTER LINE



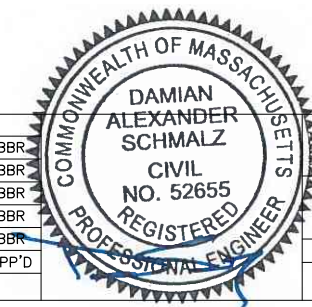
EAST ELEVATION

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SALEM, NH 03079

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FRAMINGHAM, MA 01701

PROPOSED ELEVATIONS

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50122947/50122963	A03	1

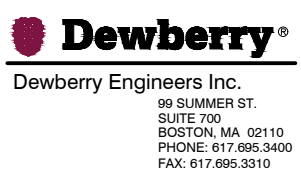
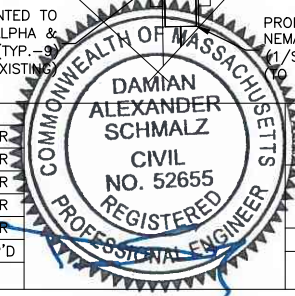
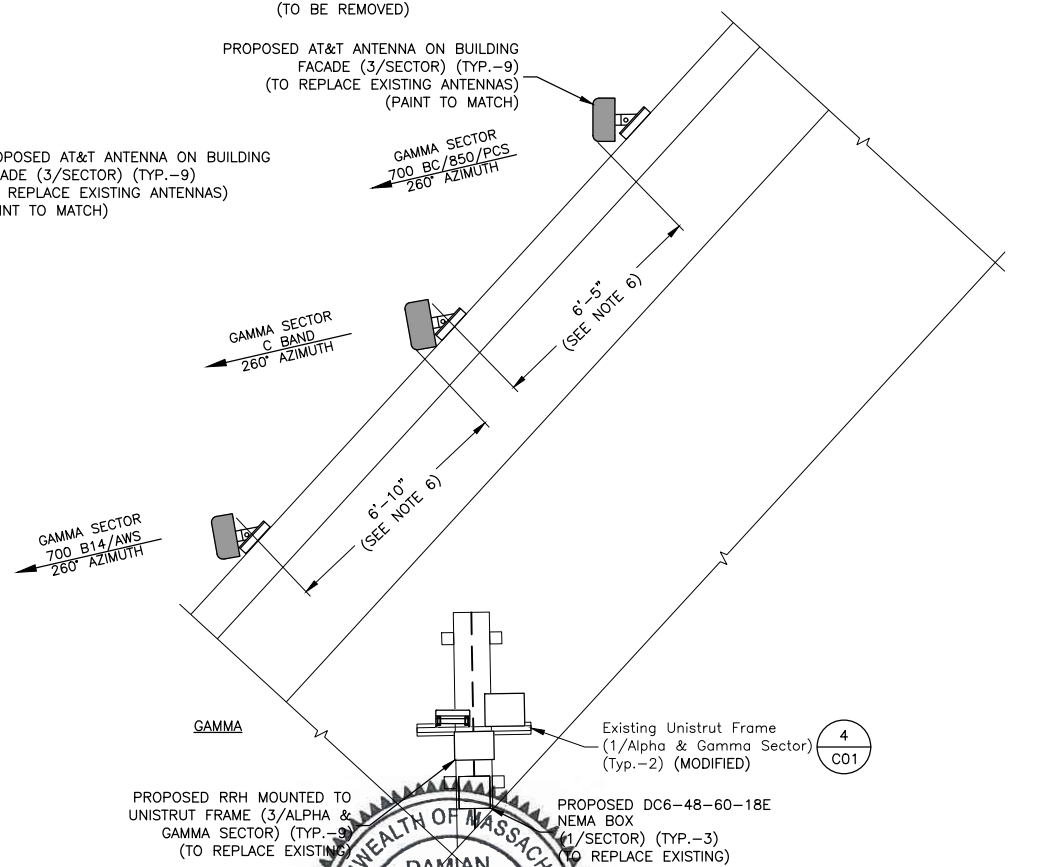
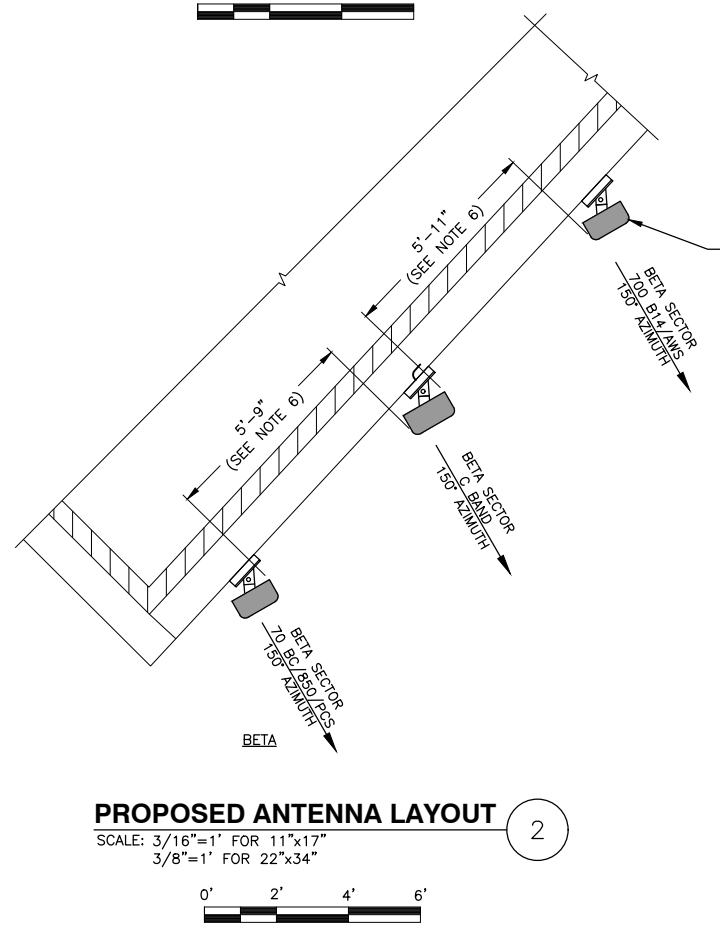
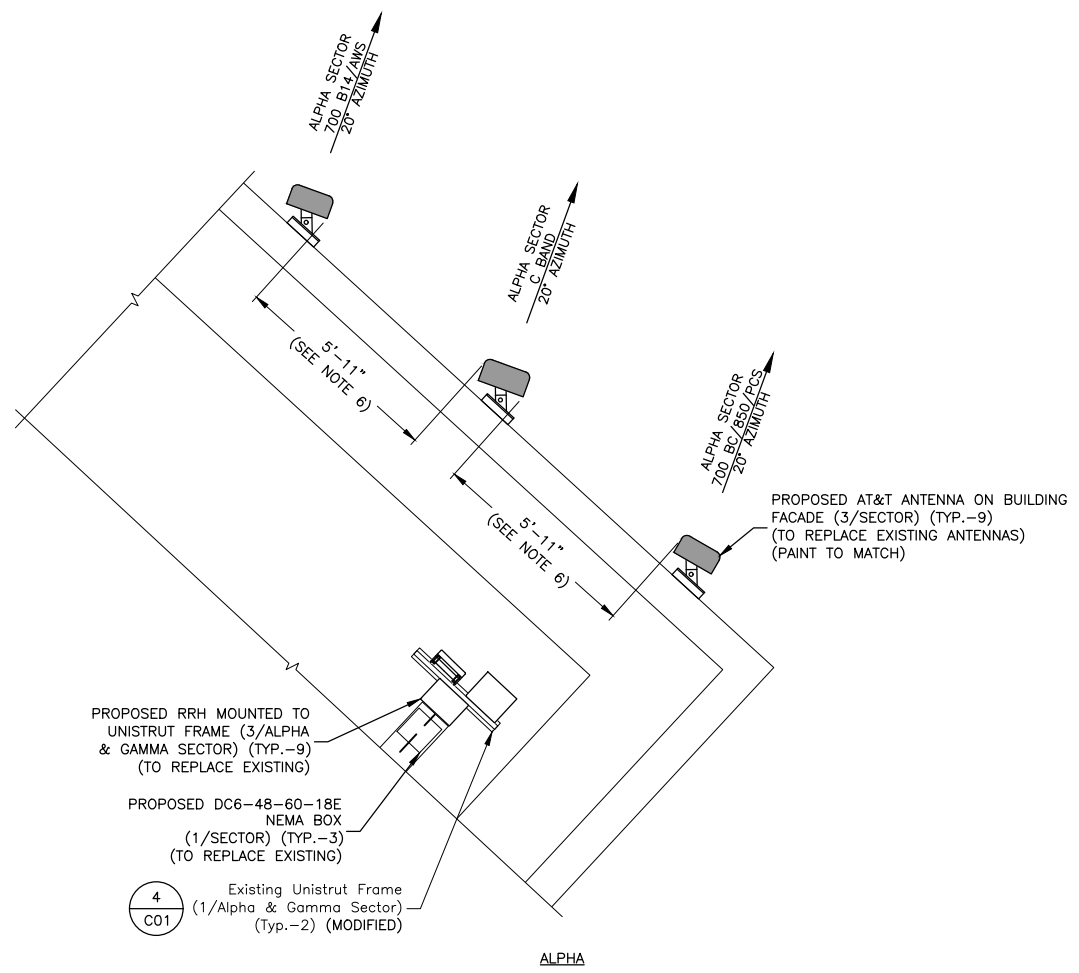
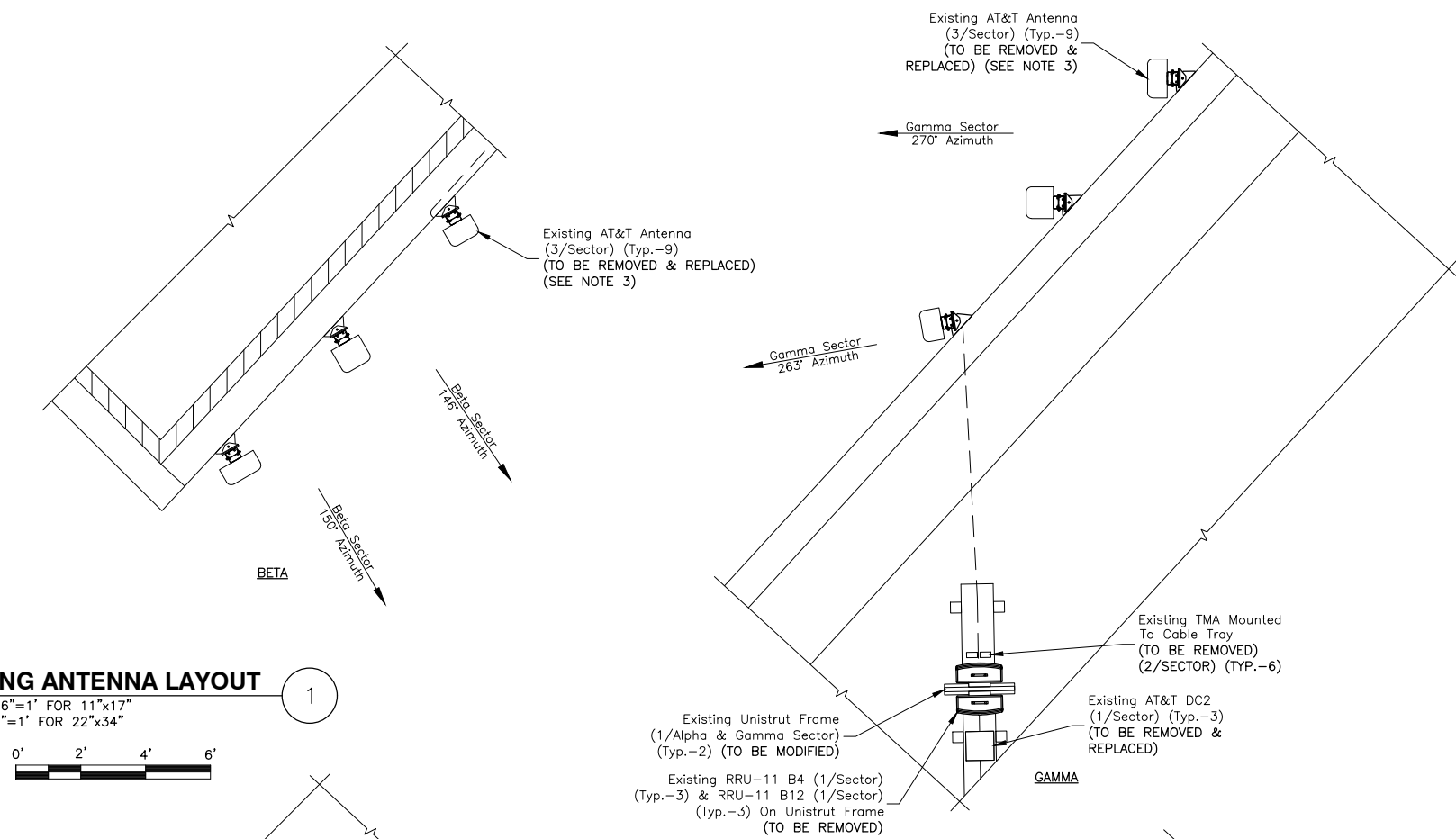
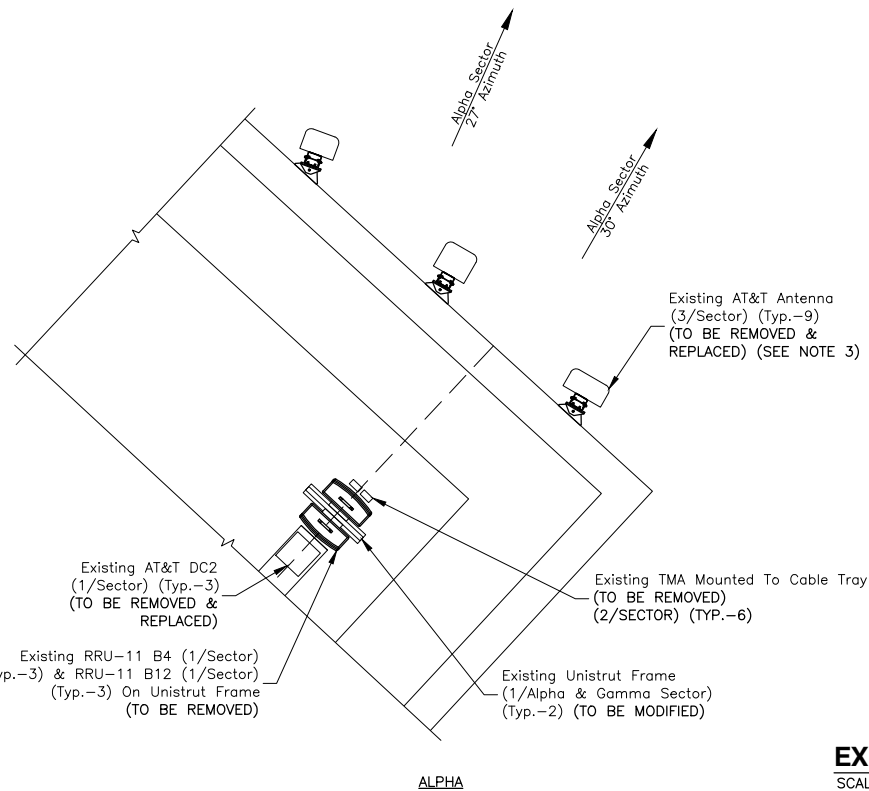
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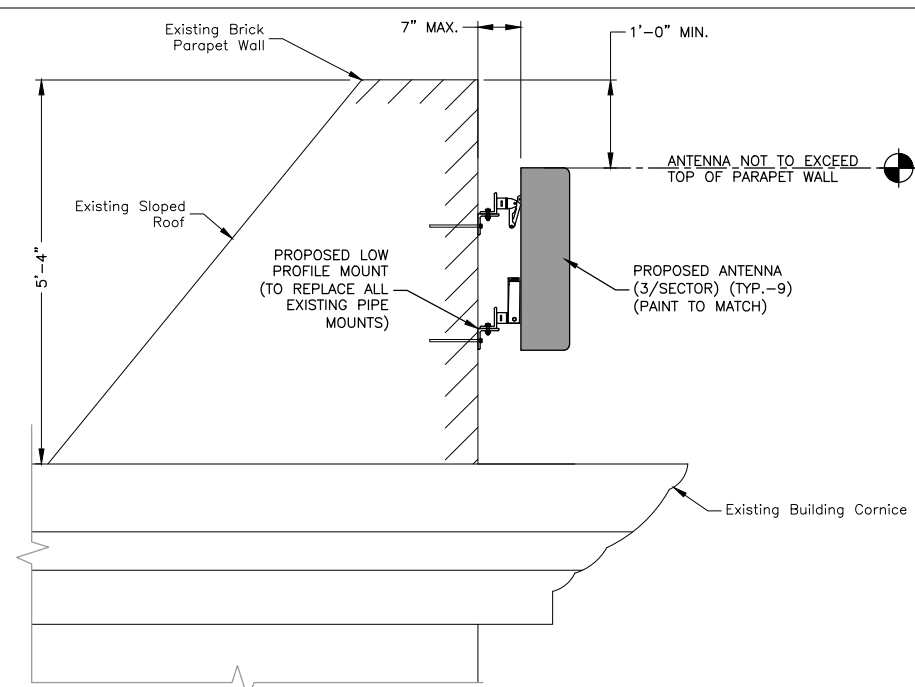
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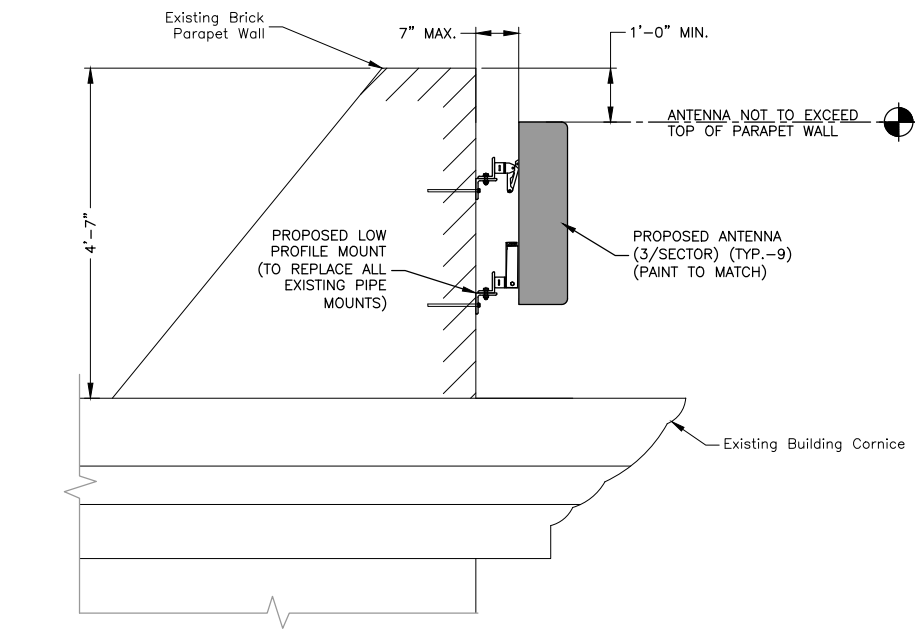
AT&T MOBILITY
FRAMINGHAM, MA 01701

EXISTING & PROPOSED ANTENNA LAYOUTS

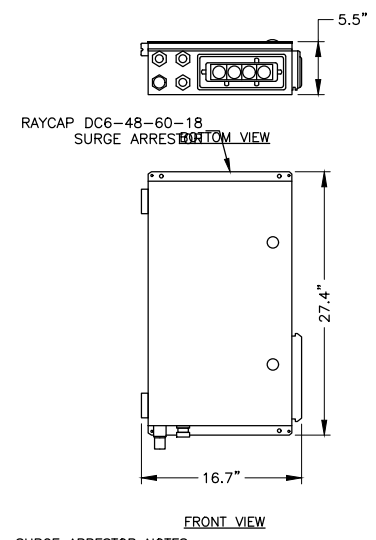
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ALPHA & BETA SECTORS

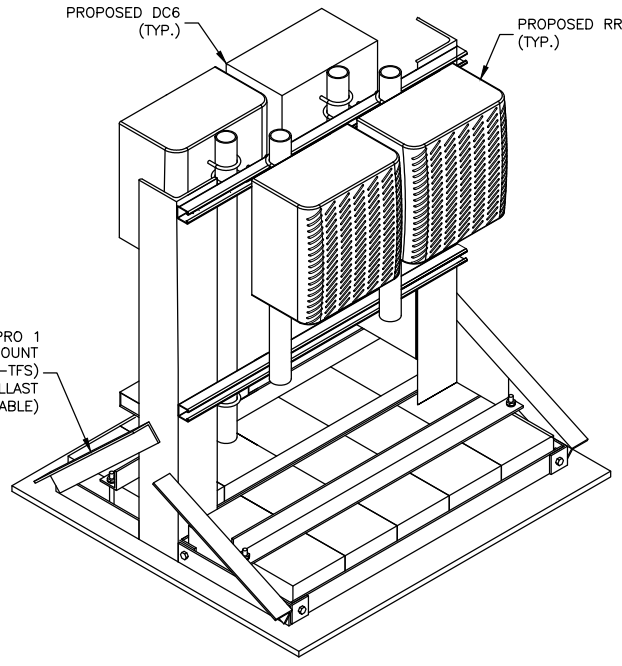


GAMMA SECTOR



- SURGE ARRESTOR NOTES:**
1. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
 2. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
 3. CONFIRM REQUIRED EQUIPMENT WITH LATEST RFDS.
 4. SEE DETAIL 2, THIS SHEET, FOR MOUNTING DETAIL.

SURGE ARRESTOR 2
SCALE: N.T.S.

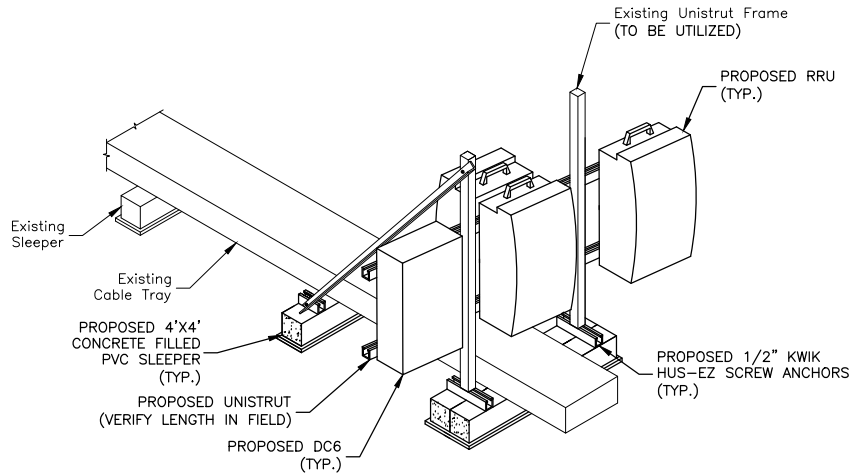


- BALLAST NOTES:**
1. NO BALLAST REQUIRED FOR THE PROPOSED FRAME.

- NOTES:**
1. CONTRACTOR TO INSTALL PROPOSED COMMSCOPE P/N: RR-TFS BALLAST FRAME OR APPROVED EQUIVALENT. CONTRACTOR TO VERIFY APPROVED EQUIVALENT SLED IS EQUAL OR LESS THEN ROOF LOADING IN THE TABLE ABOVE.
 2. DETAIL IS SCHEMATIC.
 3. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
 4. NO BALLAST REQUIRED FOR THE PROPOSED FRAMES.

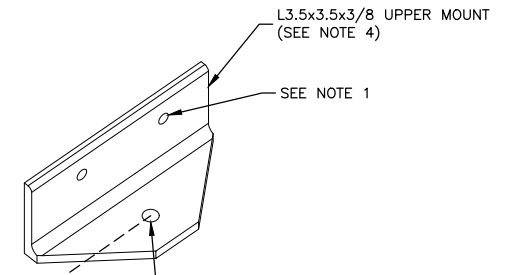
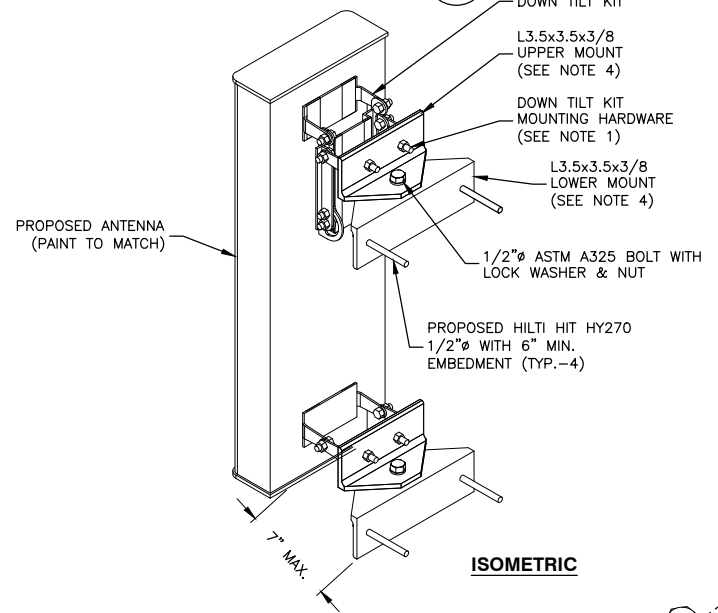
REMOTE BALLAST FRAME
SCALE: N.T.S.

- NOTES:**
1. VERIFY DOWNTILT MOUNTING KIT BOLT LAYOUT PRIOR TO FABRICATION OF UPPER MOUNT BRACKET.
 2. ROTATE UPPER CONNECTION TO REQUIRED AZIMUTH. TIGHTEN BOLT AND INSTALL SELF TAPPING SCREWS.
 3. WEATHER SEAL AROUND EXTERIOR WALL ATTACHMENT ANGLES WITH SILICONE SEALANT.
 4. PAINT ALL ANTENNAS, MOUNTS AND ASSOCIATED EQUIPMENT TO MATCH BUILDING FACADE.
 5. ALL FEEDERS ARE TO BE NEATLY BUNDLED AND PAINTED TO MATCH THE BUILDING FACADE.
 6. ALL STEEL TO BE GALVANIZED.
 7. VERIFY AZIMUTHS IN FIELD AND CORRESPONDING ROTATION OF LOW PROFILE BRACKETS PRIOR TO FABRICATION.

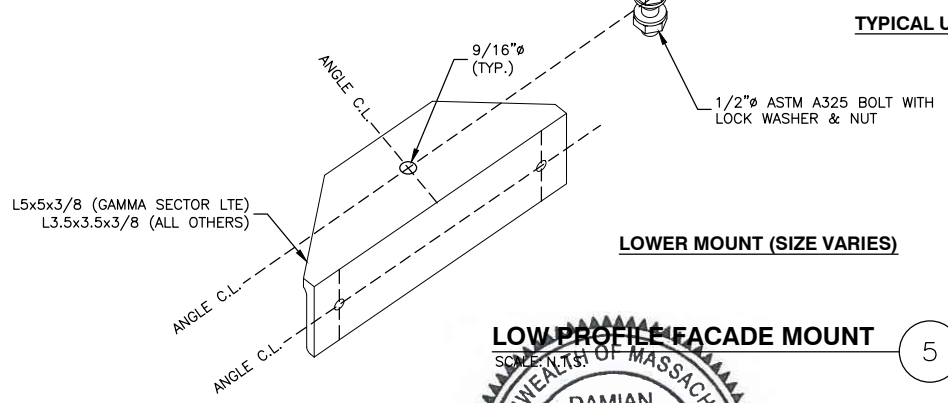


- NOTES:**
1. INSTALL GROUND & WEATHERPROOF PER MANUFACTURER RECOMMENDATIONS.
 2. ALL HARDWARE TO BE GALVANIZED.

RRU MOUNTING DETAIL AT CABLE TRAY 4
SCALE: N.T.S.



TYPICAL UPPER MOUNT



LOWER MOUNT (SIZE VARIES)

LOW PROFILE FACADE MOUNT 5

- NOTES:**
1. IF CONDITIONS DIFFER FROM THOSE SHOWN CONTRACTOR WILL CONTACT C.M. AND ENGINEER IMMEDIATELY.
 2. CONTRACTOR TO WEATHERPROOF ALL CORED HOLES.
 3. VERIFY AZIMUTHS IN FIELD AND CORRESPONDING ROTATION OF LOW PROFILE BRACKETS PRIOR TO FABRICATION.
 4. DISTANCE BETWEEN TOP OF ANTENNA AND TOP OF PARAPET TO BE MAXIMIZED SO AS TO LIMIT VISIBILITY OF ANTENNAS FROM STREET LEVEL. MAINTAIN ADEQUATE CLEARANCE BELOW ANTENNAS FOR MINIMUM BEND RADIUS OF JUMPER CABLES.

ANTENNA MOUNTING DETAIL 1
SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"
0' 1' 2' 3'

Dewberry
Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

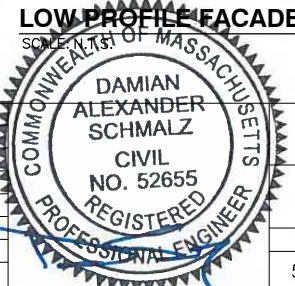
SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

BOSTON 285 COLUMBUS AVENUE
SITE NO. MA2224
5G/6C/7C/RETRO/BBU
RECONFIGURATION
285 COLUMBUS AVENUE
BOSTON, MA 02116

at&t
Mobility
550 COCHITUATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	04/27/22	ISSUED FOR CONSTRUCTION	JG	DAS	BBR
0	04/21/22	ISSUED FOR CONSTRUCTION	JG	DAS	BBR
C	02/01/22	ISSUED FOR REVIEW	JG	DAS	BBR
B	09/17/21	ISSUED FOR REVIEW	JG	DAS	BBR
A	03/12/21	ISSUED FOR REVIEW	JG	DAS	BBR

SCALE: AS SHOWN DESIGNED BY: JG DRAWN BY: JG



AT&T MOBILITY
FRAMINGHAM, MA 01701

CONSTRUCTION DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50122947/50122963	C01	1

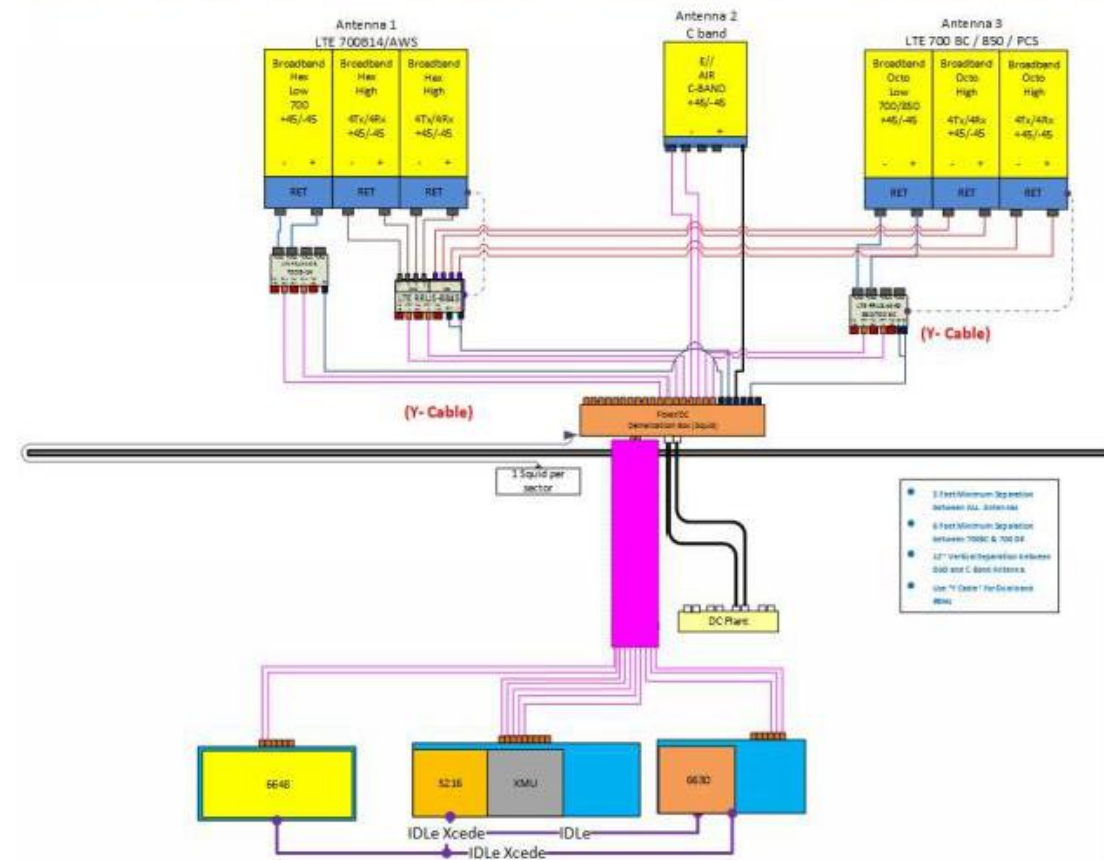
FINAL EQUIPMENT CONFIGURATION								
SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxD)	RAD. CENTER	AZIMUTH	RRU	SIZE (INCHES) (LxWxD)	SURGE ARRESTOR
ALPHA	LTE 700B14/AWS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	20°	(P) RRUS-4478 B14	15.0 x 13.2 x 7.4	(P) (1) DC6-48-60-18E NEMA BOX
	C BAND	(P) AIR6449N77D	30.4x15.9x8.1	101'-10"	20°	-	-	-
	LTE 700 BC/850/PCS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	20°	(P) RRUS-4449 B5/B12 (P) RRUS-8843 B2/B66A	17.9 x 13.2 x 9.4 15.0 x 13.2 x 5.4	-
	-	-	-	-	-	-	-	-
BETA	LTE 700B14/AWS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	150°	(P) RRUS-4478 B14	15.0 x 13.2 x 7.4	(P) (1) DC6-48-60-18E NEMA BOX
	C BAND	(P) AIR6449N77D	30.4x15.9x8.1	101'-10"	150°	-	-	-
	LTE 700 BC/850/PCS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	150°	(P) RRUS-4449 B5/B12 (P) RRUS-8843 B2/B66A	17.9 x 13.2 x 9.4 15.0 x 13.2 x 5.4	-
	-	-	-	-	-	-	-	-
GAMMA	LTE 700B14/AWS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	260°	(P) RRUS-4478 B14	15.0 x 13.2 x 7.4	(P) (1) DC6-48-60-18E NEMA BOX
	C BAND	(P) AIR6449N77D	30.4x15.9x8.1	101'-10"	260°	-	-	-
	LTE 700 BC/850/PCS	(P) HPA-65F-BUU-H2-K	21.4x14.4x7.3	101'-10"	260°	(P) RRUS-4449 B5/B12 (P) RRUS-8843 B2/B66A	17.9 x 13.2 x 9.4 15.0 x 13.2 x 5.4	-
	-	-	-	-	-	-	-	-

FINAL EQUIPMENT CONFIGURATION
SCALE: N.T.S.

1

Diagram Sector: A
Atoll Site Name: MAL02224
Market: BOSTON
Comments: Important Note: For detailed radio to antenna wiring refer to the latest 4T4R Antenna/ Radio Port connections Field

Diagram File Name: MA2224_5C_CBand.vsd
Location Name: BOSTON 285 COLUMBUS AVENUE (MA0004)
Market Cluster: NEW ENGLAND

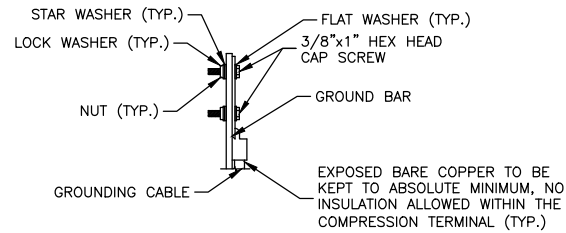
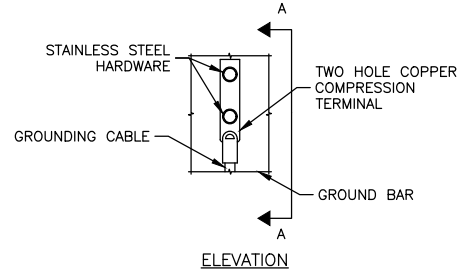


FINAL EQUIPMENT PLUMBING DIAGRAM
SCALE: N.T.S.

2

GROUNDING NOTES:

- THE CONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE CONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS. ALL AVAILABLE GROUNDING ELECTRODES SHALL BE CONNECTED TOGETHER IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. USE OF OTHER METHODS MUST BE PRE-APPROVED BY CONTRACTOR IN WRITING.
- THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS ON TOWER SITES AND 10 OHMS OR LESS ON ROOFTOP SITES. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO TRANSMISSION EQUIPMENT.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK-TO-BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
- EACH INTERIOR TRANSMISSION CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH 6 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRE UNLESS NOTED OTHERWISE IN THE DETAILS. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER WIRE UNLESS NOTED OTHERWISE IN THE DETAILS.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE 2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM SAI COMMUNICATIONS MARKET REPRESENTATIVE.
- EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.
- ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.
- ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTORS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP TRANSMISSION EQUIPMENT AND STRUCTURAL STEEL.
- COAX BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO-HOLE MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH 2 AWG SOLID TIN-PLATED COPPER GROUND CONDUCTOR. DURING EXCAVATION FOR NEW GROUND CONDUCTORS, IF EXISTING GROUND CONDUCTORS ARE ENCOUNTERED, BOND EXISTING GROUND CONDUCTORS TO NEW CONDUCTORS.
- GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS, OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT WITH LISTED BONDING FITTINGS.



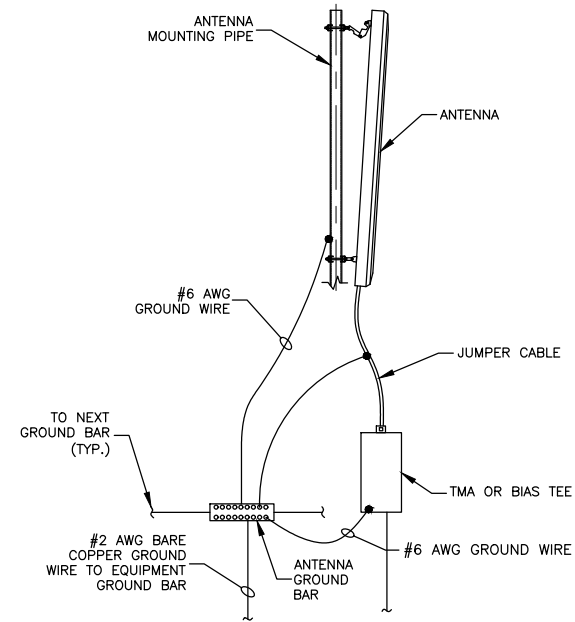
NOTES:

- DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL

SCALE: N.T.S.

1



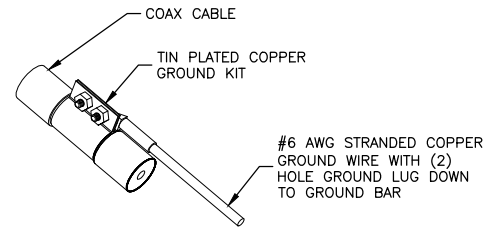
NOTE:

- GROUND ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS & T-MOBILE STANDARDS.

TYPICAL ANTENNA GROUNDING DETAIL

SCALE: N.T.S.

2



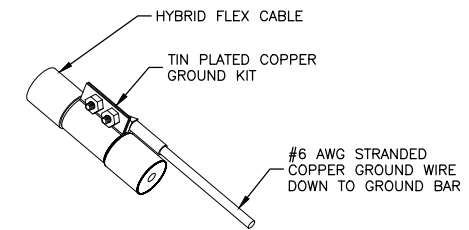
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
- WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
- COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

COAX GROUNDING DETAIL

SCALE: N.T.S.

3



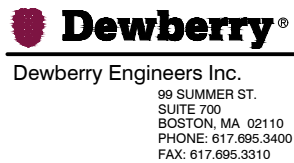
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT LOCATION & QUANTITY PER CARRIER SPECIFICATIONS.
- WEATHER PROOFING SHALL BE PER CARRIER REQUIREMENTS.

HCS GROUNDING DETAIL

SCALE: N.T.S.

4

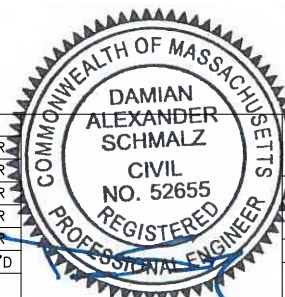


**BOSTON 285 COLUMBUS AVENUE
SITE NO. MA2224
5G/6C/7C/RETRO/BBU
RECONFIGURATION
285 COLUMBUS AVENUE
BOSTON, MA 02116**



NO.	DATE	REVISIONS	BY	CHK	APP'D
1	04/27/22	ISSUED FOR CONSTRUCTION	JG	DAS	BBR
0	04/21/22	ISSUED FOR CONSTRUCTION	JG	DAS	BBR
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A	03/12/21	ISSUED FOR REVIEW	JG	DAS	BBR

SCALE: AS SHOWN DESIGNED BY: JG DRAWN BY: JG



AT&T MOBILITY
FRAMINGHAM, MA 01701

GROUNDING DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50122947/50122963	E01	1