PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	551 TREMONT STREET BOSTON, MA 02116
LATITUDE: LONGITUDE:	42.34438408° N 71.07173390° W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
PROJECT TYPE:	SITE MODIFICATION
DESIGN CONFIGURATION:	67D5A997DB MUAC

SITE NUMBER: 4BSM431A

SITE NAME: CENTER OF THE ARTS_RT

551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

DESIGN CONFIGURATION: 67D5A997DB MUAC

DRAWING INDEX

		REV
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	ROOF & EQUIPMENT PLANS	1
A-2	ELEVATION	1
A-3	ANTENNA PLANS	1
A-4	DETAILS & EQUIPMENT SCHEDULE	1
A-5	DETAILS	1
S-1	SECTOR ALPHA MOUNTING DETAILS	1
S-2	SECTOR BETA MOUNTING DETAILS	1
S-3	SECTOR GAMMA MOUNTING DETAILS	1
S-4	STRUCTURAL DETAILS	1
S-5	CABINET MOUNTING DETAILS	1
G-1	GROUNDING, ONE-LINE DIAGRAM & DETAILS	1

APPROVED
By Michael DeLia at 7:29 am, Jun 10, 2021

APPROVED
By Michael Granese at 2:21 pm, Jun 09, 2021

SIGNATURES

CONSTRUCTION DATE

RF ENGINEERING DATE

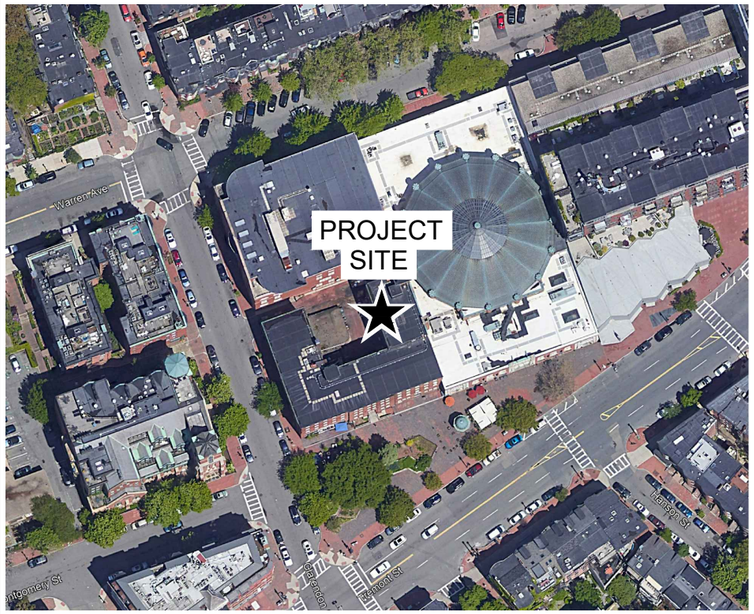
ZONING / SITE ACQ. DATE

OPERATIONS DATE

LANDLORD DATE

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

LOCUS MAP



N

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

DIG SAFE SYSTEM, INC.

CALL BEFORE YOU DIG

CALL TOLL FREE: 811 OR 888-DIG-SAFE

UNDERGROUND SERVICE ALERT

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

TITLE SHEET

SHEET NO. T-1

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.

5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.

15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.

16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.

17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.

19. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.

20. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.

21. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

22. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

23. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

24. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

25. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

26. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

27. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

28. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR

29. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES

30. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS

31. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

32. SUBCONTRACTOR'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-H, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

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.

APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S 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, 9TH EDITION
ELECTRICAL CODE: MASSACHUSETTS 527 CMR 12.00 (NEC 2020)
NFPA 780, 2017

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.

5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.

6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.

7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.

8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.

9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.

10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.

11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.

12. PPC SUPPLIED BY PROJECT OWNER.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250.

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

ADDITIONAL NOTE:
GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.

16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.

17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.

19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.

20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.

21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.

22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.

23.CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

ABBREVIATIONS

AAV	ALTERNATIVE ACCESS VENDOR	EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE
AC	ALTERNATING CURRENT	EGB	EQUIPMENT GROUND BAR	REF	REFERENCE
AGL	ABOVE GRADE LEVEL	EGR	EQUIPMENT GROUND RING	REQ	REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	(F)	FUTURE	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	GALV.	GALVANIZED	RGS	RIGID GALVANIZED STEEL
AZ	AZIMUTH	G.C.	GENERAL CONTRACTOR	RRH	REMOTE RADIO HEAD
BCW	BARE COPPER WIRE	KW	KILOWATT	TBD	TO BE DETERMINED
BEP	BUILDING ENTRY POINT	MGB	MASTER GROUND BUS	TBR	TO BE REMOVED
BTS	BASE TRANSCEIVER STATION	MIN.	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
CSC	CELL SITE CONTROLLER	(P)	PROPOSED	TYP	TYPICAL
(E)	EXISTING	PPC	POWER PROTECTION CABINET	U/G	UNDERGROUND

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

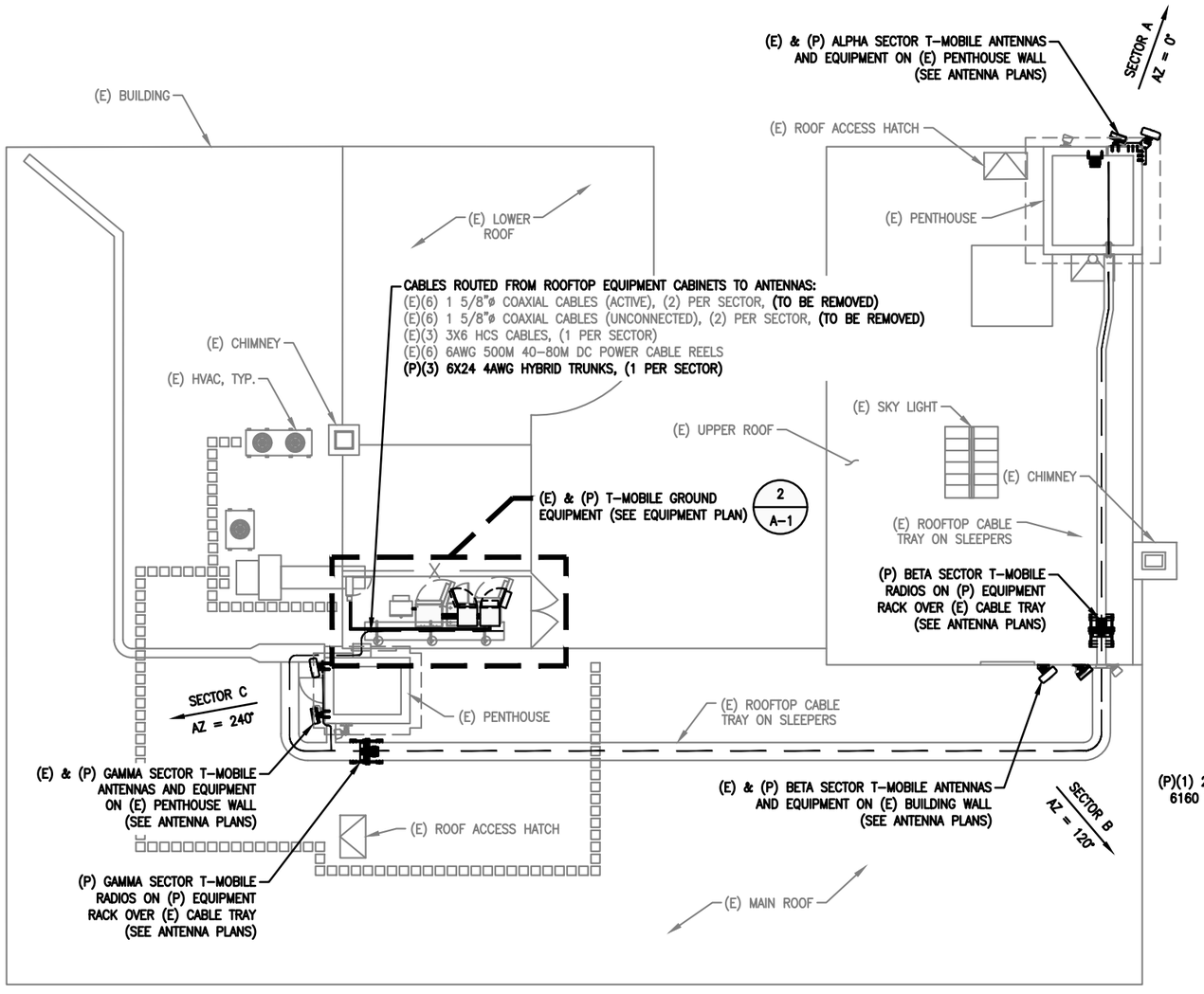
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

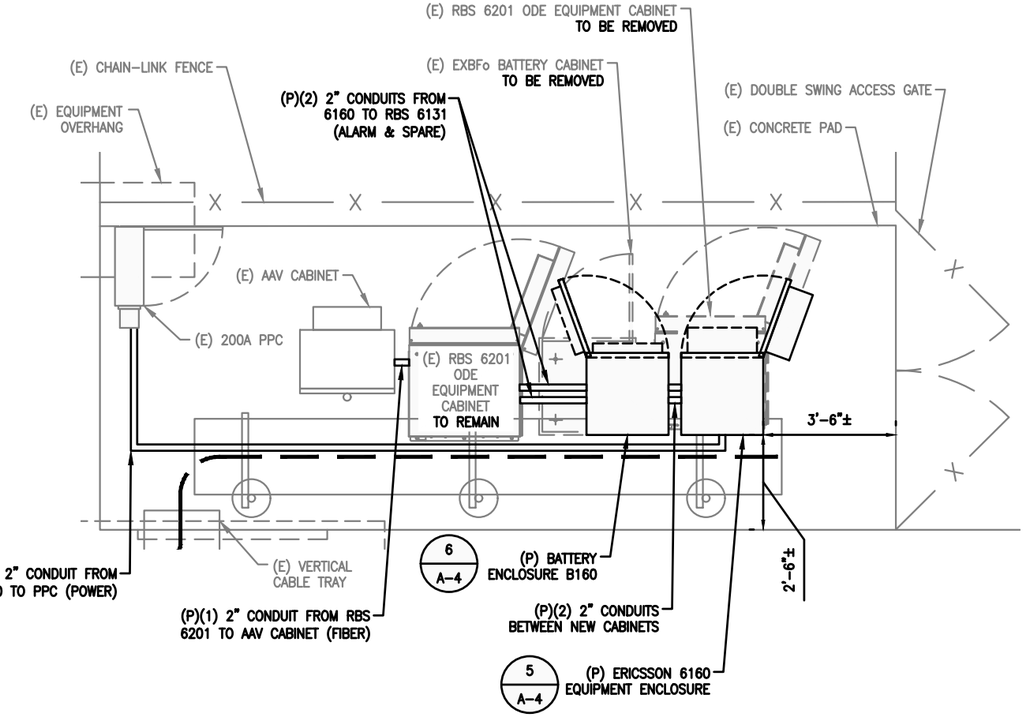
T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

GENERAL NOTES

SHEET NO. GN-1





NOTE:
ALL PROPOSED ANTENNAS AND RELATED APPURTENANCES TO BE PAINTED TO MATCH EXISTING BUILDING FACADE

NORTH

1 / A–1 ROOF PLAN

SCALE: 1/16" = 1'–0"

0 8'–0" 16'–0" 32'–0"

NORTH

2 / A–1 EQUIPMENT PLAN

SCALE: 1/4"=1'–0"

0 2'–0" 4'–0" 8'–0"

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

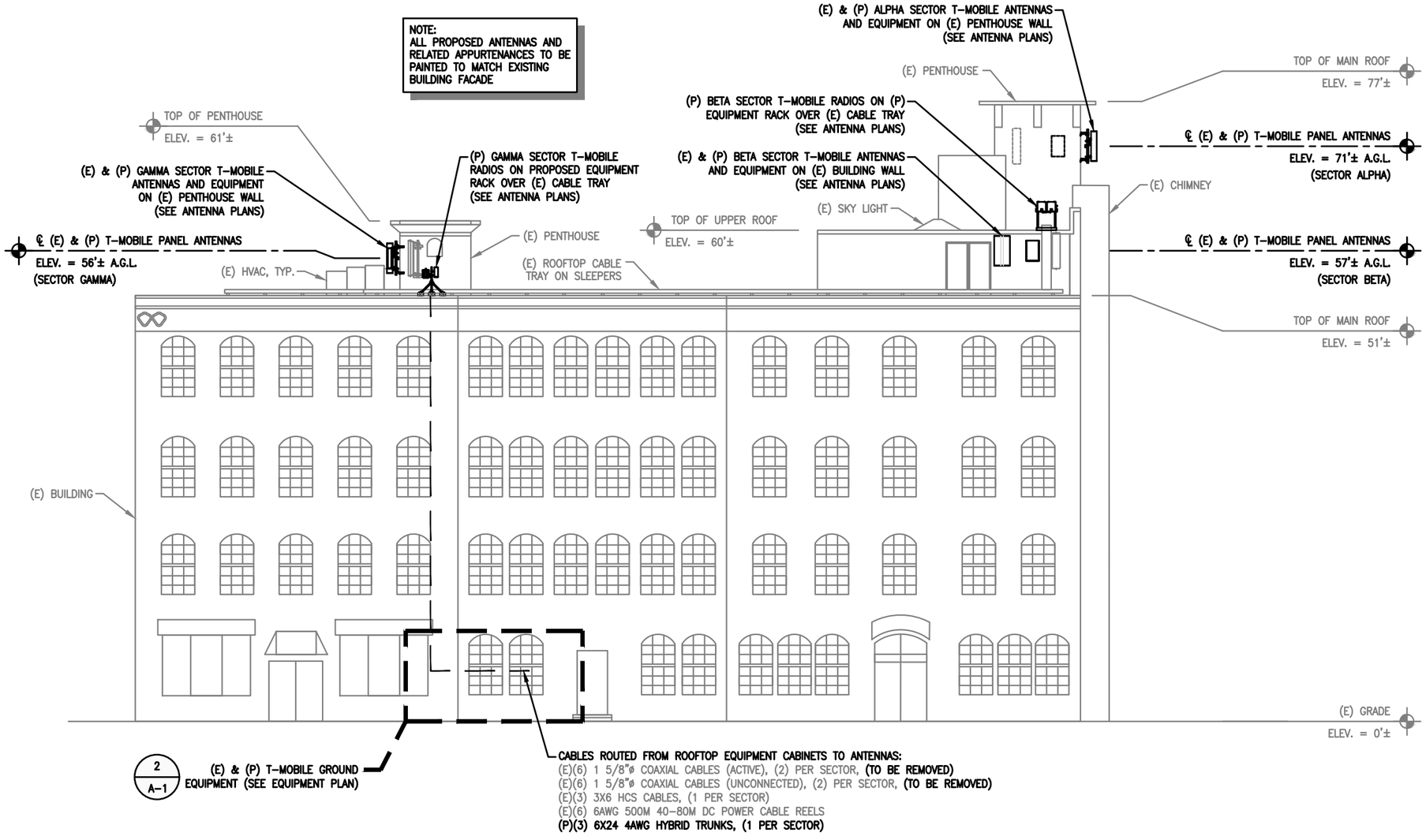
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T–MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286–2700
FAX: (508) 286–2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

ROOF & EQUIPMENT PLANS

SHEET NO. A-1



COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

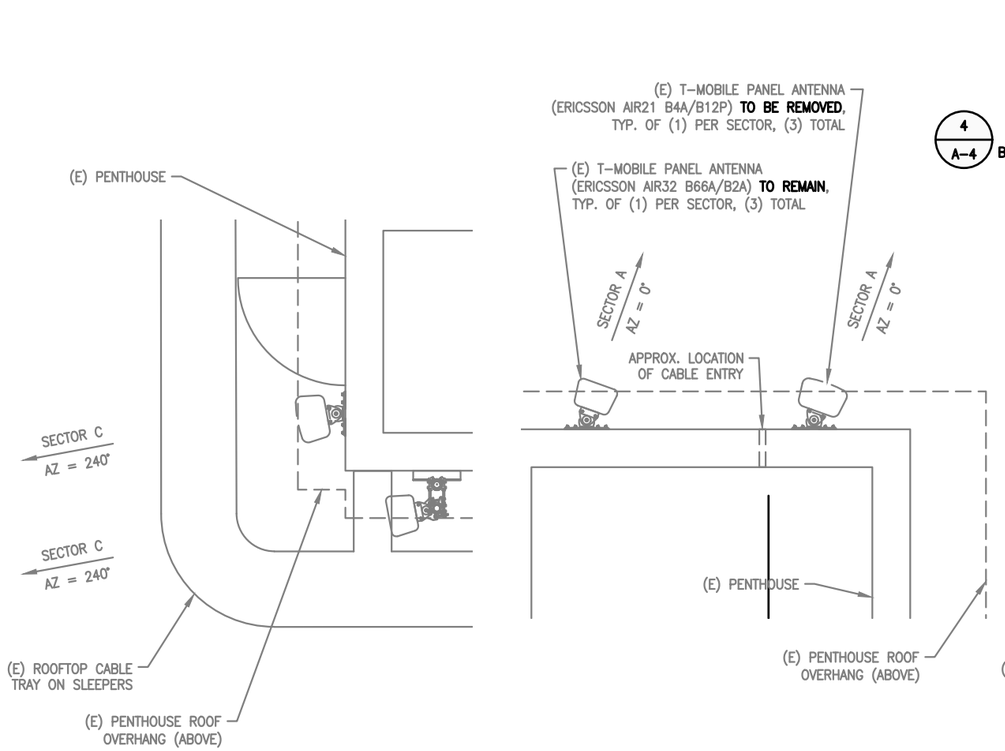
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

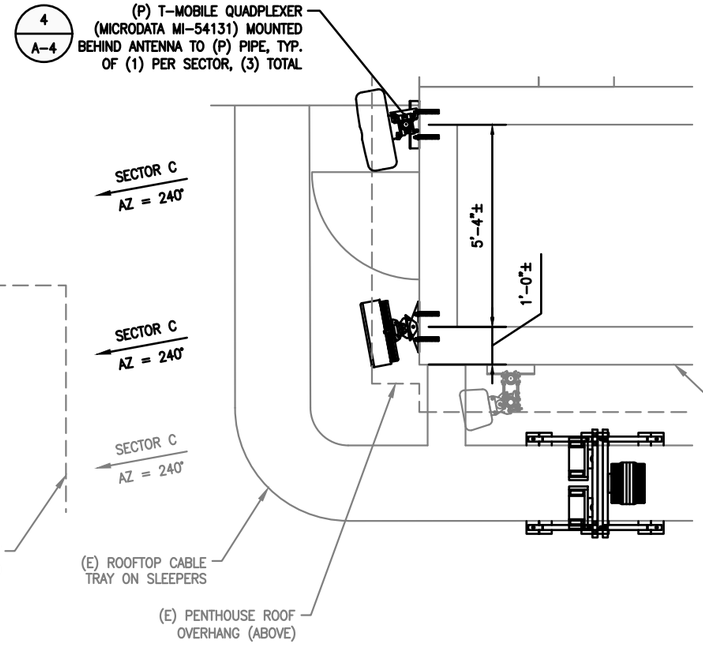
T–MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286–2700
FAX: (508) 286–2893

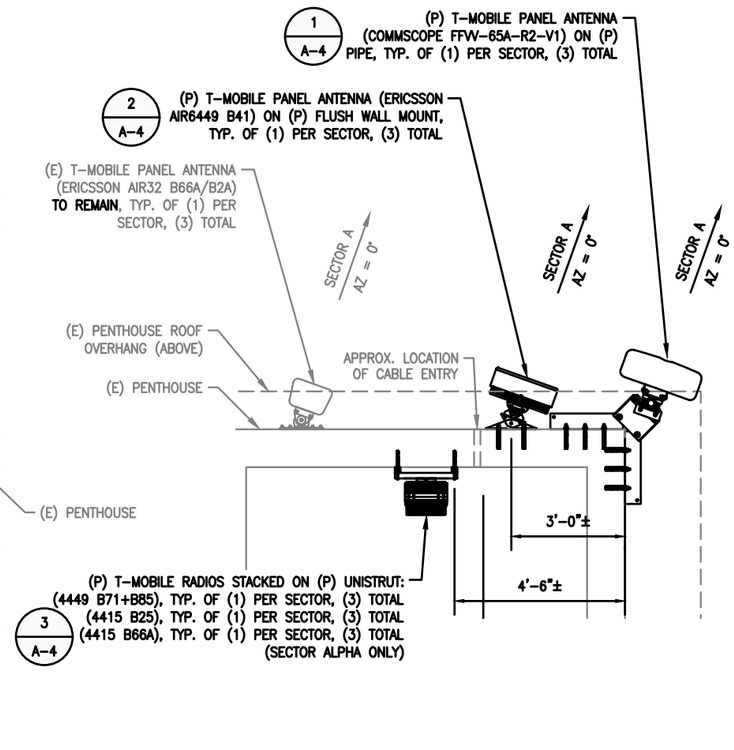
NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

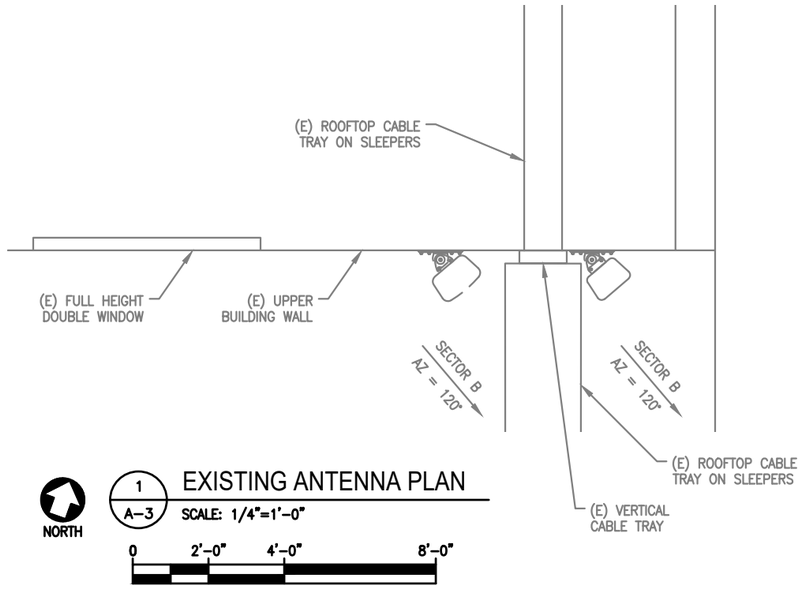
ELEVATION

SHEET NO. A-2









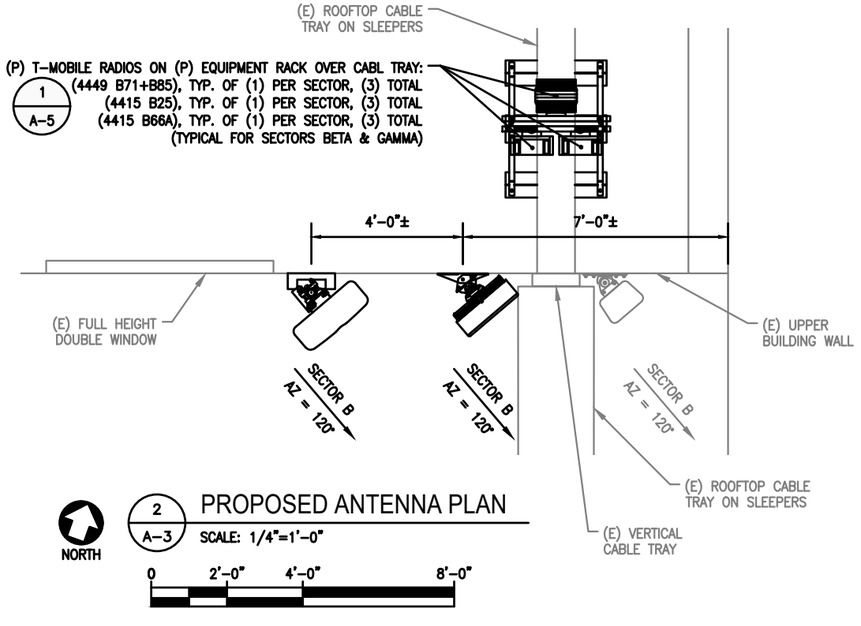
NORTH

1 A-3 EXISTING ANTENNA PLAN

SCALE: 1/4"=1'-0"

0 2'-0" 4'-0" 8'-0"

NOTE:
ALL PROPOSED ANTENNAS AND RELATED APPURTENANCES TO BE PAINTED TO MATCH EXISTING BUILDING FACADE



NORTH

2 A-3 PROPOSED ANTENNA PLAN

SCALE: 1/4"=1'-0"

0 2'-0" 4'-0" 8'-0"

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

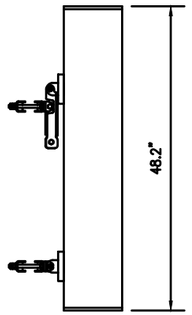
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

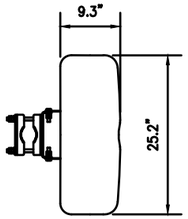
NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

ANTENNA PLANS

SHEET NO. A-3



ELEVATION VIEW

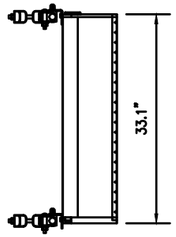


PLAN VIEW

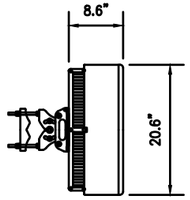
FFVV-65A-R2-V1

MANUFACTURER: ANDREW–COMMSCOPE
DIMENSIONS: (HxWxD) 48.2"x25.2"x9.3"
WEIGHT: 73.2 LBS.

1 / A–4 ANTENNA DETAIL
SCALE: N.T.S.



ELEVATION VIEW



PLAN VIEW

AIR 6449 B41

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 33.1" X 20.6" X 8.6"
WEIGHT: 103 LBS.

2 / A–4 ANTENNA DETAIL
SCALE: N.T.S.

MI-54131

MANUFACTURER: MICRODATA
DIMENSIONS (HxWxD): 4.2"x8.3"x3.0"
WEIGHT: 6.61 LBS

4 / A–4 QUADPLEXER DETAIL
SCALE: N.T.S.

EQUIPMENT SCHEDULE

CURRENT EQUIPMENT

QUANTITY	DESCRIPTION
3	ERICSSON AIR32 B66A/B2A PANEL ANTENNAS
3	ERICSSON AIR21 B4A/B12A 4FT PANEL ANTENNAS
6	1 5/8"ø COAXIAL CABLES (ACTIVE)
6	1 5/8"ø COAXIAL CABLES (UNCONNECTED)
6	6AWG 500M 40–80M DC POWER CABLE REELS
3	3x6 HCS HYBRID CABLES
2	ERICSSON RBS 6201 ODE EQUIPMENT CABINETS
1	EXBFo BATTERY CABINET
1	AAV CABINET

EQUIPMENT TO BE REMOVED

3	ERICSSON AIR21 B4A/B12A 4FT PANEL ANTENNAS
6	1 5/8"ø COAXIAL CABLES (ACTIVE)
6	1 5/8"ø COAXIAL CABLES (UNCONNECTED)
1	ERICSSON RBS 6201 ODE EQUIPMENT CABINET
1	EXBFO BATTERY CABINET

EQUIPMENT TO BE ADDED

3	COMMSCOPE FFVV–65A–R2–V1 PANEL ANTENNAS
3	ERICSSON AIR6449 B41 PANEL ANTENNAS
3	ERICSSON 4415 B25 RADIOS
3	ERICSSON 4415 B66A RADIOS
3	ERICSSON 4449 B71+B85 RADIOS
3	MICRODATA AWS/PCS 8:4 QUADPLEXER
3	ERICSSON 6/24 4AWG HYBRID TRUNKS
1	ERICSSON 6160 EQUIPMENT ENCLOSURE
1	ERICSSON B160 BATTERY CABINET

FINAL EQUIPMENT CONFIGURATION

3	ERICSSON AIR32 B66A/B2A PANEL ANTENNAS
3	COMMSCOPE FFVV–65A–R2–V1 PANEL ANTENNAS
3	ERICSSON AIR6449 B41 PANEL ANTENNAS
3	ERICSSON 4415 B25 RADIOS
3	ERICSSON 4415 B66A RADIOS
3	ERICSSON 4449 B71+B85 RADIOS
3	MICRODATA AWS/PCS 8:4 QUADPLEXER
3	ERICSSON 6/24 4AWG HYBRID TRUNKS
1	ERICSSON RBS 6201 ODE EQUIPMENT CABINET
1	AAV CABINET
1	ERICSSON 6160 EQUIPMENT ENCLOSURE
1	ERICSSON B160 BATTERY CABINET

RF CONFIGURATION 67D5A997DB MUAC

SCOPE OF WORK

1. REMOVE (3) EXISTING PANEL ANTENNAS, (1) PER SECTOR
2. REMOVE (12) 1 5/8"ø COAX CABLES, (4) PER SECTOR
3. REMOVE (1) EXISTING DARK RBS 6201 ODE BTS CABINET
4. REMOVE (1) EXISTING EXBFo BATTERY CABINET
5. REMOVE (3) EXISTING FLUSH WALL MOUNTS, (1) PER SECTOR
6. INSTALL (1) NEW CORNER WALL MOUNT, SECTOR ALPHA
7. INSTALL (2) NEW WALL PIPE MOUNTS, SECTORS BETA & GAMMA
8. INSTALL (6) NEW PANEL ANTENNAS, (2) PER SECTOR
9. INSTALL (9) NEW RADIOS, (3) PER SECTOR
10. INSTALL (3) NEW QUADPLEXERS, (1) PER SECTOR
11. INSTALL (3) NEW 6/24 HYBRID TRUNKS, (1) PER SECTOR
12. INSTALL (1) NEW EQUIPMENT ENCLOSURE CABINET W/ (1) NEW BB 6648 FOR N2500 & L2500, (1) NEW PSU 4813 VOLTAGE BOOSTER, AND (1) NEW CSR IXRe V2(GEN2) TRANSPORT SYSTEM
13. INSTALL (1) NEW BATTERY CABINET

RRUS-4415 B66A

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 14.9"x13.2"x5.9"
WEIGHT: 46.3 LBS

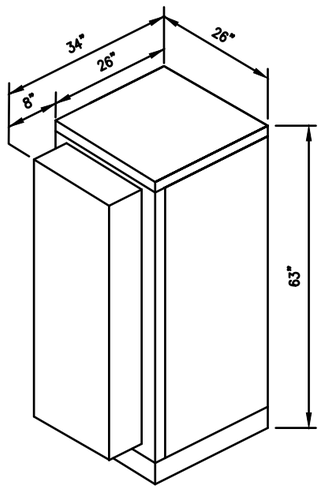
RRUS-4415 B25

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 16.5"x13.4"x5.9"
WEIGHT: 46 LBS

RRUS-4449 B71/B85

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 14.9"x13.2"x10.4"
WEIGHT: 74 LBS

3 / A–4 REMOTE RADIO HEAD (RRH) DETAILS
SCALE: N.T.S.

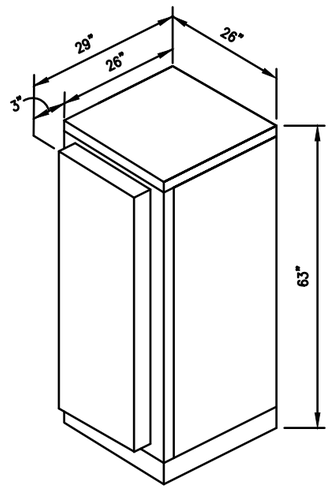


ENCLOSURE 6160 AC

*PRELIMINARY SPECIFICATIONS
MANUFACTURER: ERICSSON
DIMENSIONS: 32"x26"x63"
WEIGHT W/O EQUIPMENT: 320 LBS.
WEIGHT W/ EQUIPMENT: 605 LBS.

NOTE:
CABINETS ARE TO BE INSTALLED AND FASTENED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

5 / A–4 EQUIPMENT CABINET DETAIL
SCALE: N.T.S.



ENCLOSURE B160

*PRELIMINARY SPECIFICATIONS
MANUFACTURER: ERICSSON
DIMENSIONS: 29"x26"x63"
WEIGHT W/O BATTERIES: 295 LBS.
WEIGHT W/ BATTERIES: 1,353 LBS.
ONLY TWO (2) STRINGS OF BATTERIES ALLOWED

6 / A–4 BATTERY CABINET DETAIL
SCALE: N.T.S.

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

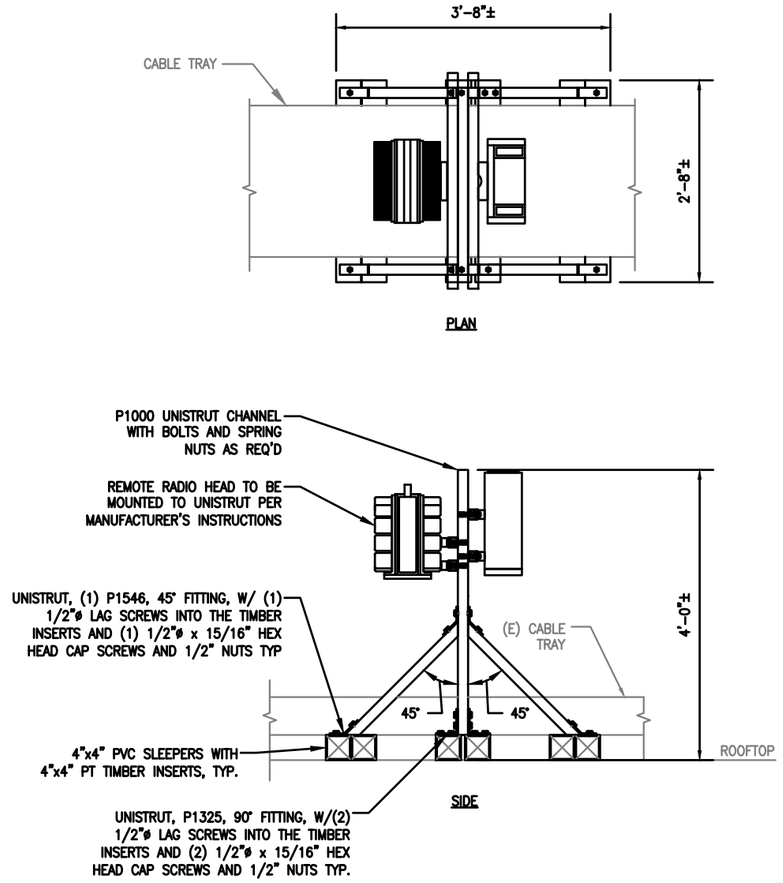
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T–MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286–2700
FAX: (508) 286–2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

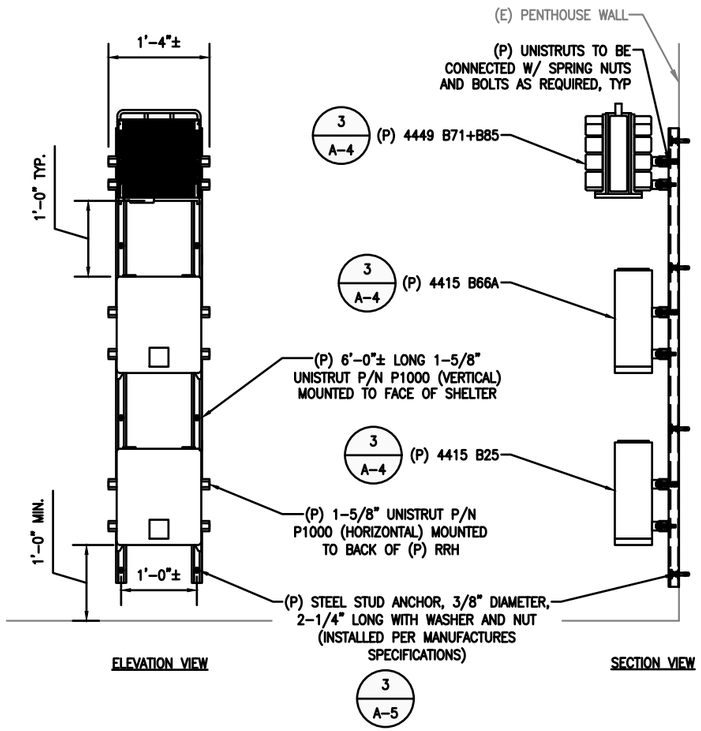
DETAILS & EQUIPMENT SCHEDULE

SHEET NO. A-4



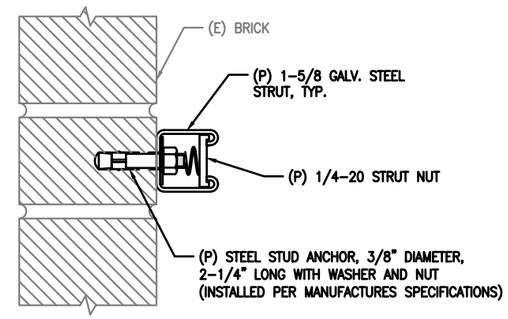
1 A-5 EQUIPMENT RACK DETAIL

SCALE: N.T.S.



2 A-5 RRH WALL MOUNT DETAIL

SCALE: N.T.S.



3 A-5 WALL ANCHOR DETAIL (UNISTRUT)

SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

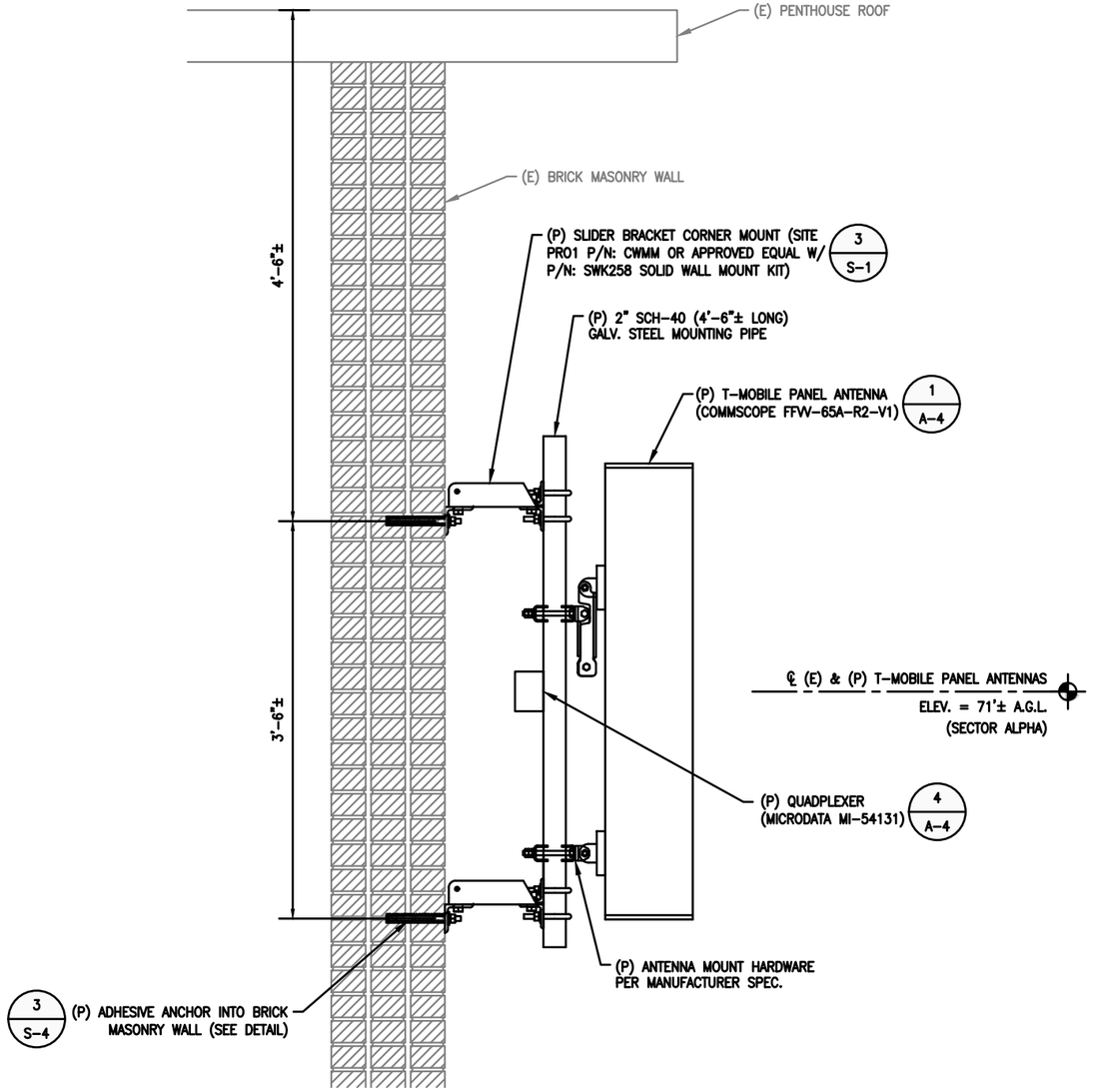
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

DETAILS

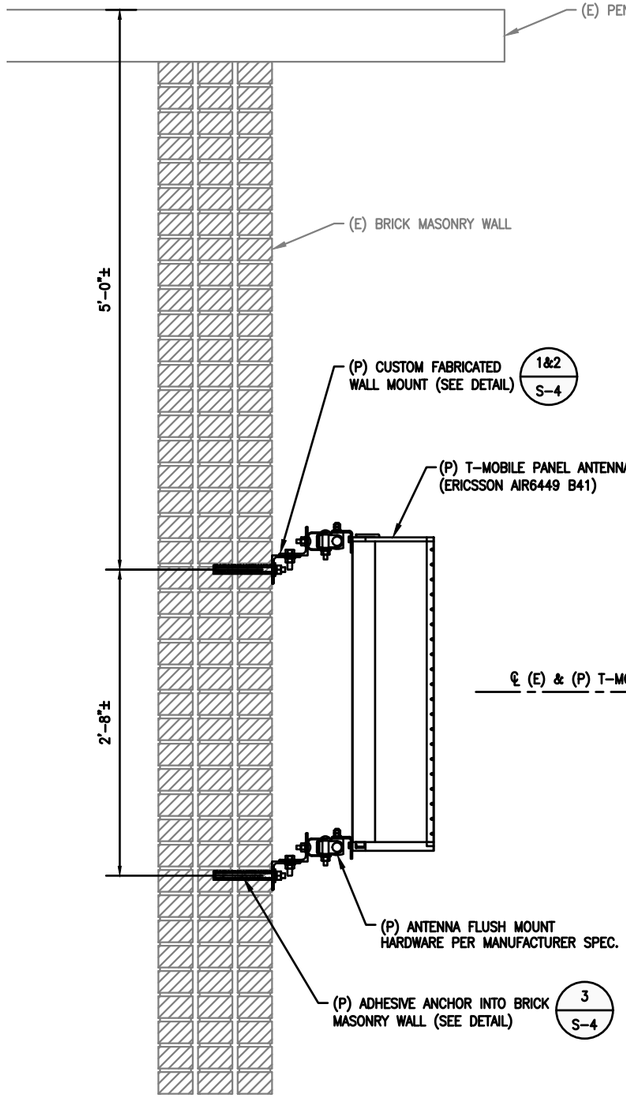
SHEET NO. A-5



1 S-1 ANTENNA & QUADPLEXER MOUNT DETAIL

SCALE: 3/4" = 1'-0"

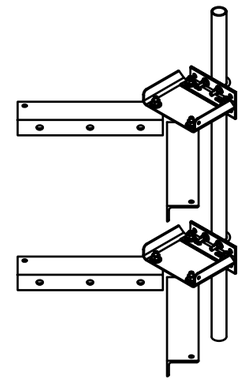
0 8" 1'-4" 2'-8"



2 S-1 ANTENNA MOUNT DETAIL

SCALE: 3/4" = 1'-0"

0 8" 1'-4" 2'-8"



CWMM

MANUFACTURER: SITE PRO 1
(INSTALL WITH SWK258 SOLID WALL MOUNT KIT)

3 S-1 CORNER MOUNT DETAIL

SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

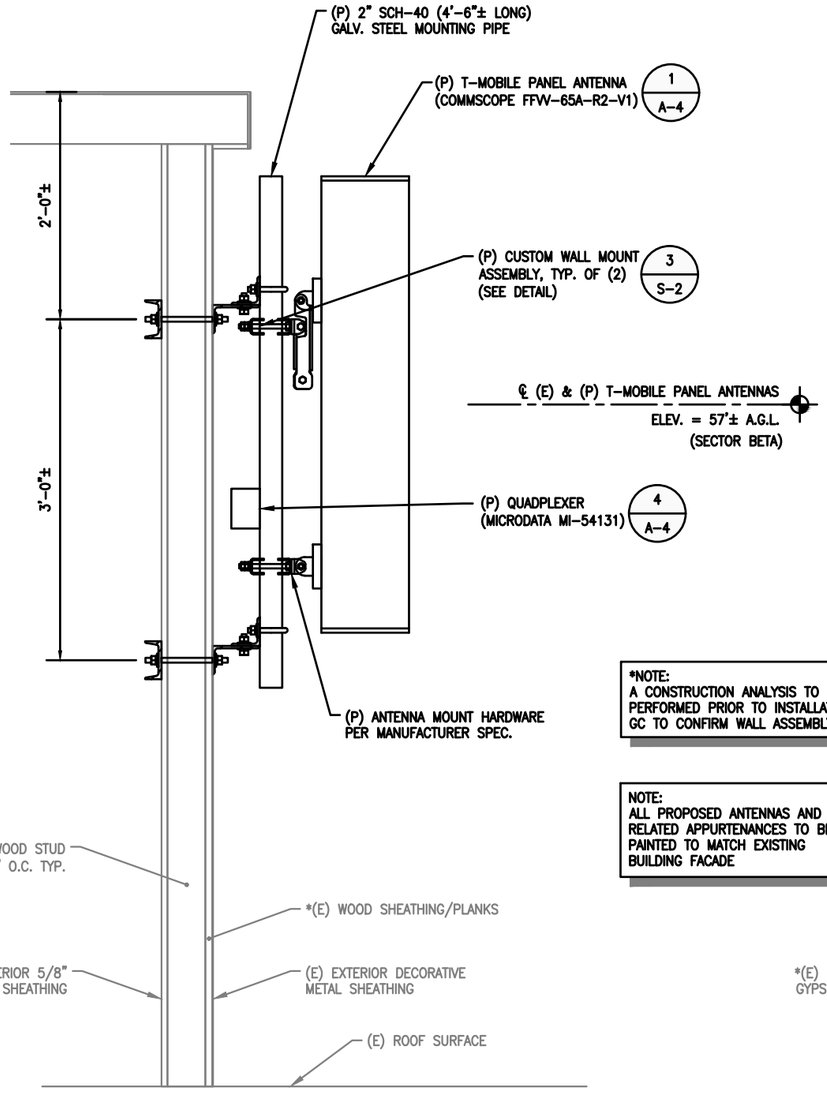
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

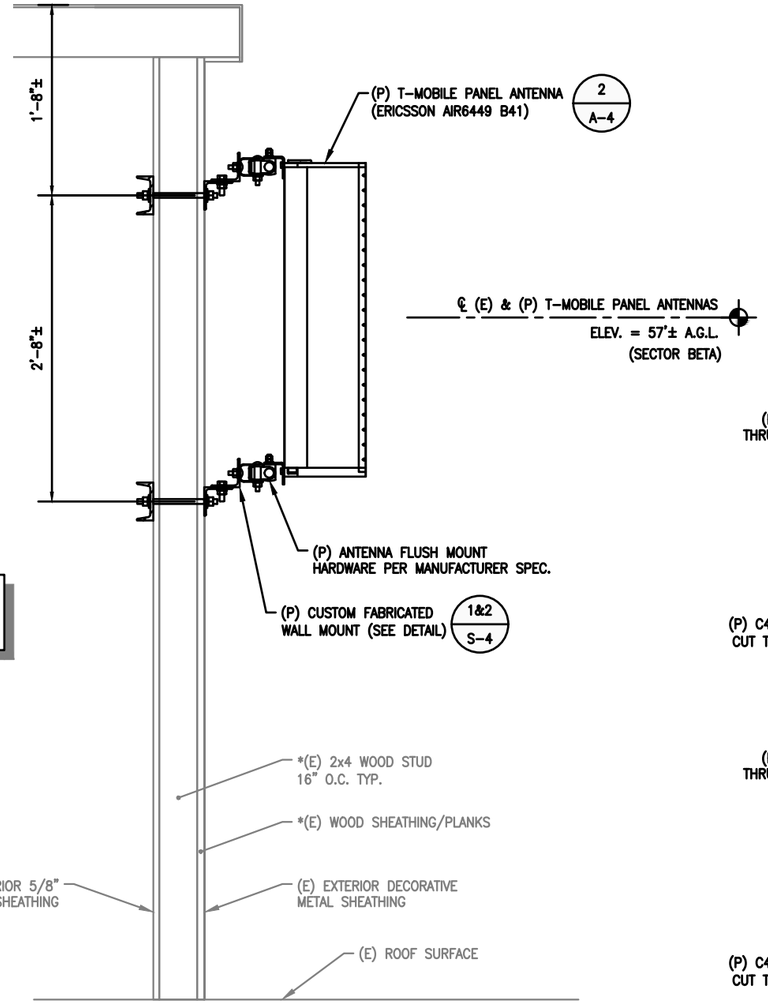
SECTOR ALPHA
MOUNTING DETAILS

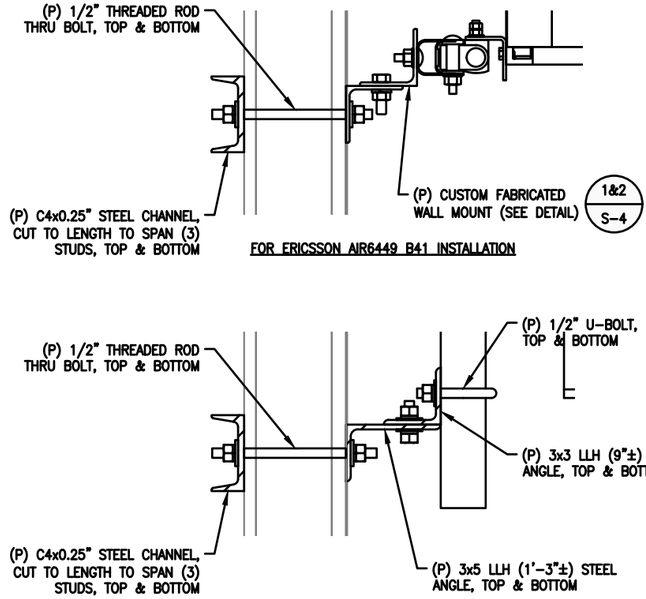
SHEET NO. S-1



*NOTE:
A CONSTRUCTION ANALYSIS TO BE PERFORMED PRIOR TO INSTALLATION. GC TO CONFIRM WALL ASSEMBLY.

NOTE:
ALL PROPOSED ANTENNAS AND RELATED APPURTENANCES TO BE PAINTED TO MATCH EXISTING BUILDING FACADE





1 S-2 ANTENNA & QUADPLEXER MOUNT DETAIL

SCALE: 3/4" = 1'-0"

0 8" 1'-4" 2'-8"

2 S-2 ANTENNA MOUNT DETAIL

SCALE: 3/4" = 1'-0"

0 8" 1'-4" 2'-8"

3 S-2 MOUNT DETAIL

SCALE: 1 1/2" = 1'-0"

0 4" 8" 1'-4"

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403 Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

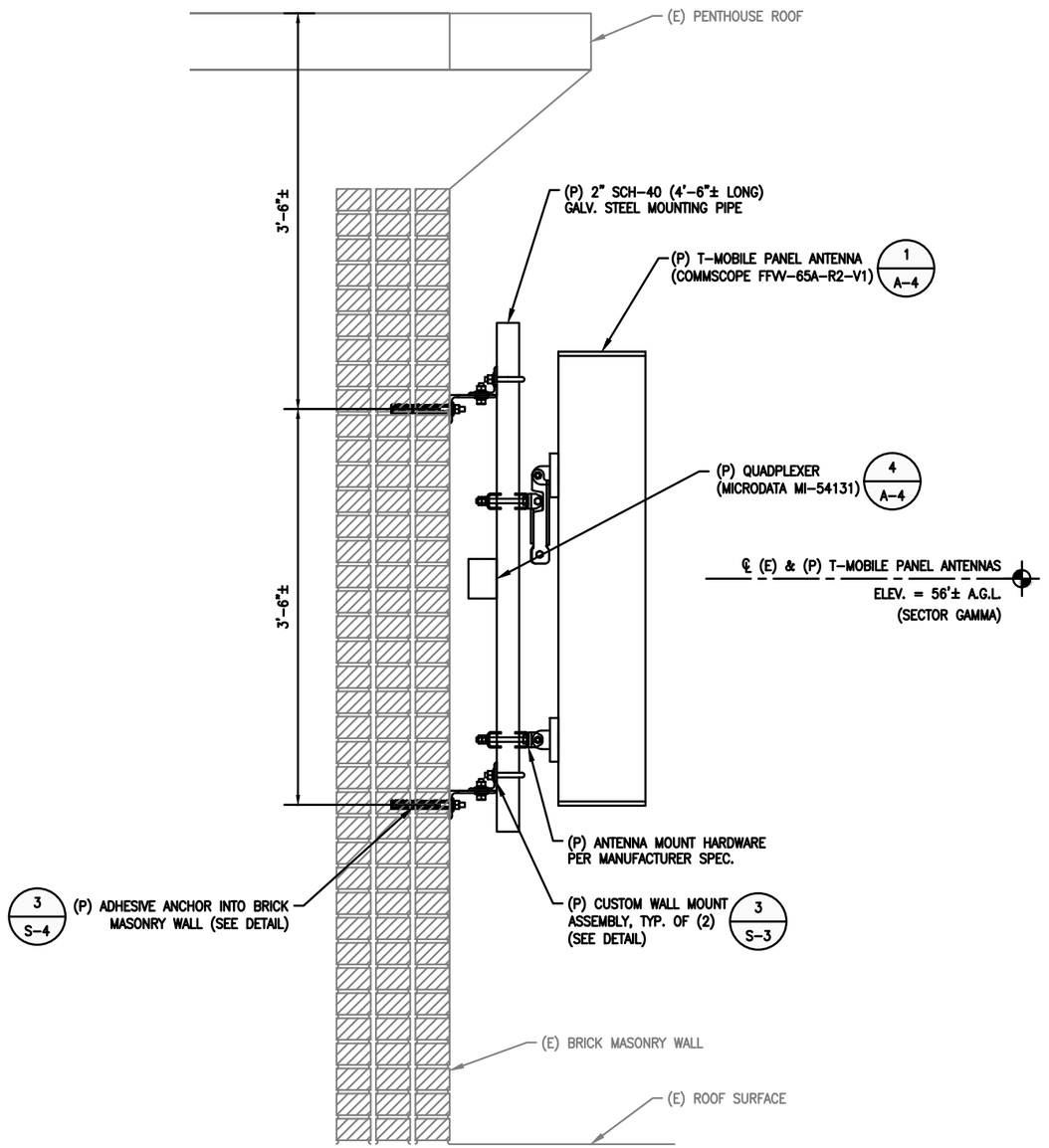
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

SECTOR GAMMA
MOUNTING DETAILS

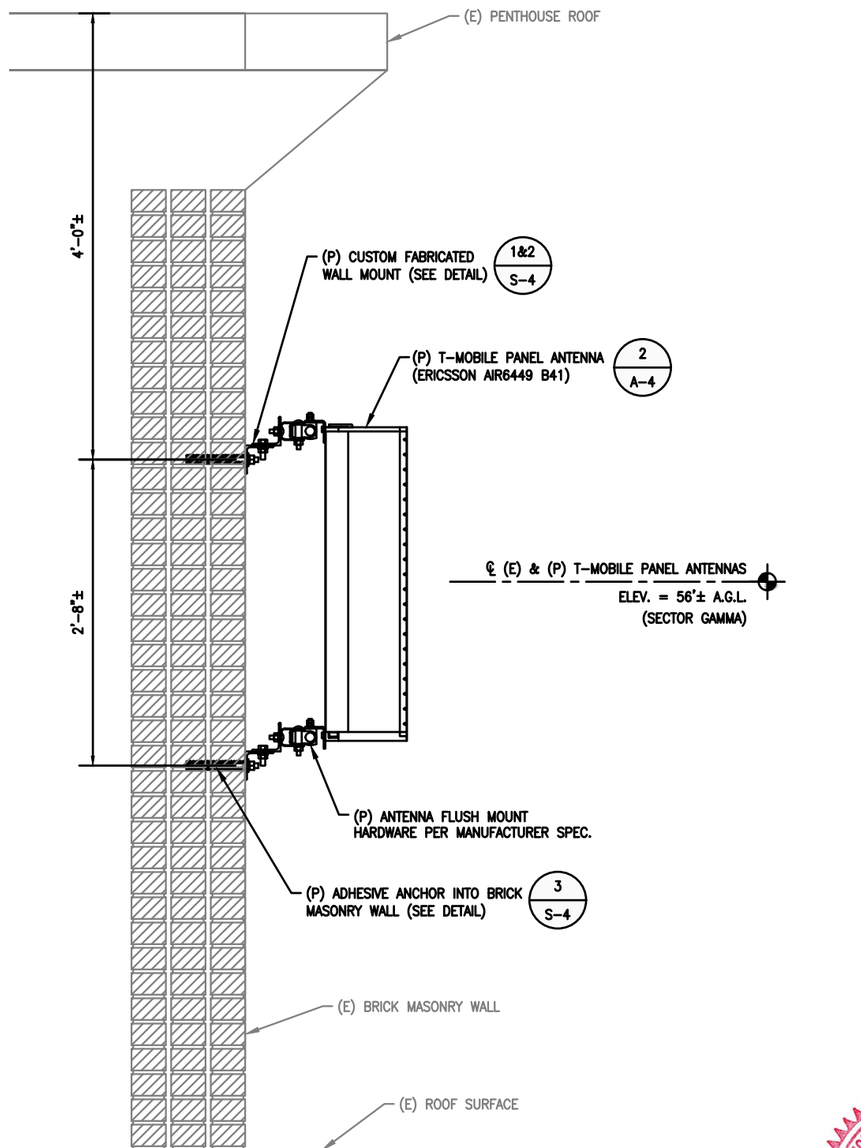
SHEET NO. S-2



1 S-3 ANTENNA & QUADPLEXER MOUNT DETAIL

SCALE: 3/4" = 1'-0"

0 8" 1'-4" 2'-8"



2 S-3 ANTENNA MOUNT DETAIL

SCALE: 3/4" = 1'-0"

0 8" 1'-4" 2'-8"

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

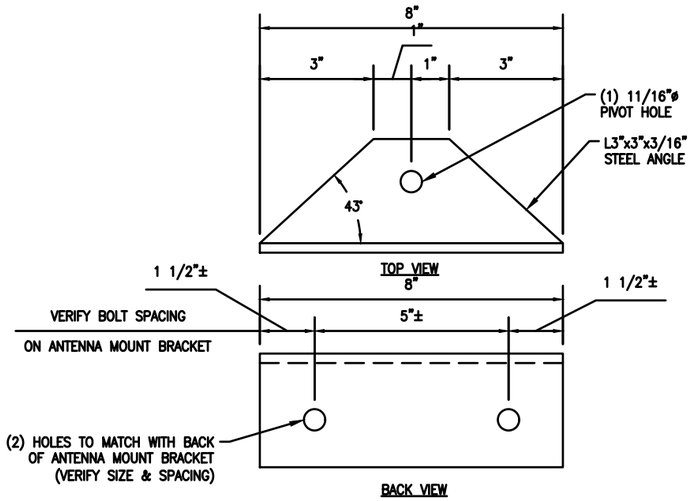
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

SECTOR BETA
MOUNTING DETAILS

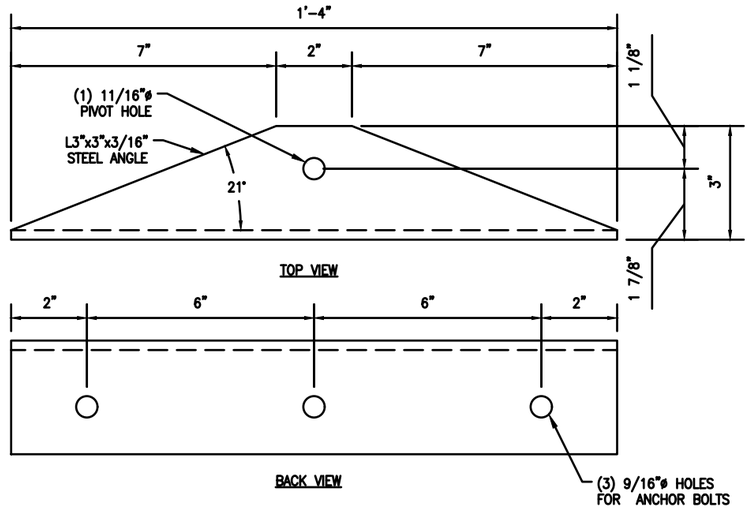
SHEET NO. S-3



1 S-4 ANTENNA BACK ANGLE DETAIL

SCALE: 3" = 1'-0"

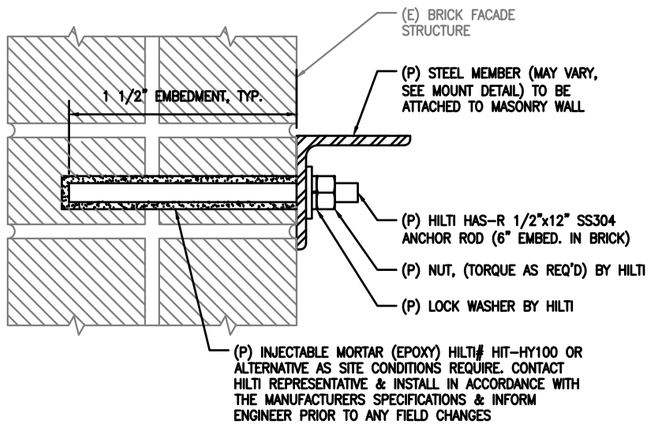
0 2" 4" 8"



2 S-4 WALL MOUNT ANGLE DETAIL

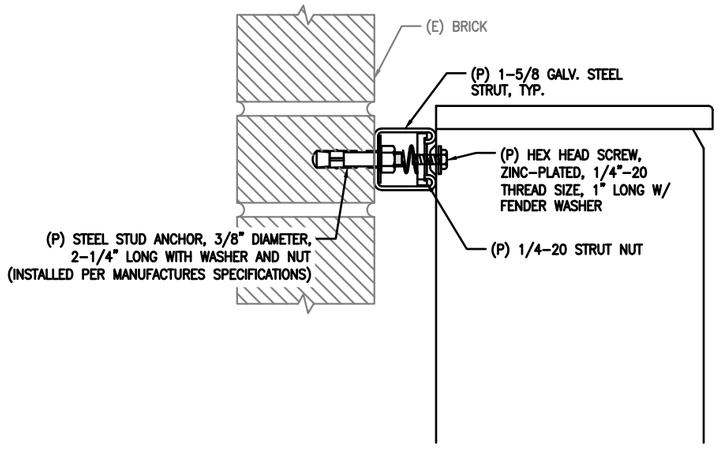
SCALE: 3" = 1'-0"

0 2" 4" 8"



3 S-4 WALL ANCHOR DETAIL (PIPE MOUNT)

SCALE: N.T.S.



4 S-4 WALL ANCHOR DETAIL (UNISTRUT)

SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

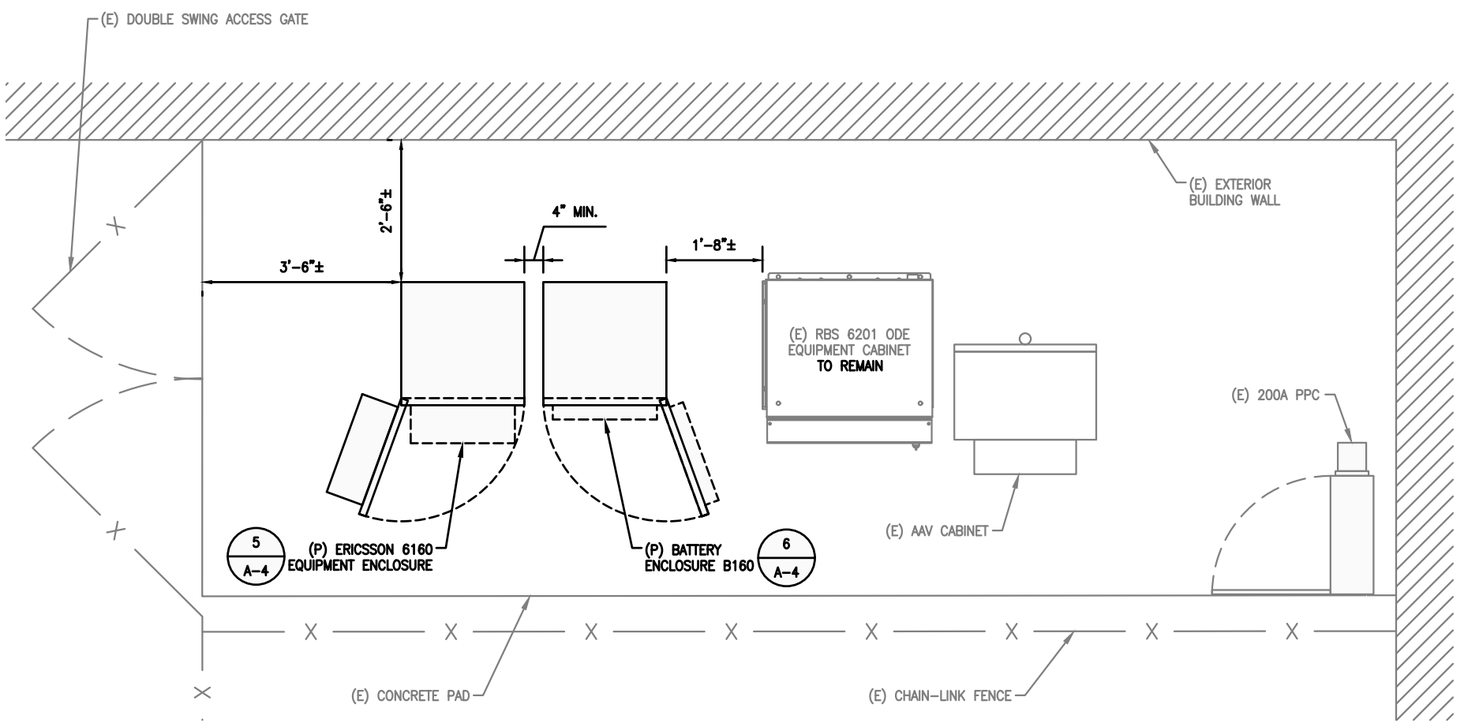
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

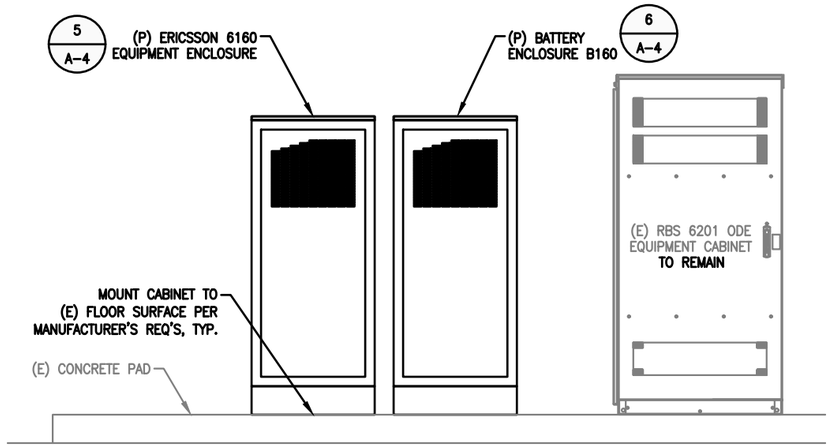
NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

STRUCTURAL DETAILS

SHEET NO. S-4



PLAN



ELEVATION

1 S-5 EQUIPMENT CABINET MOUNTING DETAILS

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

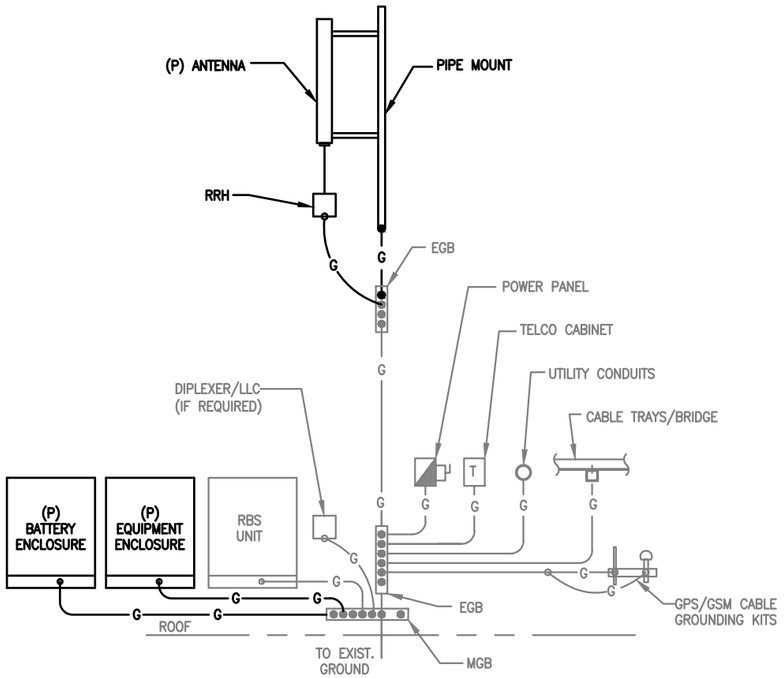
SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

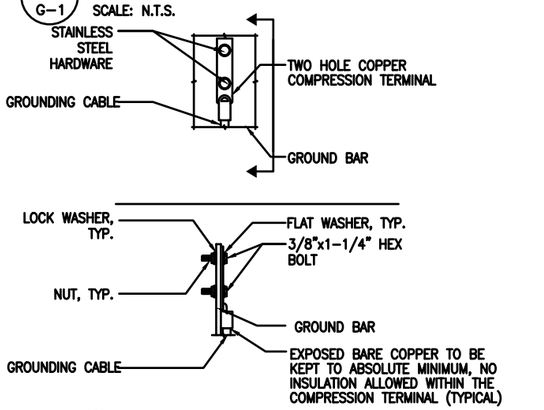
CABINET MOUNTING DETAILS

SHEET NO. S-5



1 G-1 TYP. GROUNDING RISER DIAGRAM

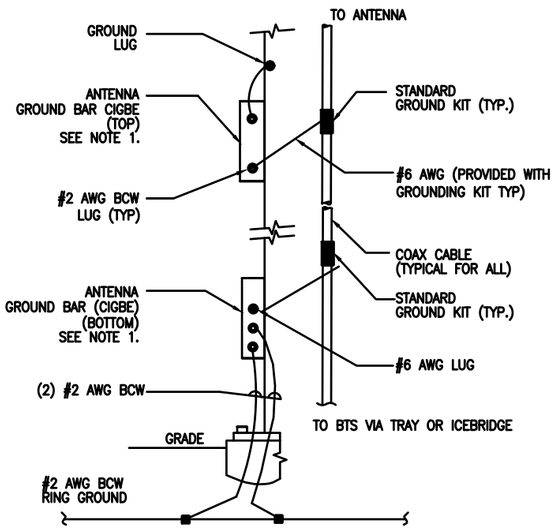
SCALE: N.T.S.



NOTES:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.
4. ALL GROUND LUGS MUST BE HEAT SHRUNK AT WIRE/LUG CONNECTION

2 G-1 TYP. GROUND BAR CONNECTION DETAIL

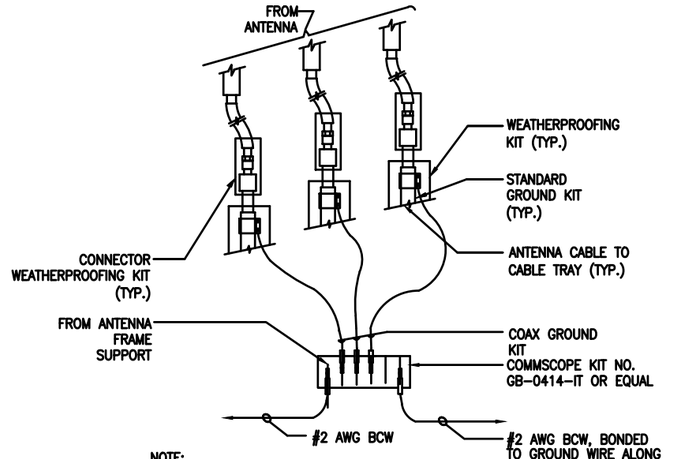
SCALE: N.T.S.



NOTE:
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

3 G-1 ANTENNA CABLE GROUNDING

SCALE: N.T.S.

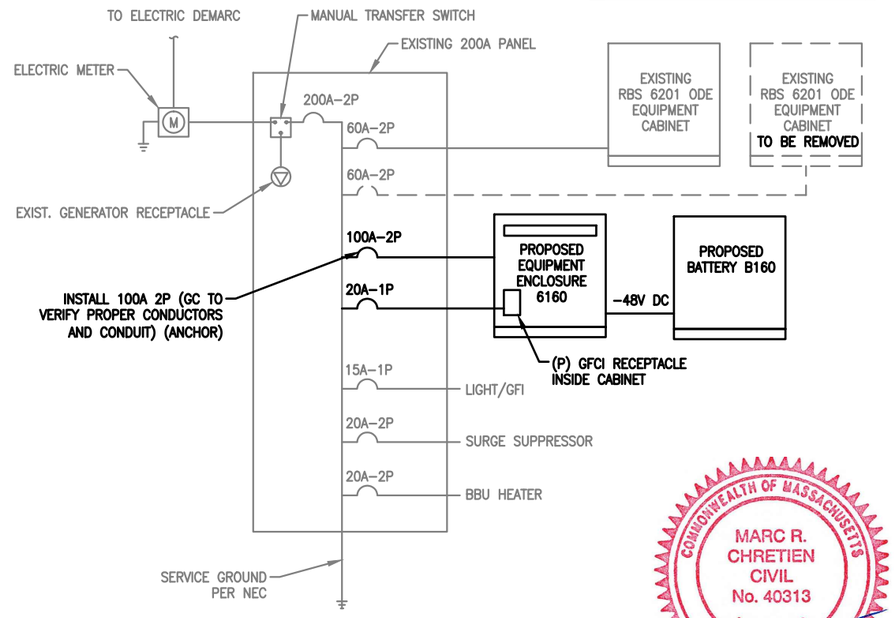


NOTE:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.
2. ALL PROPOSED COAXIAL CABLING TO BE GROUNDED IN (3) LOCATIONS; BELOW JUMPER/HARDLINE CONNECTION, AT BASE OF TOWER & PRIOR TO BUILDING/CABINET ENTRY.

4 G-1 GROUND WIRE TO GROUND BAR CONNECTION DETAIL

SCALE: N.T.S.

NOTE:
ALL WORK MUST BE PERFORMED BY LICENSED ELECTRICIAN ADHERING TO THE NEC AND LOCAL CODE REQUIREMENTS.



5 G-1 ONE LINE POWER DIAGRAM

SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS
MARC R. CHRETIEN
CIVIL
No. 40313
REGISTERED PROFESSIONAL ENGINEER

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 North Broadway, East Providence, RI 02914
Phone: (401) 354-2403
Fax: (401) 633-6354

Transcend Wireless
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430

SITE NUMBER: 4BSM431A
SITE NAME: CENTER OF THE ARTS_RT
551 TREMONT STREET
BOSTON, MA 02116
SUFFOLK COUNTY

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700
FAX: (508) 286-2893

NO.	DATE	REVISIONS	BY	CHK
0	04/16/21	ISSUED FOR REVIEW	AAB	MRC
1	06/08/21	ISSUED FOR CONSTRUCTION	AAB	MRC

GROUNDING, ONE LINE DIAGRAM & DETAILS

SHEET NO. G-1