

PROJECT INFORMATION

SCOPE OF WORK: TELECOMMUNICATIONS FACILITY (NSB A PROPOSED 180'-0" A.G.L. TALL MONOPOLE. PROPOSED EQUIPMENT SHELTER WILL BE INSTALLED AT GRADE INSIDE A PROPOSED FENCED-IN COMPOUND. PROPOSED (3) TPA65R-BU8DA-K ANTENNAS, (3) DMP65R-BU8DA-K ANTENNAS, (3) 4478 B14 RRU'S, (3) 4415 B30 RRU'S, (3) 4449 B5/B12 RRU'S, (3) 8843 B2/B66A RRU'S, (1) DC9-48-60-24-8C-EV SURGE ARRESTOR, AND (1) DC6-48-60-0-8F SURGE ARRESTOR WILL BE INSTALLED AT A HEIGHT OF 176'-0" A.G.L.):

SITE ADDRESS: 43 KNOTT ROAD
HEATH, MA 01346

APPLICANT: AT&T
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

SITE OWNER: JOHN METELICA III
366 DEERFIELD STREET
GREENFIELD, MA 01301

LATITUDE: 42.69412 N, 42° 41' 38.8" N

LONGITUDE: 72.84554 W, 72° 50' 43.9" W

TYPE OF SITE: MONOPOLE/ WALK-IN CABINET

TOWER HEIGHT: 180'-0"±

RAD CENTER: 176'-0"±

APPLICABLE CODES: ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE MA STATE BUILDING CODE, NATIONAL ELECTRIC CODE (NEC 2017), ANSI/EIA/TIA-222 H & COMPLY WITH AT&T MOBILITY SPECIFICATIONS



SITE NUMBER: MA4795

SITE NAME: HEATH KNOTT ROAD

FA CODE:14510277

PACE ID: MRCTB049410

PROJECT: NSB

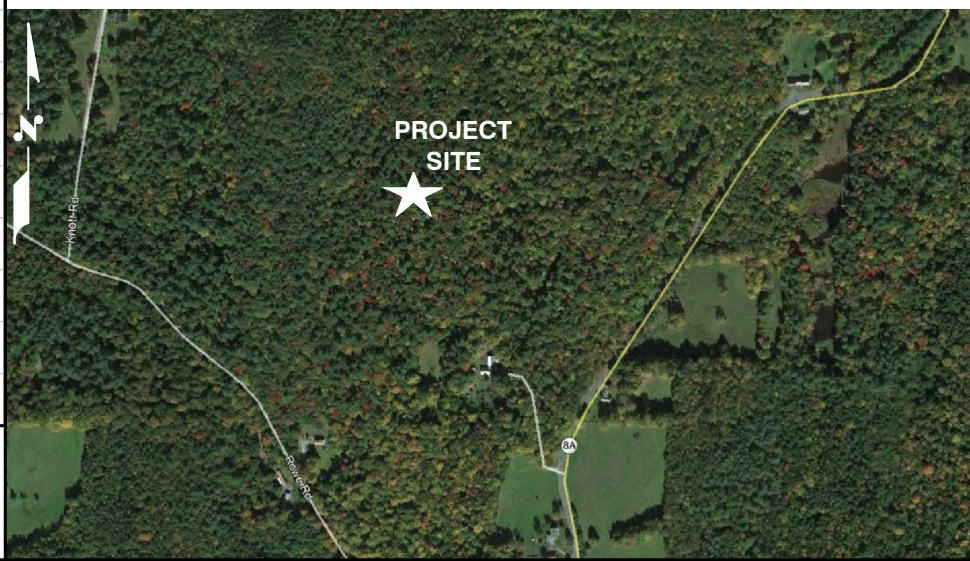
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VICINITY MAP

DIRECTIONS TO SITE:

TURN RIGHT, AND THEN IMMEDIATELY TURN LEFT ONTO LEGGATT MCCALL CONNECTOR RD. BEAR LEFT ONTO BURR ST. TURN LEFT ONTO MA-30 / COCHITUATE RD. TAKE RAMP RIGHT FOR I-90 EAST / I-90 WEST TOWARD BOSTON / SPRINGFIELD. AT EXIT 4, TAKE RAMP RIGHT FOR I-91 NORTH TOWARD HOLYOKE. AT EXIT 26, TAKE RAMP RIGHT FOR MA-2 WEST TOWARD GREENFIELD CENTER / NORTH ADAMS. AT ROUNDABOUT, TAKE 3RD EXIT ONTO MA-2 / MOHAWK TRAIL TOWARD NORTH ADAMS / MA-2. KEEP STRAIGHT ONTO MA-112 / MA-2 / MOHAWK TRAIL. KEEP STRAIGHT ONTO MA-2 / MOHAWK TRAIL. TURN RIGHT ONTO MA-8A / ROUTE 8A. TURN LEFT ONTO ROWE RD. ARRIVE AT ROWE RD. O ROWE ROAD WILL BE ON THE RIGHT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. 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 AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

UNDERGROUND SERVICE ALERT



WWW.DIGSAFE.COM
72 HOURS PRIOR

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: MA4795
SITE NAME: HEATH KNOTT ROAD

43 KNOTT ROAD
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SCALE: AS SHOWN DESIGNED BY: JC DRAWN BY: CC

AT&T		
TITLE SHEET (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	T-1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR 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) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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 IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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 BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – CENTERLINE
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **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: IBC 2015 & MA STATE BUILDING CODE 780 CMR 9TH EDITION
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)**

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, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

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.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		



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**SITE NUMBER: MA4795
 SITE NAME: HEATH KNOTT ROAD**

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 FRANKLIN COUNTY**



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SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T

**GENERAL NOTES
 (NSB)**

SITE NUMBER	DRAWING NUMBER	REV
MA4795	GN-1	1

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

MASSACHUSETTS AMENDMENTS TO THE IBC

(REFERENCE 780 CMR):

107.6 CONSTRUCTION CONTROL.

107.6.1 GENERAL. THIS SECTION SHALL APPLY TO THE CONSTRUCTION CONTROLS, PROFESSIONAL SERVICES AND CONTRACTOR SERVICES REQUIRED FOR BUILDINGS AND STRUCTURES NEEDING REGISTERED DESIGN PROFESSIONAL SERVICES.

107.6.1.1 SPECIALIZED STRUCTURES. TELECOMMUNICATION TOWERS, WIND TURBINE TOWERS, AND SIMILAR STRUCTURES ARE ENGINEERED STRUCTURES AND SHALL BE SUBJECT TO THE REQUIREMENTS OF SECTION 107.6.

107.6.2.2 CONSTRUCTION. THE REGISTERED DESIGN PROFESSIONALS WHO ARE RESPONSIBLE FOR THE DESIGN, PLANS, CALCULATIONS, AND SPECIFICATIONS, THEIR DESIGNER OR THE REGISTERED DESIGN PROFESSIONALS WHO HAVE BEEN RETAINED FOR CONSTRUCTION PHASE SERVICES, SHALL PERFORM THE FOLLOWING TASKS:

- REVIEW, FOR CONFORMANCE TO 780 CMR AND THE DESIGN CONCEPT, SHOP DRAWINGS, SAMPLES AND OTHER SUBMITTALS BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
- PERFORM THE DUTIES FOR REGISTERED DESIGN PROFESSIONALS IN 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.
- BE PRESENT AT INTERVALS APPROPRIATE TO THE STAGE OF CONSTRUCTION TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND TO DETERMINE IF THE WORK IS BEING PERFORMED IN A MANNER CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND 780 CMR.

THE PERMIT APPLICATION SHALL NOT BE DEEMED COMPLETED UNTIL ALL OF THE CONSTRUCTION DOCUMENTS REQUIRED BY 780 CMR HAVE BEEN SUBMITTED. DOCUMENTATION INDICATING THAT WORK COMPLIES WITH THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED AT THE COMPLETION OF EACH PHASE WHEN REQUIRED BY THE BUILDING OFFICIAL. UPON COMPLETION OF THE WORK, THE REGISTERED DESIGN PROFESSIONAL SHALL FILE A FINAL DOCUMENT TO THE BUILDING OFFICIAL INDICATING THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THW APPROVED PLANS AND 780 CMR. FORMS FOR CONSTRUCTION CONTROL WHEN REQUIRED BY THE BUILDING OFFICIAL SHALL BE THOSE FOUND AT <http://www.mass.gov/ocabr/government/oca-agencies/dpl-ip/opsi/>.

107.6.2.3 SPECIAL INSPECTIONS AND TESTS. SPECIAL INSPECTIONS AND TESTS SHALL BE PROVIDED IN ACCORDANCE WITH 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.

170.6.2.4 NON STRUCTURAL SYSTEM TEST AND INSPECTION. TESTS AND INSPECTIONS OF NON-STRUCTURAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE ENGINEERING PRACTICE STANDARDS, REFERENCED STANDARDS LISTED IN 780 CMR 35.00: REFERENCED STANDARDS, OR AS OTHERWISE SPECIFIED IN 780 CMR.

107.6.3 CONSTRUCTION CONTRACTOR SERVICES. THE ACTUAL CONSTRUCTION OF THE WORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AS IDENTIFIED ON THE APPROVED PERMIT AND SHALL INVOLVE THE FOLLOWING:

- EXECUTION OF ALL WORK IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- EXECUTION AND CONTROL OF ALL METHODS OF CONSTRUCTION IN A SAFE AND SATISFACTORY MANNER IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STATUTES AND REGULATIONS.
- UPON COMPLETION OF THE CONSTRUCTION, CERTIFICATION IN WRITING TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE THAT, TO THE BEST OF THE CONTRACTOR'S KNOWLEDGE AND BELIEF, CONSTRUCTION HAS BEEN DONE IN SUBSTANTIAL ACCORD WITH SECTION 107.6 AND WITH ALL PERTINENT DEVIATIONS SPECIFICALLY NOTED. THE BUILDING OFFICIAL MAY REQUIRE A COPY OF THIS CERTIFICATION.

107.6.4 PROJECT REPRESENTATION. A PROJECT REPRESENTATIVE MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS REPRESENTATIVE SHALL KEEP DAILY RECORDS AND SUBMIT REPORTS AS MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS PROJECT REPRESENTATION REQUIREMENT SHALL BE DETERMINED PRIOR TO THE ISSUANCE OF THE PERMIT AND MAY BE A PREREQUISITE FOR PERMIT ISSUANCE. REFUSAL BY THE APPLICANT TO PROVIDE SUCH SERVICE IF REQUIRED BY THE BUILDING OFFICIAL SHALL RESULT IN THE DENIAL OF THE PERMIT. ALL FEES AND COSTS RELATED TO THE PERFORMANCE OF PROJECT REPRESENTATION SHALL BE BORNE BY THE OWNER. WHEN APPLICATIONS FOR UNUSUAL DESIGNS OR MAGNITUDE OF CONSTRUCTION ARE FILED, OR WHERE REFERENCE STANDARDS REQUIRE SPECIAL ARCHITECTURAL OR ENGINEERING INSPECTIONS, THE BUILDING OFFICIAL MAY REQUIRE THAT THE PROJECT REPRESENTATIVE BE A REGISTERED DESIGN PROFESSIONAL IN ADDITION TO THOSE REGISTERED DESIGN PROFESSIONALS REQUIRED ELSEWHERE IN ACCORDANCE WITH SECTION 107.6.

107.6.5 BUILDING OFFICIAL RESPONSIBILITY. NOTHING CONTAINED IN SECTION 107.6 SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE 780 CMR WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

REQUIRED INSPECTIONS AND SITE REVIEW DOCUMENT AS A CONDITION OF THE BUILDING PERMIT THE FOLLOWING INSPECTIONS AND SITE REVIEWS IDENTIFIED BY THE BUILDING OFFICIAL ARE REQUIRED FOR WORK PER THE 9TH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, 780 CMR, SECTION 110 AND CHAPTER 17

REQUIRED SITE REVIEW AND DOCUMENTATION FOR PORTIONS OR PHASES CONSTRUCTION 1,6,7
(TO BE PERFORMED BY THE APPROPRIATE REGISTERED DESIGN PROFESSIONAL OR HIS/HER DESIGNEE OR M.G.L.C 112 §81R CONTRACTOR)

SITE REVIEW AND DOCUMENTATION	X	SITE REVIEW AND DOCUMENTATION	X
SOIL CONDITION/ANALYSIS/REPORT		ENERGY EFFICIENCY REQUIREMENTS	
FOOTING AND FOUNDATION (INCLUDING REINFORCEMENT AND FOUNDATION ATTACHMENT)		FIRE ALARM INSTALLATION ²	
CONCRETE FLOOR AND UNDER FLOOR		FIRE SUPPRESSION INSTALLATION ³	
LOWEST FLOOR FLOOD ELEVATION		FIELD REPORTS ⁵	
STRUCTURAL FRAME - WALL/FLOOR/ROOF	X	CARBON MONOXIDE DETECTION SYSTEM ⁴	
LATH AND PLASTER/GYPSUM		SEISMIC REINFORCEMENT	
FIRE RESISTANT WALL/PARTITIONS FRAMING		SMOKE CONTROL SYSTEMS	
FIRE RESISTANT WALL/PARTITIONS FINISH ATTACHMENTS		SMOKE AND HEAT VENTS	
ABOVE CEILING INSPECTION		ACCESSIBILITY (521 CMR)	
FIRE BLOCKING/STOPPING SYSTEM		OTHER:	
EMERGENCY LIGHTING/EXIT SIGNAGE			
MEANS OF EGRESS COMPONENTS		SPECIAL INSPECTIONS (SECTION 1704):	X
ROOFING, COPING/SYSTEM			
VENTING SYSTEMS (KITCHEN, CHEMICAL, FUME)			
MECHANICAL SYSTEMS			

NOTES:

- ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"Ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
- VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
- CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
- EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

NOTES:

- REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
- PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
- PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
- HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
- ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
- AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
REQUIRED	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
REQUIRED	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

- IT IS THE RESPONSIBILITY OF THE PERMIT APPLICANT TO NOTIFY THE BUILDING OFFICIAL OF REQUIRED INSPECTIONS (X). INSPECTION OF 780 CMR FIRE PROTECTION SYSTEMS MAY BE WITNESSED BY THE FIRE OFFICIAL AND INSTALLATION PERMITS ARE REQUIRED FROM THE FIRE DEPARTMENT PER 527 CMR.
- INCLUDE NFPA 72 TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE APPLICABLE NFPA 13, 13R, 13D, 14, 15, 17, 20, 241, ETC. - TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE NFPA 720 RECORD OF COMPLETION AND INSPECTION AND TEST FORM
- INCLUDE FIELD REPORTS AND RELATED DOCUMENTATION
- WORK SHALL NOT PROCEED, OR BE CONCEALED, UNTIL THE REQUIRED INSPECTION HAS BEEN APPROVED BY THE BUILDING OFFICIAL, AND NOTHING WITHIN CONSTRUCTION CONTROL SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE THIS CODE WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.
- ROUGH AND/OR FINISH INSPECTIONS OF ELECTRICAL, PLUMBING, OR SHEET METAL SHALL BE INSPECTED PRIOR TO ROUGH AND FINISH INSPECTIONS BY THE BUILDING OFFICIAL.

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: MA4795
SITE NAME: HEATH KNOTT ROAD

43 KNOTT ROAD
HEATH, MA 01346
FRANKLIN COUNTY

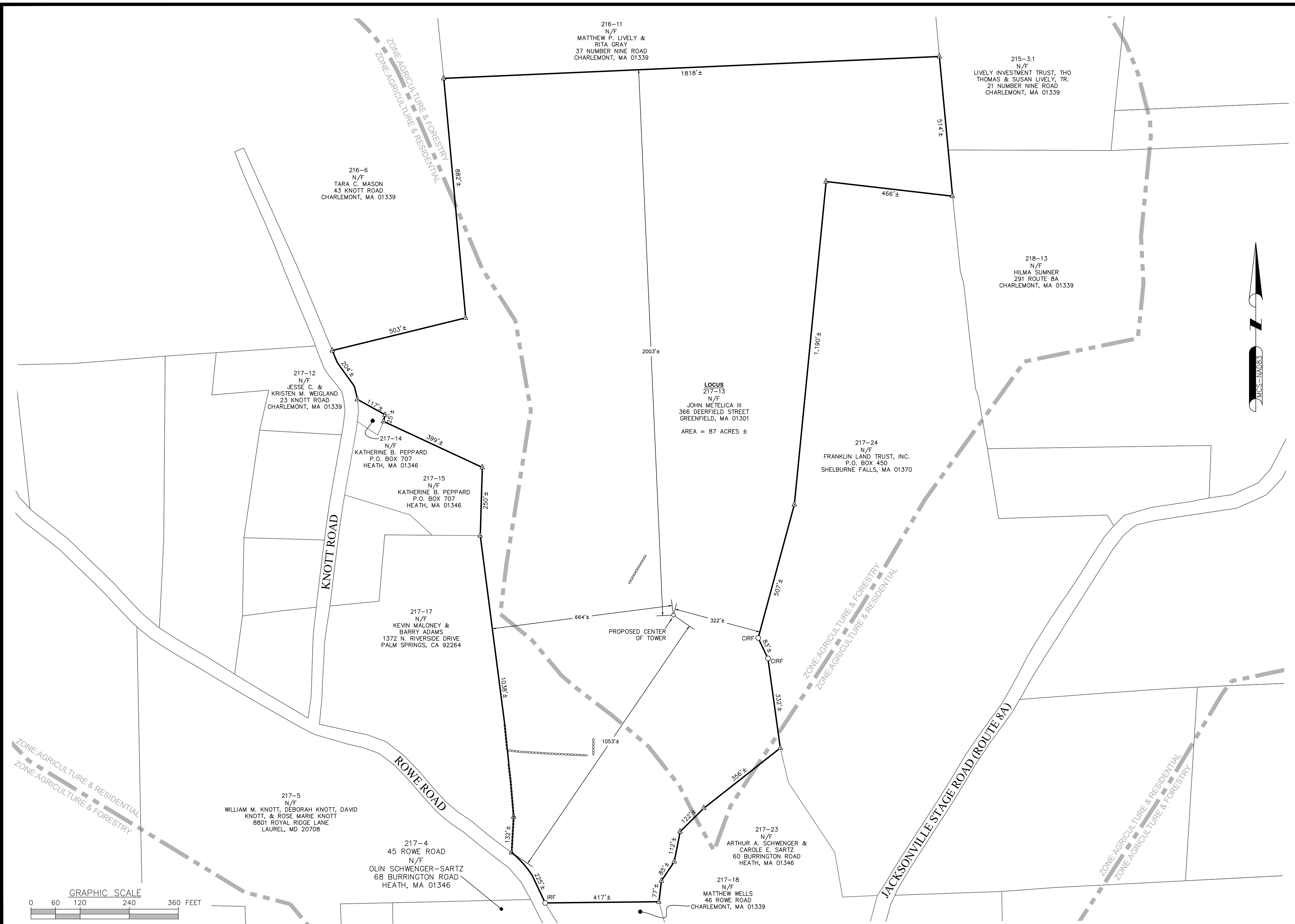
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T

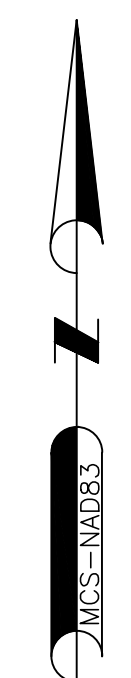
STRUCTURAL NOTES (NSB)

SITE NUMBER	DRAWING NUMBER	REV
MA4795	SN-1	1



LEGEND	
	LOCUS PROPERTY LINE
	ABUTTERS PROPERTY LINE (±)
	ZONING LINE
	STONEWALL
	CALCULATED POINT
	(C)IRFO (CAPPED) IRON ROD FOUND
	TOWER CONTROL POINT

- SITE SPECIFIC NOTES:**
- FIELD SURVEY DATE: 11-20-2020 & 11-23-2020
 - HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
 - OWNER: JOHN METELICA III
366 DEERFIELD STREET
GREENFIELD, MA 01301
 - SITE NAME: HEATH KNOTT ROAD
 - SITE NUMBER: MA4795
 - SITE ADDRESS: 43 KNOTT ROAD
HEATH, MA 01346
 - APPLICANT: AT&T
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701
 - JURISDICTION: TOWN OF HEATH
FRANKLIN COUNTY
 - TAX ID: 217-13
 - DEED REFERENCE: DEED BOOK 2079 PAGE 204
DEED BOOK 2079 PAGE 205
 - PLAN REFERENCE: PLAN BOOK 114 PAGE 14
 - ZONING DISTRICT: AGRICULTURE AND FORESTRY
 - THE HORIZONTAL DATUM AND VERTICAL DATUM WERE DERIVED FROM AN RTK GPS SURVEY.
 - ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO COMMENCEMENT OF ALL SITE WORK. CALL DIGSAFE 1-800-322-4844 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
 - ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY A FLOOD HAZARD STUDY HAS NOT BEEN PERFORMED FOR THE TOWN OF HEATH.
 - FIELD SURVEY BY RTK GPS & EDM TOTAL STATION.
 - THIS IS NOT A BOUNDARY SURVEY.** PROPERTY LINES SHOWN HEREON ARE TAKEN FROM PLANS AND DEEDS OF RECORD, MONUMENTS FOUND AND GIS DATA.
 - NO WETLAND DELINEATIONS WERE OBSERVED DURING THE FIELD WORK.



ZONING INFORMATION		
DIMENSION REQUIREMENTS:	REQUIRED	PROPOSED±
MINIMUM LOT SIZE:	4 ACRES	
MINIMUM LOT FRONTAGE:	350'	
MINIMUM FRONT YARD SETBACK:	50'	
MINIMUM SIDE YARD SETBACK:	25'	
MINIMUM REAR YARD SETBACK:	25'	

HG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

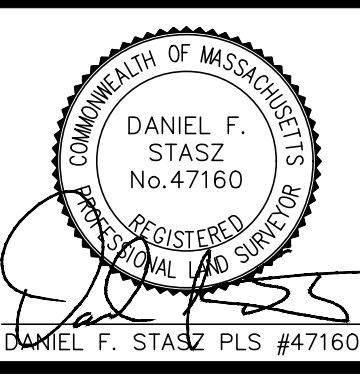
CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: MA4795
SITE NAME: HEATH KNOTT ROAD

43 KNOTT ROAD
HEATH, MA 01346
FRANKLIN COUNTY

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701




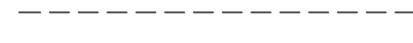
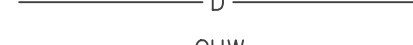






NO.	DATE	ISSUED FOR REVIEW	BCF	CHK	APP'D
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SCALE: AS SHOWN		DESIGNED BY: --	DRAWN BY: JDG		

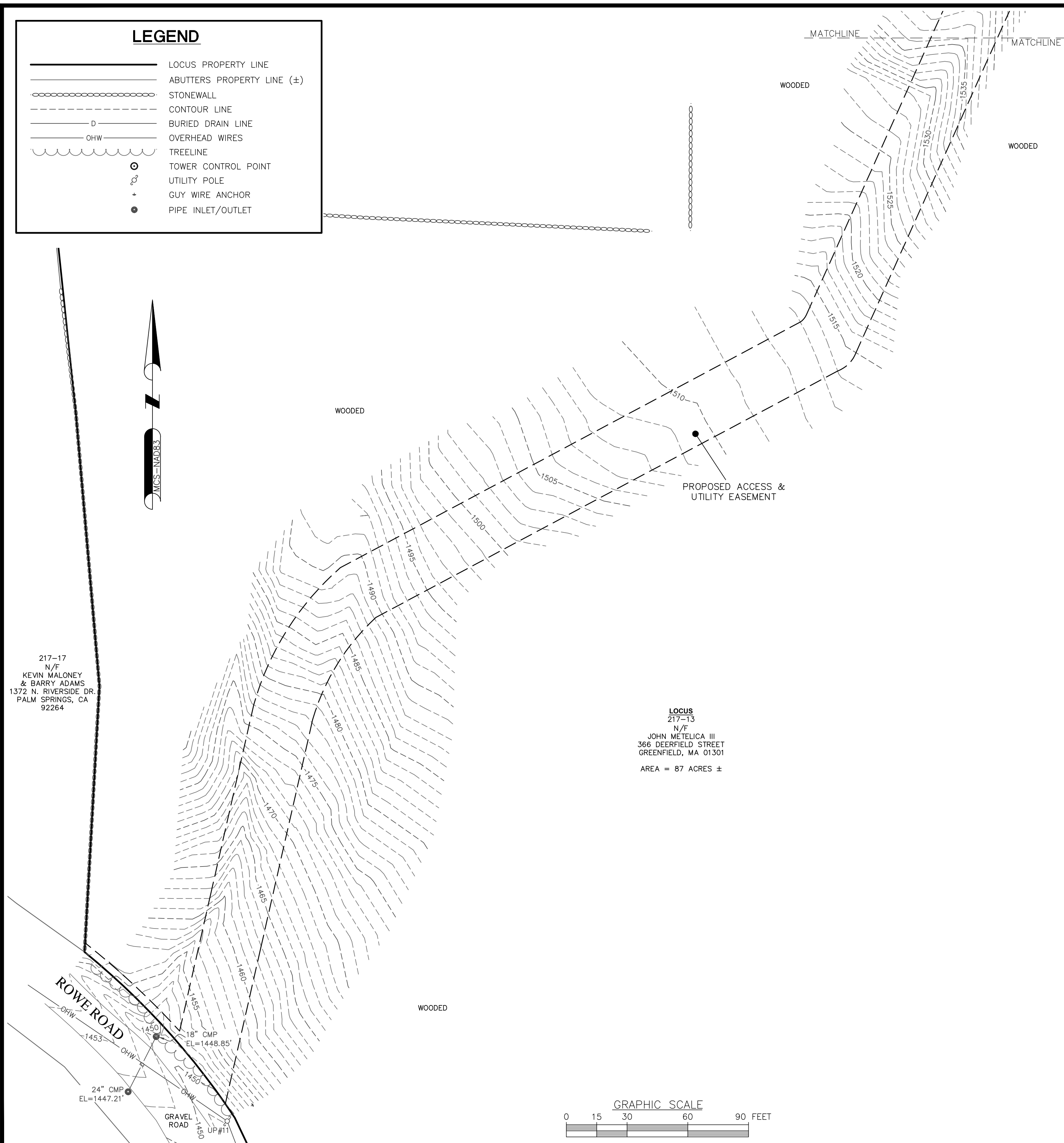


AT&T
ABUTTERS PLAN (NSB)

SITE NUMBER	DRAWING NUMBER	REV
MA4795	C-1	0

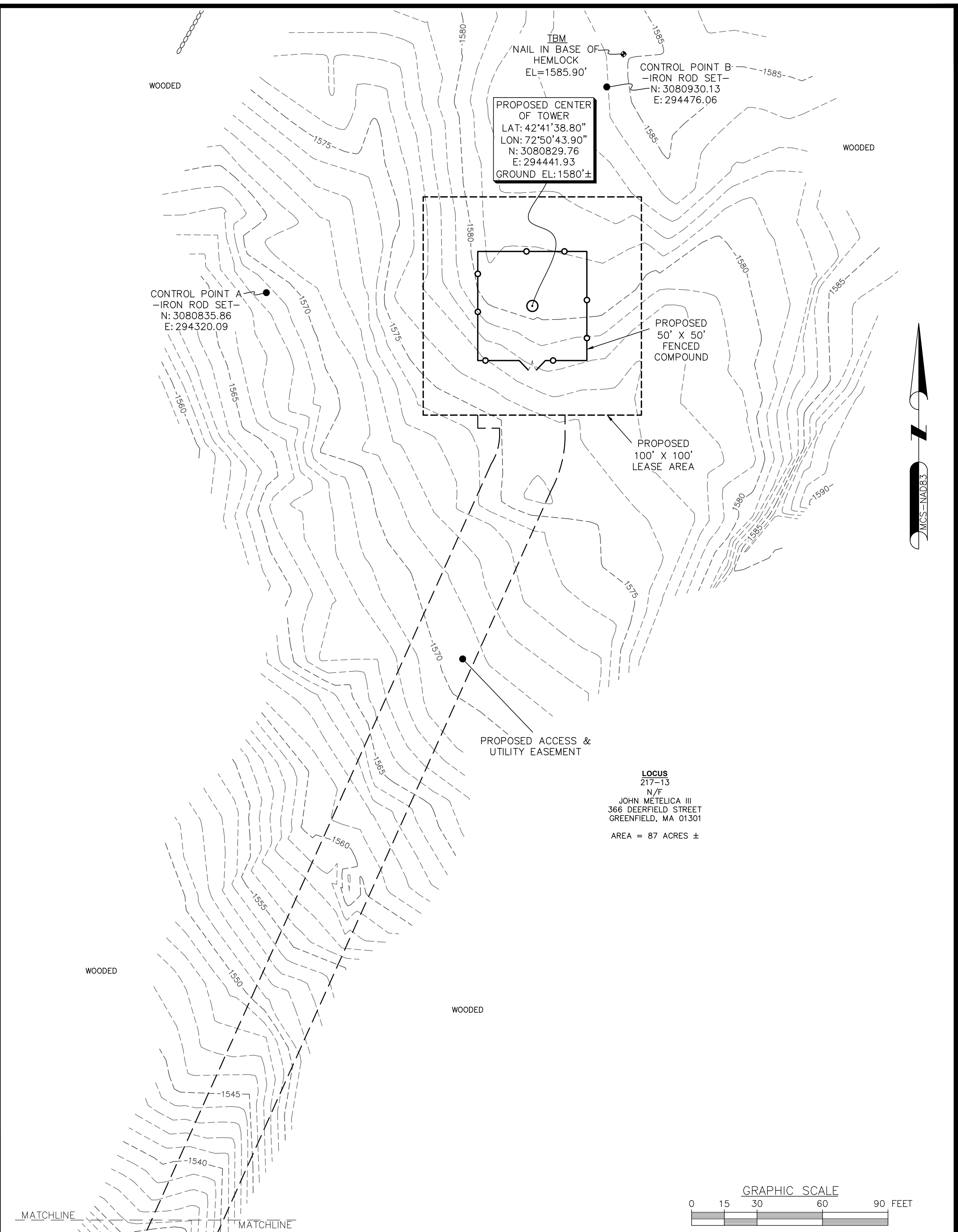
LEGEND

-  LOCUS PROPERTY LINE
-  ABUTTERS PROPERTY LINE (±)
-  STONEWALL
-  CONTOUR LINE
-  BURIED DRAIN LINE
-  OVERHEAD WIRES
-  TREELINE
-  TOWER CONTROL POINT
-  UTILITY POLE
-  GUY WIRE ANCHOR
-  PIPE INLET/OUTLET



217-17
N/F
KEVIN MALONEY
& BARRY ADAMS
1372 N. RIVERSIDE DR.
PALM SPRINGS, CA
92264

LOCUS
217-13
N/F
JOHN METELICA III
366 DEERFIELD STREET
GREENFIELD, MA 01301
AREA = 87 ACRES ±



CONTROL POINT A
-IRON ROD SET-
N: 3080835.86
E: 294320.09

PROPOSED CENTER OF TOWER
LAT: 42°41'38.80"
LON: 72°50'43.90"
N: 3080829.76
E: 294441.93
GROUND EL: 1580'±

CONTROL POINT B
-IRON ROD SET-
N: 3080930.13
E: 294476.06

PROPOSED 50' X 50' FENCED COMPOUND

PROPOSED 100' X 100' LEASE AREA

PROPOSED ACCESS & UTILITY EASEMENT

LOCUS
217-13
N/F
JOHN METELICA III
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GREENFIELD, MA 01301
AREA = 87 ACRES ±




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750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 02379

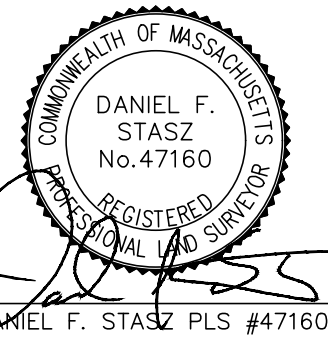
SITE NUMBER: MA4795
SITE NAME: HEATH KNOTT ROAD

43 KNOTT ROAD
HEATH, MA 01346
FRANKLIN COUNTY



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

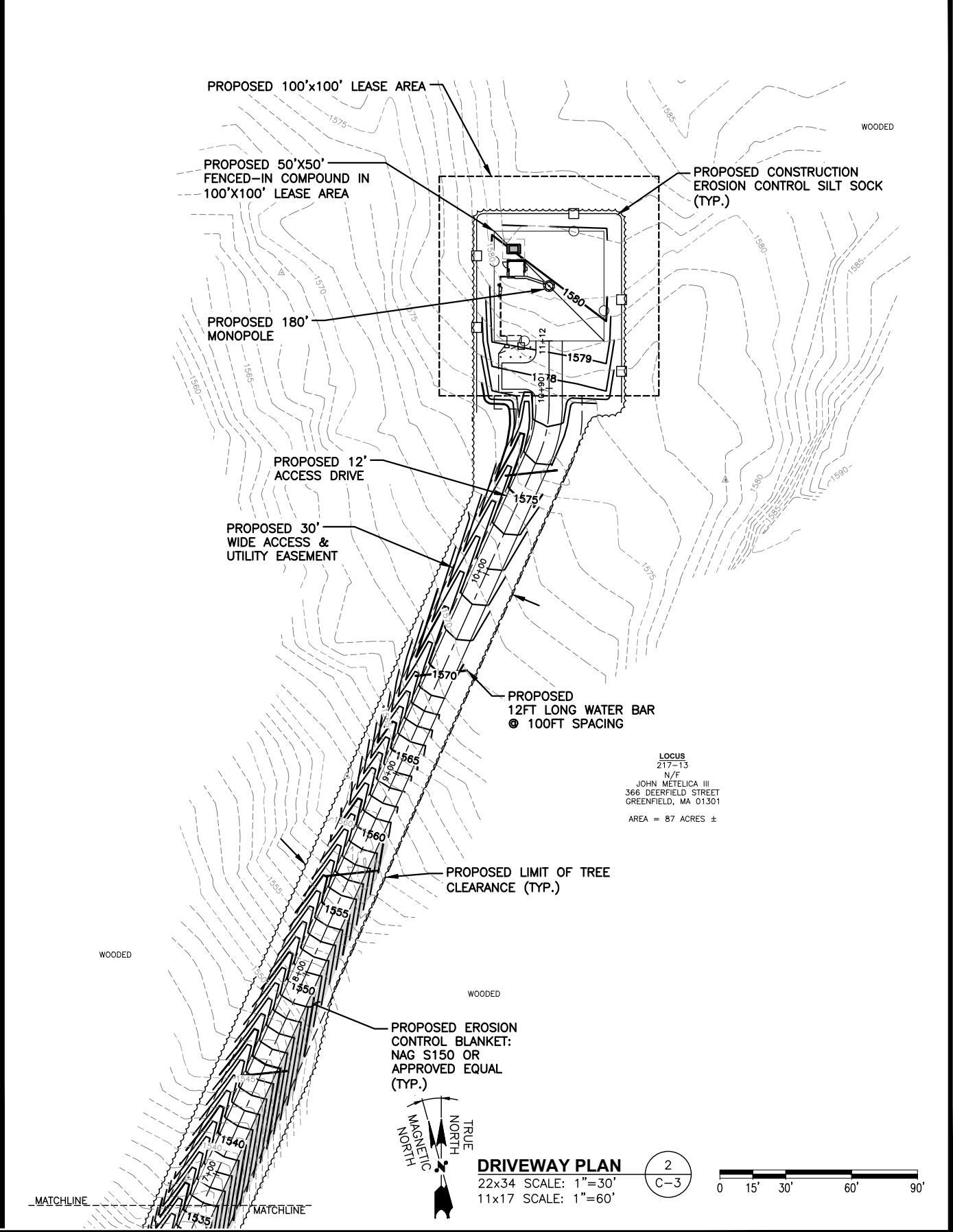
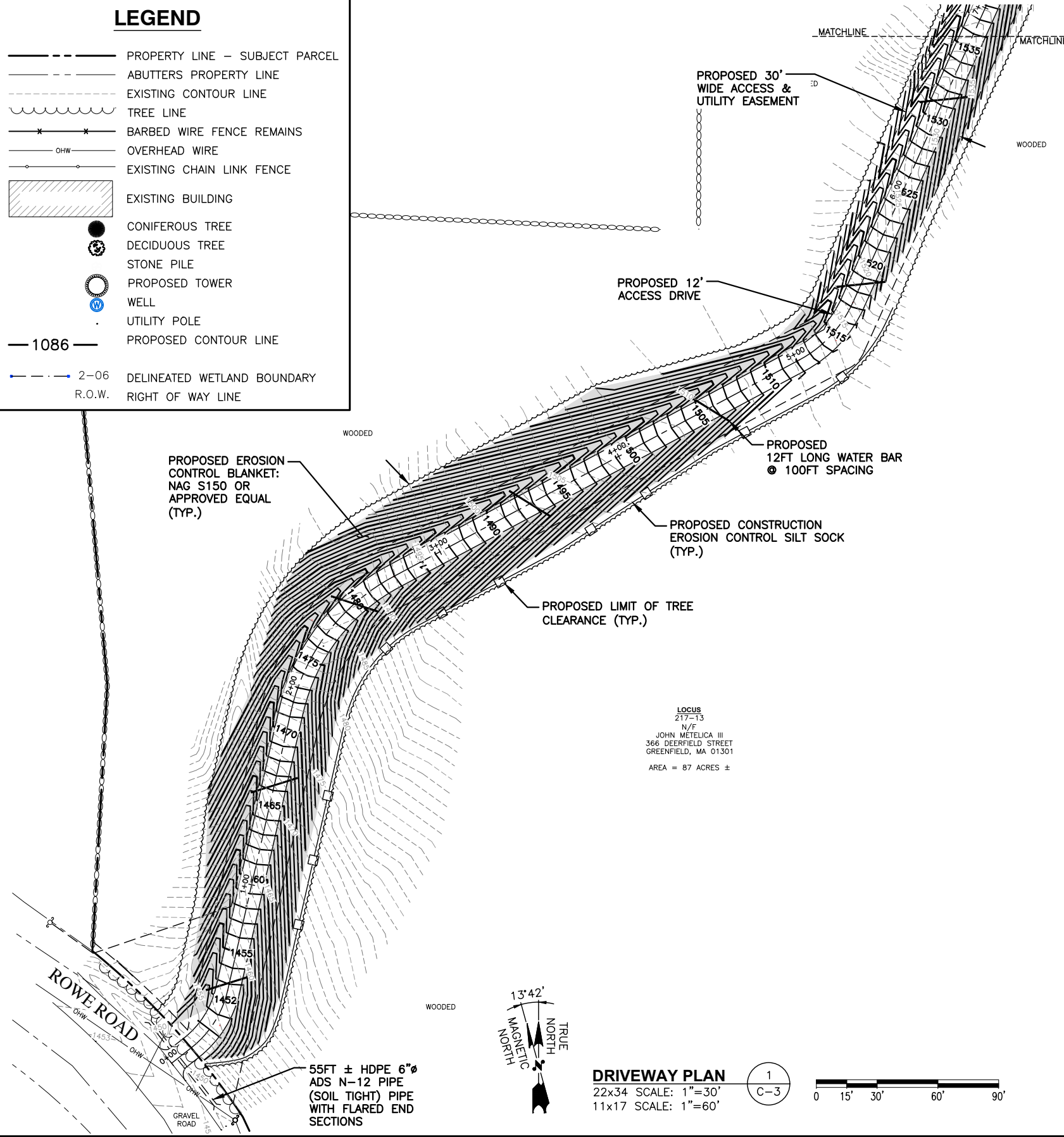
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: --	DRAWN BY: JDG		



AT&T		
EXISTING CONDITIONS (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	C-2	0

LEGEND

- PROPERTY LINE - SUBJECT PARCEL
- ABUTTERS PROPERTY LINE
- EXISTING CONTOUR LINE
- ~ ~ ~ TREE LINE
- BARBED WIRE FENCE REMAINS
- OHW OVERHEAD WIRE
- EXISTING CHAIN LINK FENCE
- EXISTING BUILDING
- CONIFEROUS TREE
- DECIDUOUS TREE
- STONE PILE
- PROPOSED TOWER
- WELL
- UTILITY POLE
- 1086 PROPOSED CONTOUR LINE
- 2-06 DELINEATED WETLAND BOUNDARY
- R.O.W. RIGHT OF WAY LINE



LOCUS
217-13
N/F
JOHN METELICA III
366 DEERFIELD STREET
GREENFIELD, MA 01301
AREA = 87 ACRES ±

LOCUS
217-13
N/F
JOHN METELICA III
366 DEERFIELD STREET
GREENFIELD, MA 01301
AREA = 87 ACRES ±

HGD HUDSON Design Group LLC
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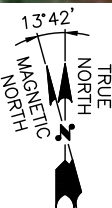
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at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T
DRIVEWAY PLAN (NSB)
SITE NUMBER: MA4795
DRAWING NUMBER: C-3
REV: 1



DENSE TREE GROWTH RADIUS
 22x34 SCALE: 1"=80'
 11x17 SCALE: 1"=160'



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 NORTH ANDOVER, MA 01845
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 FAX: (978) 336-5586



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43 KNOTT ROAD
 HEATH, MA 01346
 FRANKLIN COUNTY



550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

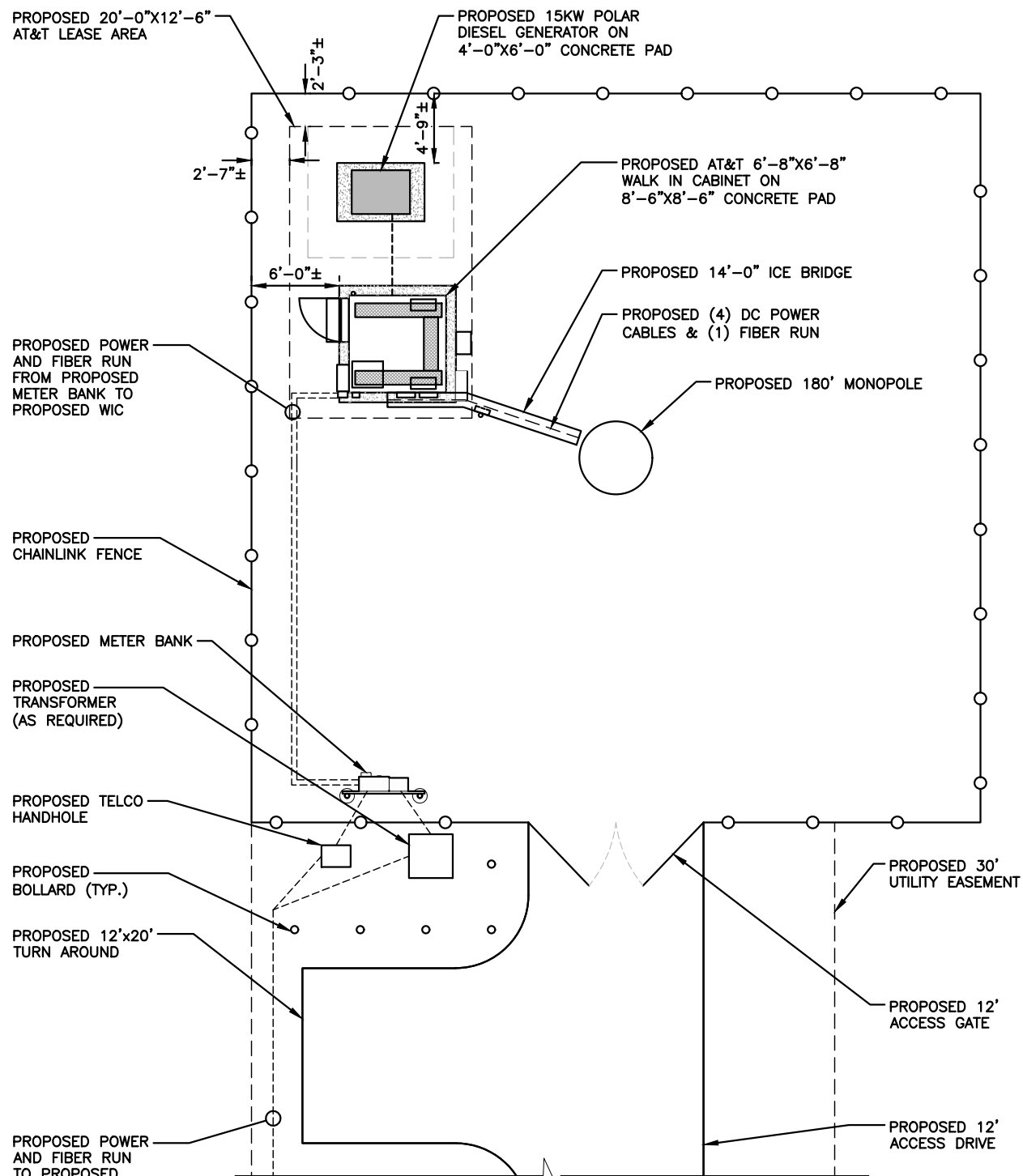
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0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH

SCALE: AS SHOWN DESIGNED BY: JC DRAWN BY: CC

AT&T

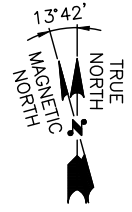
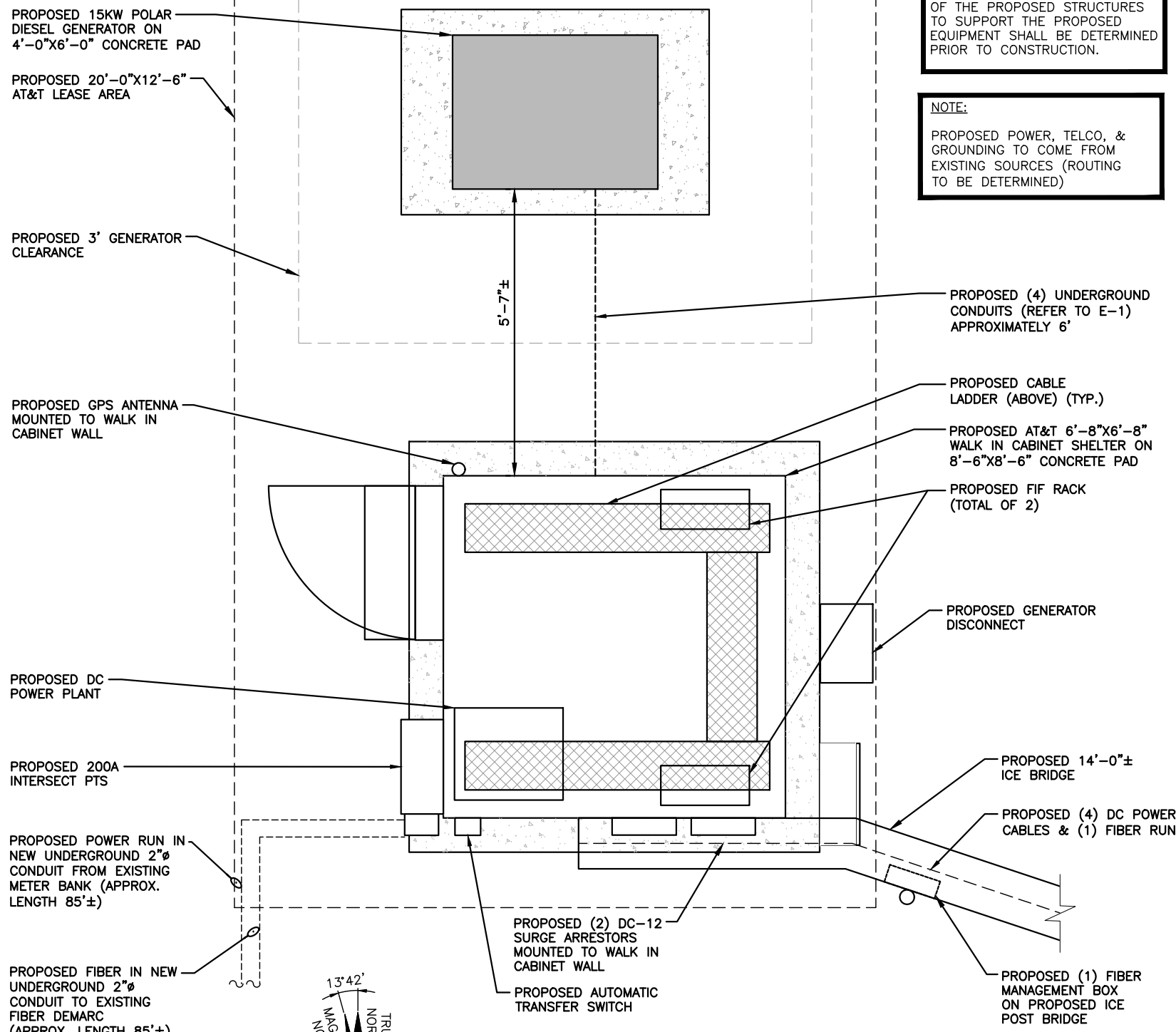
DENSE TREE GROWTH
 (NSB)

SITE NUMBER	DRAWING NUMBER	REV
MA4795	C-4	1



COMPOUND PLAN
 22x34 SCALE: 3/16"=1'-0"
 11x17 SCALE: 3/32"=1'-0"

1
A-1



EQUIPMENT PLAN
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"

2
A-1



NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE PROPOSED STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
PROPOSED POWER, TELCO, & GROUNDING TO COME FROM EXISTING SOURCES (ROUTING TO BE DETERMINED)

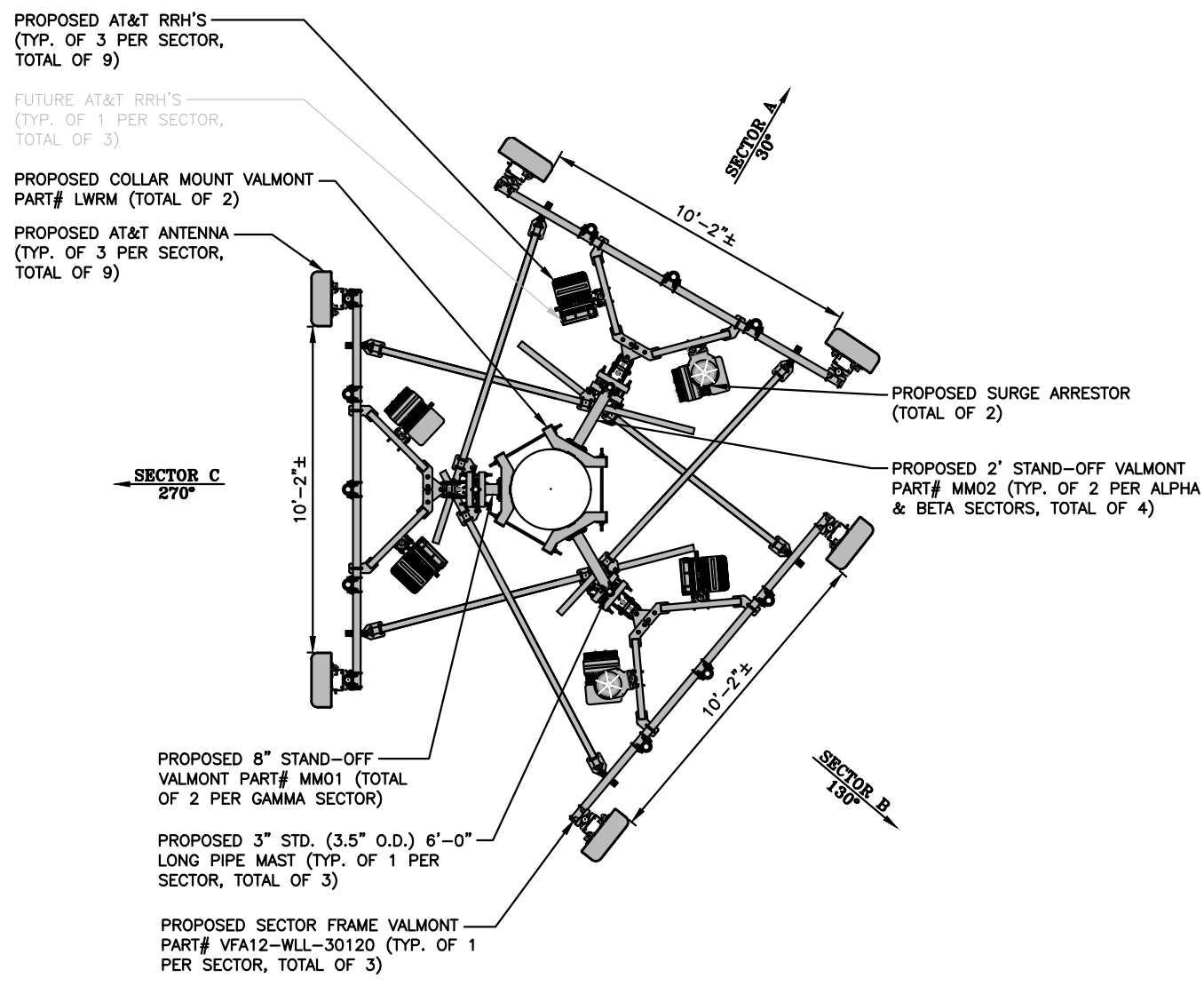
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0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T		
COMPOUND & EQUIPMENT PLANS (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	A-1	1

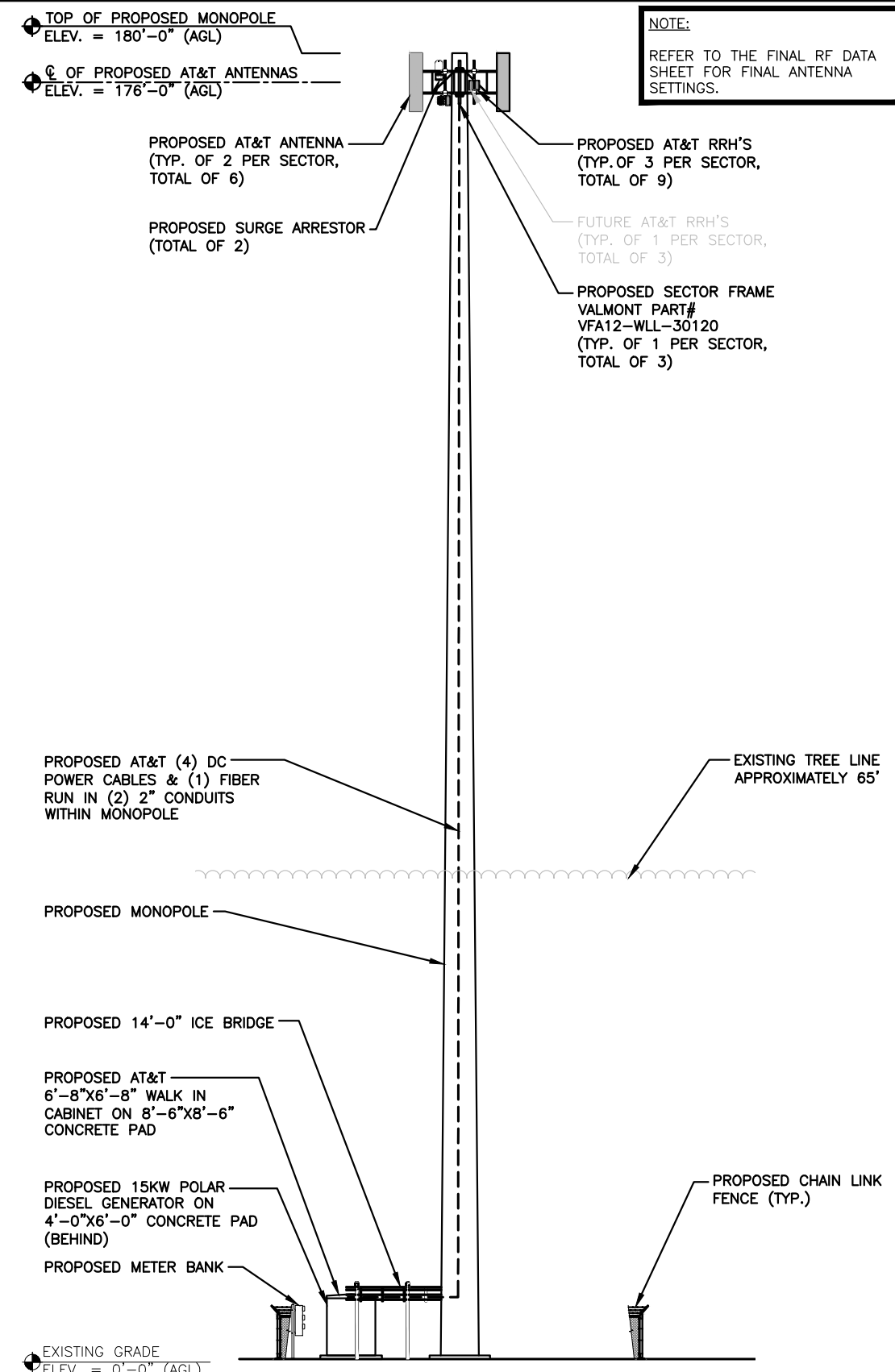
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE PROPOSED STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: DECEMBER 17, 2020



PROPOSED ANTENNA LAYOUT 1
SCALE: N.T.S. A-2



SOUTH ELEVATION 2
22x34 SCALE: 3/32"=1'-0" A-2
11x17 SCALE: 3/64"=1'-0"
0 5'-4" 10'-8" 21'-4" 32'-0"

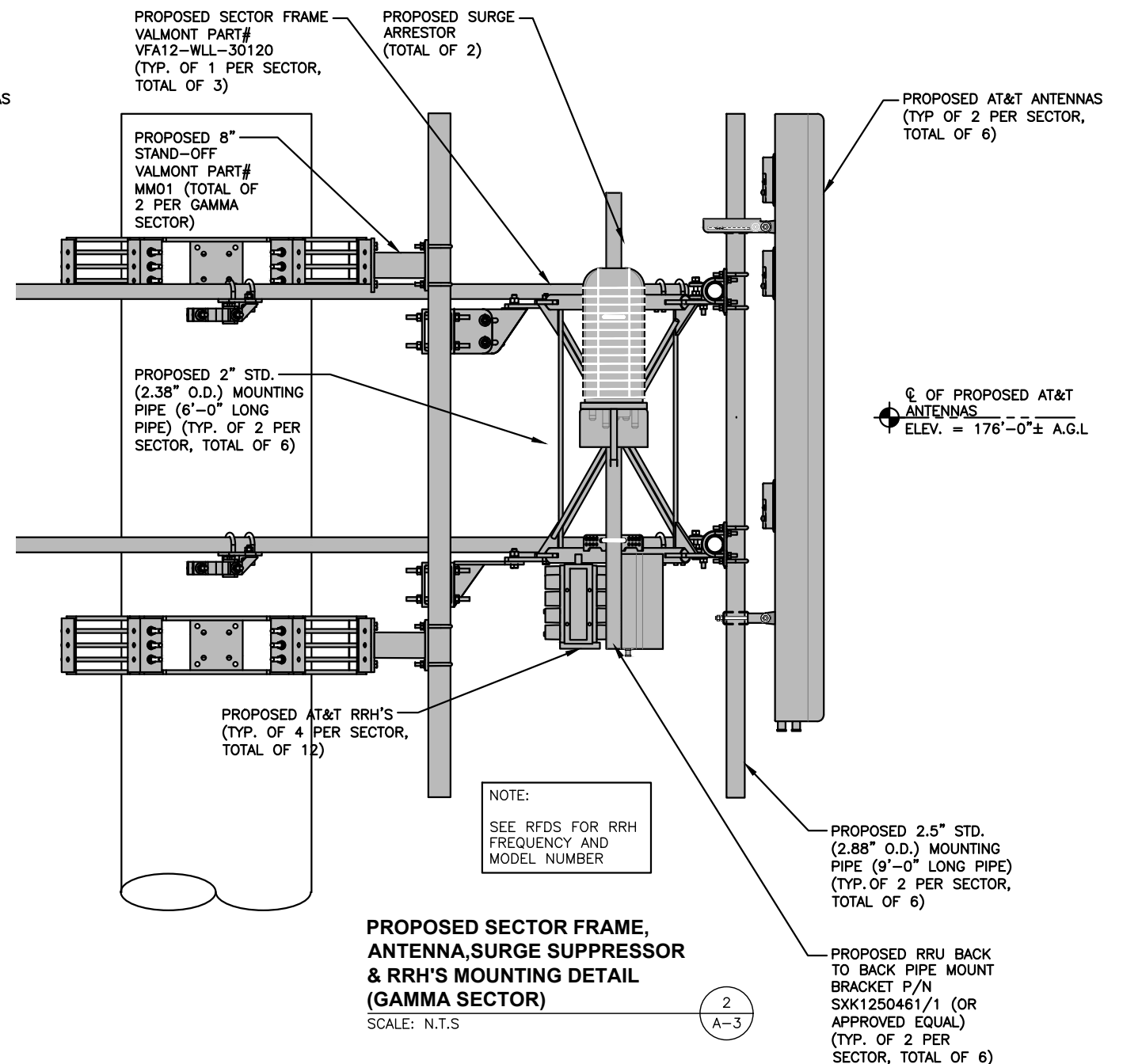
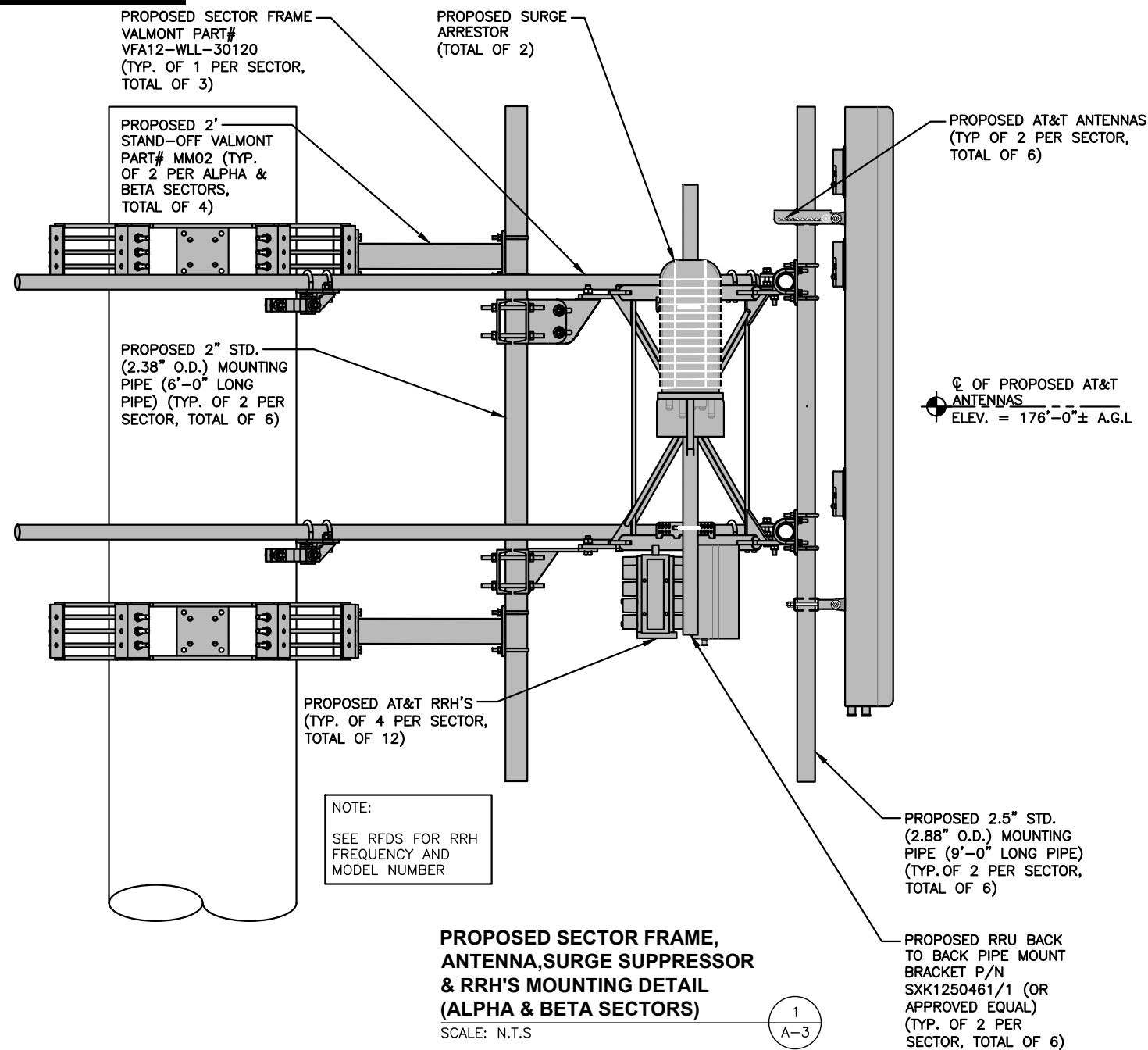
NO.	DATE	REVISIONS	BY	CHK	APP'D
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0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T		
ANTENNA LAYOUT & ELEVATIONS (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	A-2	1

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE PROPOSED STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:
HUDSON DESIGN GROUP, LLC.
DATED: DECEMBER 17, 2020



1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T		
DETAILS (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	A-3	1

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE PROPOSED STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

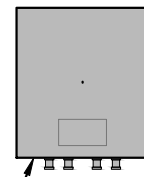
NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: DECEMBER 17, 2020

ANTENNA SCHEDULE											
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Ø HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
ALPHA	PROPOSED	LTE B14/AWS/WCS	TPA65R-BU8DA-K	96X21X7.8	176'-0"	30°	-	(P) (1) 4478 B14 (F) (1) 4415 B30	18.1X13.4X8.3 16.5X13.4X5.9	(P) (4) DC POWER CABLES (P) (1) FIBER RUN	(P) (1) DC9-48-60-24-8C-EV (P) (1) DC6-48-60-0-8F
	PROPOSED	LTE 700BC/850/PCS	DMP65R-BU8DA-K	96X20.7X7.7	176'-0"	30°	-	(P) (1) 4449 B5/B12 (P) (1) 8843 B2/B66A	14.9X13.2X10.4 14.9X13.2X10.9		
BETA	PROPOSED	LTE B14/AWS/WCS	TPA65R-BU8DA-K	96X21X7.8	176'-0"	130°	-	(P) (1) 4478 B14 (F) (1) 4415 B30	18.1X13.4X8.3 16.5X13.4X5.9		
	PROPOSED	LTE 700BC/850/PCS	DMP65R-BU8DA-K	96X20.7X7.7	176'-0"	130°	-	(P) (1) 4449 B5/B12 (P) (1) 8843 B2/B66A	14.9X13.2X10.4 14.9X13.2X10.9		
GAMMA	PROPOSED	LTE B14/AWS/WCS	TPA65R-BU8DA-K	96X21X7.8	176'-0"	270°	-	(P) (1) 4478 B14 (F) (1) 4415 B30	18.1X13.4X8.3 16.5X13.4X5.9		
	PROPOSED	LTE 700BC/850/PCS	DMP65R-BU8DA-K	96X20.7X7.7	176'-0"	270°	-	(P) (1) 4449 B5/B12 (P) (1) 8843 B2/B66A	14.9X13.2X10.4 14.9X13.2X10.9		

FINAL ANTENNA SCHEDULE 1
SCALE: N.T.S. A-4

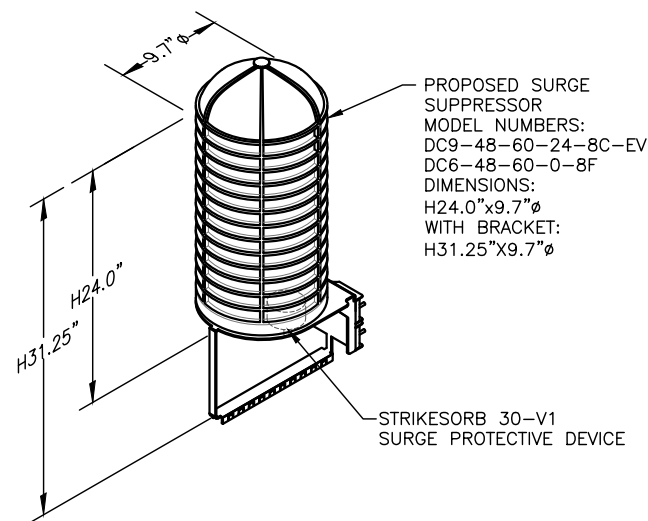
NOTE:
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER



PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

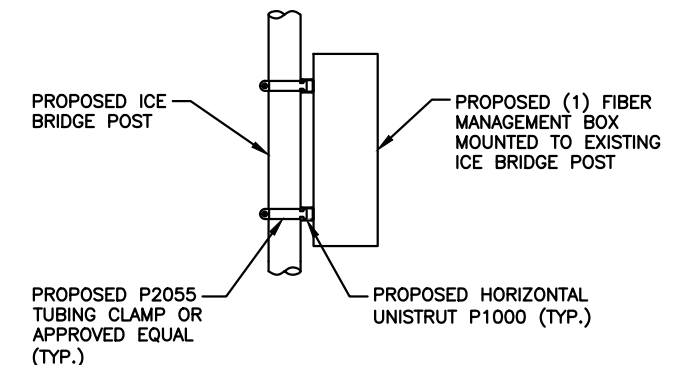
PROPOSED RRUS DETAIL 2
SCALE: N.T.S. A-4



PROPOSED SURGE SUPPRESSOR
MODEL NUMBERS:
DC9-48-60-24-8C-EV
DC6-48-60-0-8F
DIMENSIONS:
H24.0"x9.7"Ø
WITH BRACKET:
H31.25"x9.7"Ø

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL 3
SCALE: N.T.S. A-4

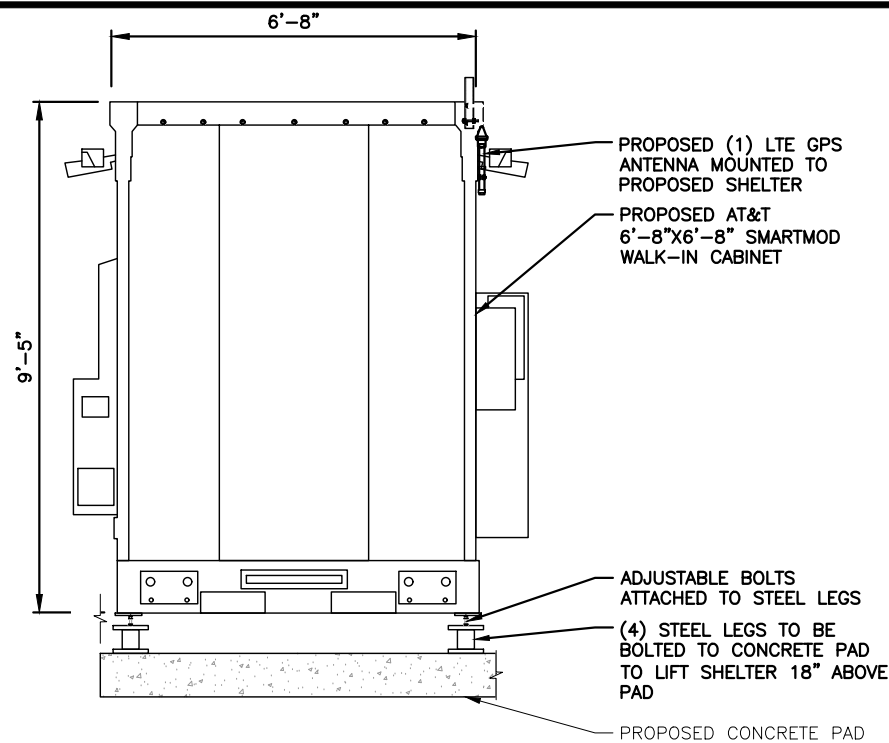
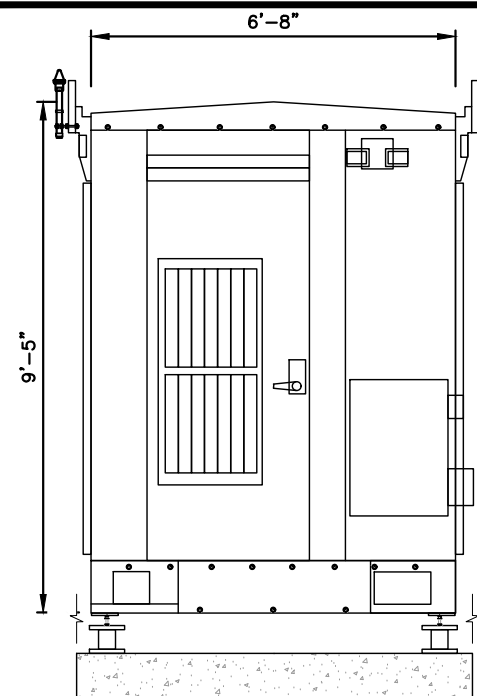


PROPOSED FIBER MANAGEMENT BOX MOUNTING DETAIL 4
SCALE: N.T.S. A-4

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH

SCALE: AS SHOWN DESIGNED BY: JC DRAWN BY: CC

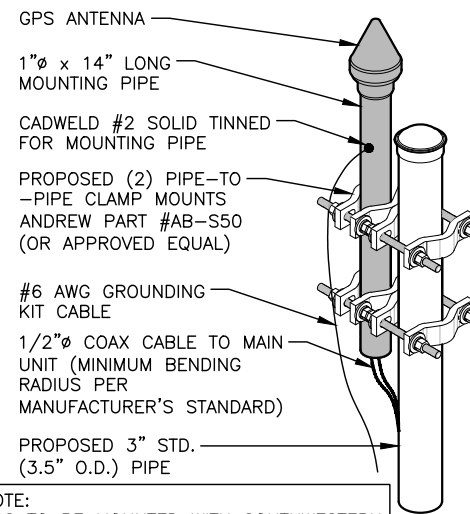
AT&T		
DETAILS (NSB)		
SITE NUMBER	DRAWING NUMBER	REV
MA4795	A-4	1



NOTE:
SHELTER SHALL BE MOUNTED PER
MANUFACTURER'S SPECIFICATIONS.

TYPICAL SHELTER DETAIL
SCALE: N.T.S

1
A-5



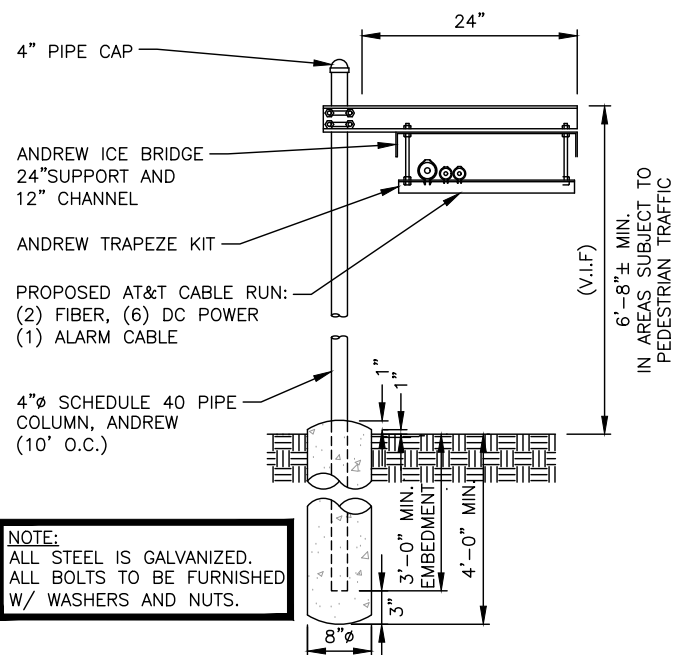
NOTE:
GPS TO BE MOUNTED WITH SOUTHWESTERN
EXPOSURE. (MIN. OF 10' AWAY FROM
EXISTING GPS ANTENNA)

GPS MOUNTING DETAIL
N.T.S

2
A-5

FOUNDATION NOTES & CONCRETE SPECIFICATIONS:

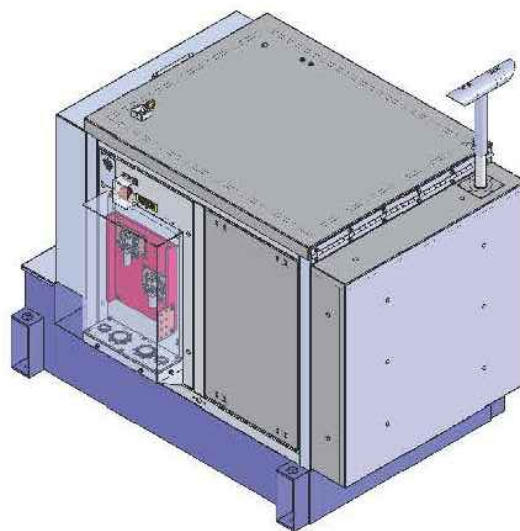
- FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDGE AND ALL OTHER EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE.
- UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.
- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c)=4000 psi. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT TO BE 6% (PLUS OR MINUS 2%)
- REINFORCING BAR TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.
- COORDINATE WITH MANUFACTURER OF PREFABRICATED SHELTER FOR LOCATION OF ATTACHMENTS TO BASE SLAB.
- ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS.
- ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.



NOTE:
ALL STEEL IS GALVANIZED.
ALL BOLTS TO BE FURNISHED
W/ WASHERS AND NUTS.

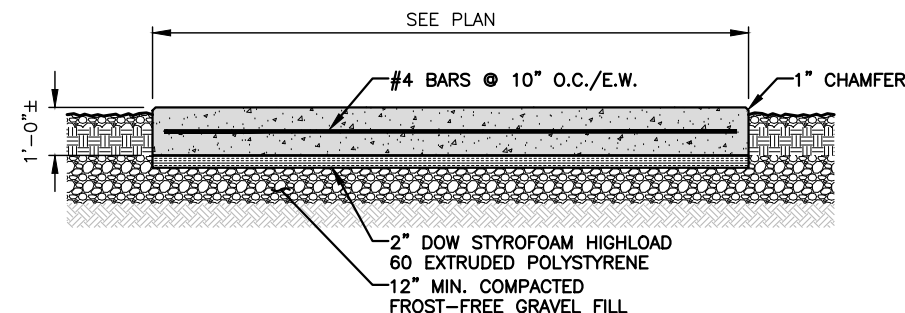
ICE BRIDGE DETAIL
SCALE: N.T.S

3
A-5



PROPOSED 15kW DIESEL POLAR GENERATOR
SCALE: N.T.S

4
A-5



CONCRETE PAD DETAIL
22x34 SCALE: N.T.S

5
A-5



45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



750 WEST CENTER STREET., SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: MA4795
SITE NAME: HEATH KNOTT ROAD

43 KNOTT ROAD
HEATH, MA 01346
FRANKLIN COUNTY



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

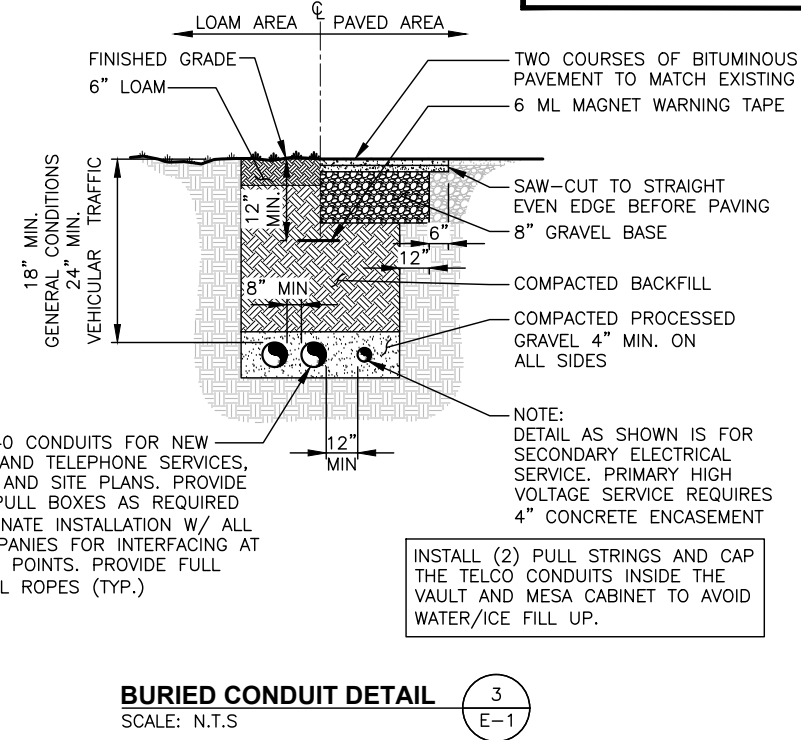
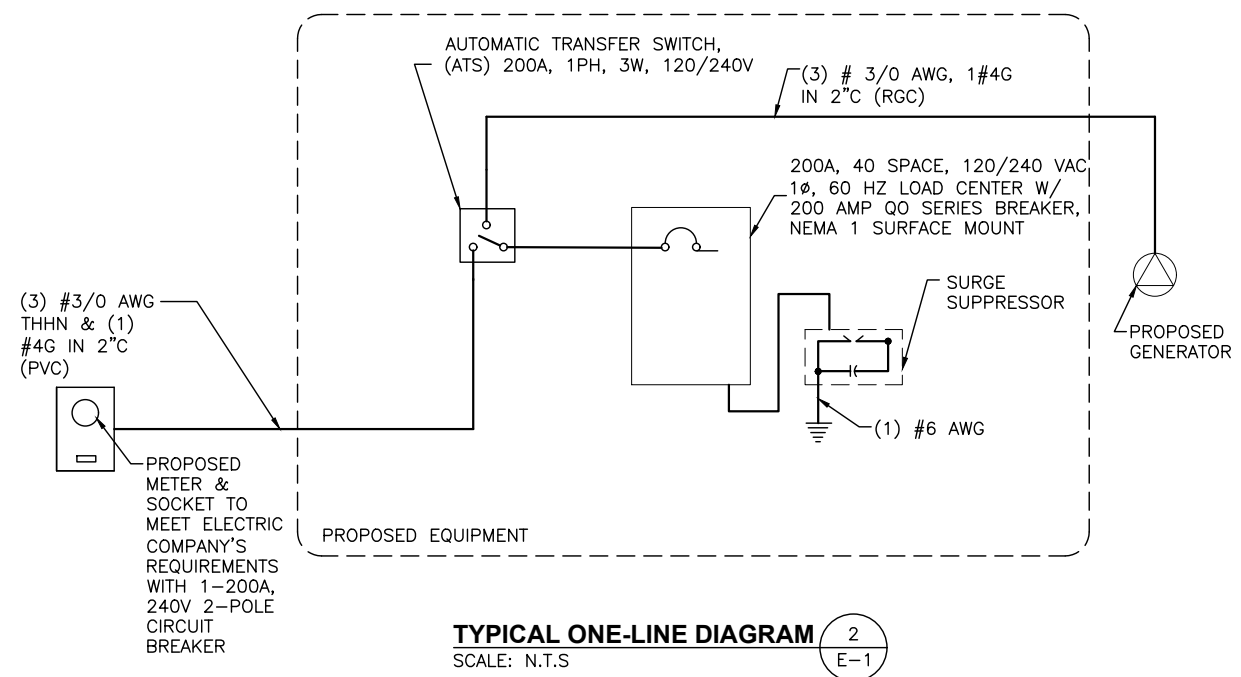
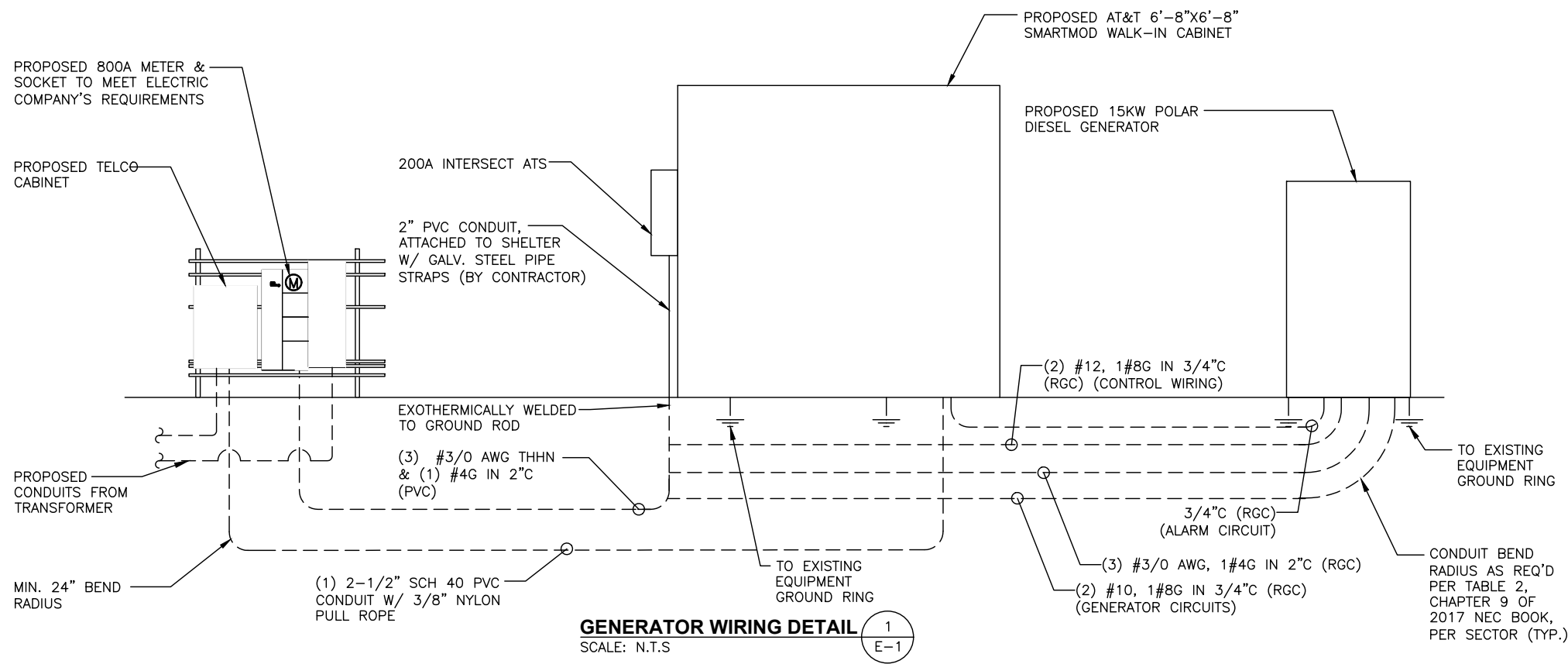
NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

AT&T

DETAILS
(NSB)

SITE NUMBER	DRAWING NUMBER	REV
MA4795	A-5	1

NOTES:
 1. GROUND [ATS] TO EXISTING GROUND BAR
 2. GROUND GENERATOR TO EXISTING GROUND RING WITH (2) #2 AWG GROUND WIRES.

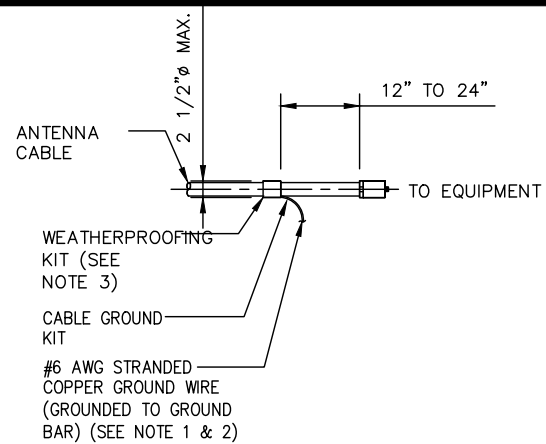


ELECTRICAL LEGEND & ABBREVIATIONS

	NEW PANEL BOARD, SURFACE MOUNTED
	EXISTING PANEL BOARD, SURFACE MOUNTED
	DRY TYPE TRANSFORMER
	METER
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
	FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
	TRANSIENT VOLTAGE SURGE SUPPRESSOR WITH BUILT-IN FUSES, SURFACE MOUNTED
	DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
	JUNCTION BOX, SURFACE MOUNTED 18" A.F.F.
	EXPOSED WIRING
	HOME RUNS, MINIMUM 2#10 + 1#8G IN 3/4" CONDUIT U.O.N.
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
GFI	GROUND FAULT INTERRUPTER
A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
PVC	POLYVINYL CHLORIDE
HZ	HERTZ
PH, Ø	PHASE
W	WATTS
NEC	NATIONAL ELECTRIC CODE
PPC	POWER PROTECTION CABINET
UL	UNDERWRITER LABORATORIES
PTS	POWER TRANSFER SWITCH
QO	QUICK OPEN
GRC	GALVANIZED RIGID CONDUIT
G	GROUND
	GROUND
	MASTER GROUND BAR
	EQUIPMENT GROUND BAR
	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	COAXIAL CABLE
	5/8"x8" COPPER CLAD STAINLESS STEEL GROUND ROD
	POWER FACTOR

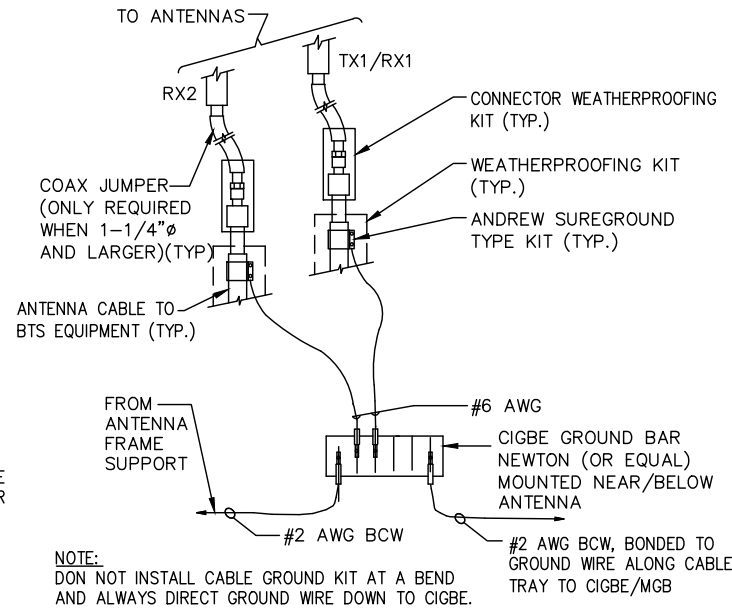
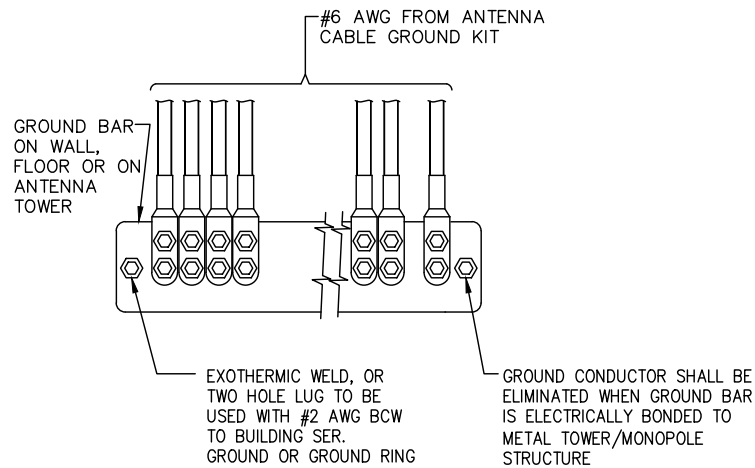
- ### ELECTRICAL AND GROUNDING NOTES
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
 - ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
 - THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
 - GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
 - 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.
 - BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
 - ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
 - 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.
 - 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 IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
 - 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.
 - ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
 - PPC SUPPLIED BY PROJECT OWNER.
 - GROUNDING SHALL COMPLY WITH NEC ART. 250.
 - GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
 - 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.
 - ALL GROUND CONNECTIONS TO BE BURNDY HYGRUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
 - 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.
 - CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
 - APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
 - BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
 - BOND ANTENNA EGB'S AND MGB TO GROUND RING.
 - CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
 - CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.
 - ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL, MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50.

1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
0	01/18/21	ISSUED FOR REVIEW	CC	JC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		



NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.



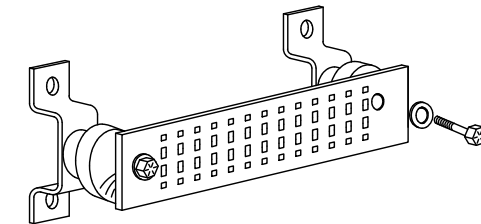
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)



CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

SCALE: N.T.S.

1
G-1

INSTALLATION OF GROUND WIRE TO GROUND BAR

SCALE: N.T.S.

2
G-1

INSTALLATION OF GROUND WIRE TO GROUNDING BAR TOWER

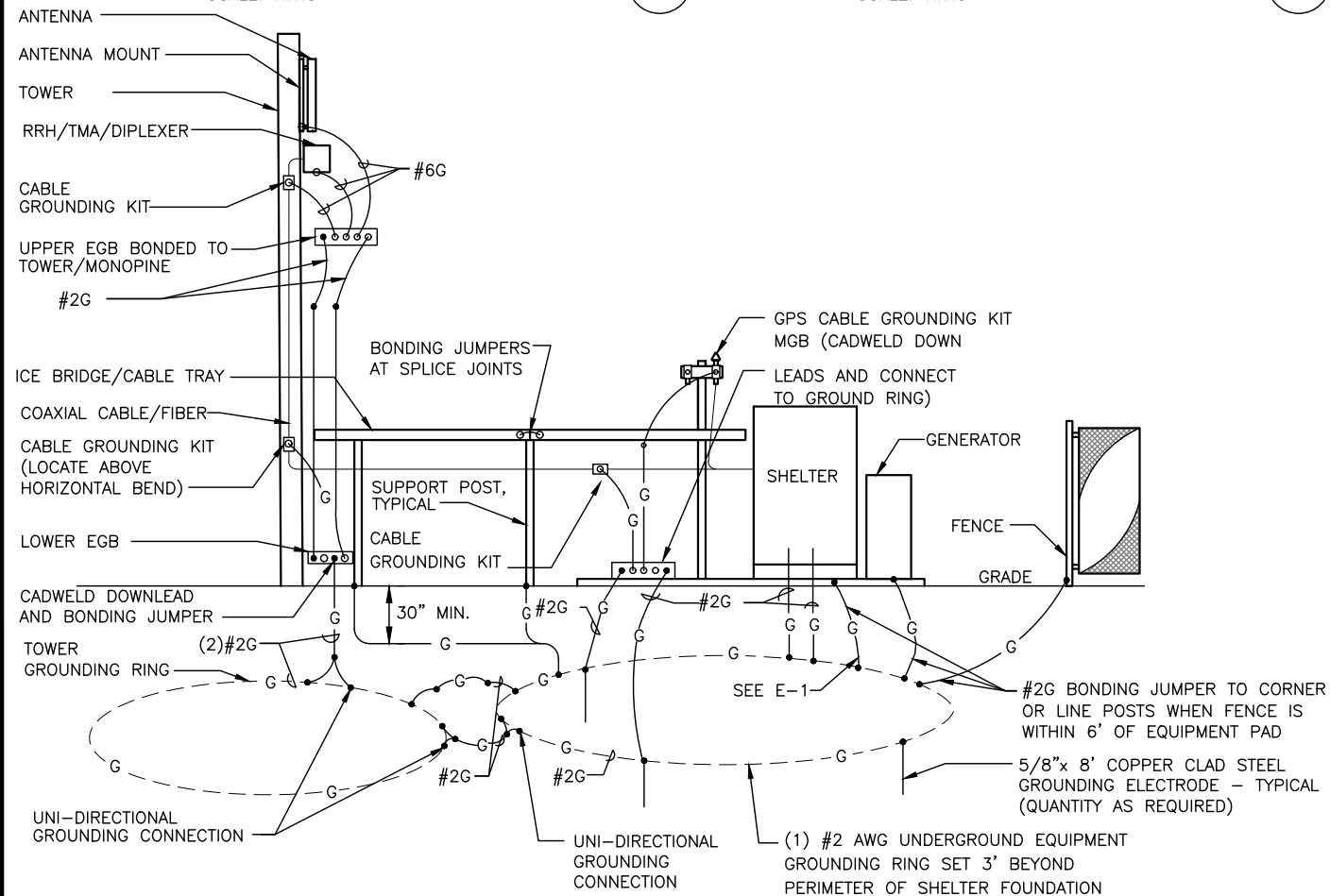
SCALE: N.T.S.

3
G-1

GROUND BAR - DETAIL

SCALE: N.T.S.

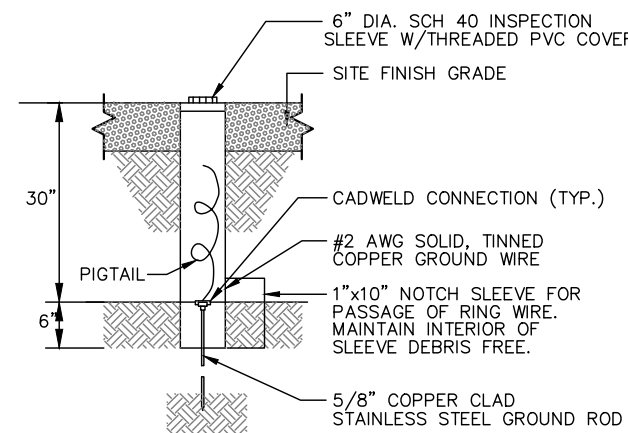
4
G-1



GROUNDING ONE-LINE DIAGRAM

SCALE: N.T.S.

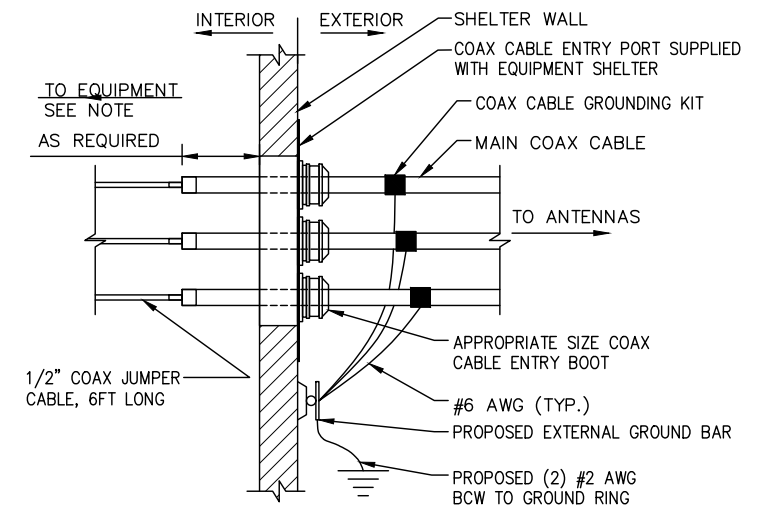
5
G-1



GROUND ROD TEST WELL DETAIL

SCALE: N.T.S.

6
G-1



NOTE:
EXTEND MAIN COAXIAL CABLE AS CLOSE AS POSSIBLE TO BTS EQUIPMENT. MAX LENGTH OF BTS JUMPER IS 6 FT.

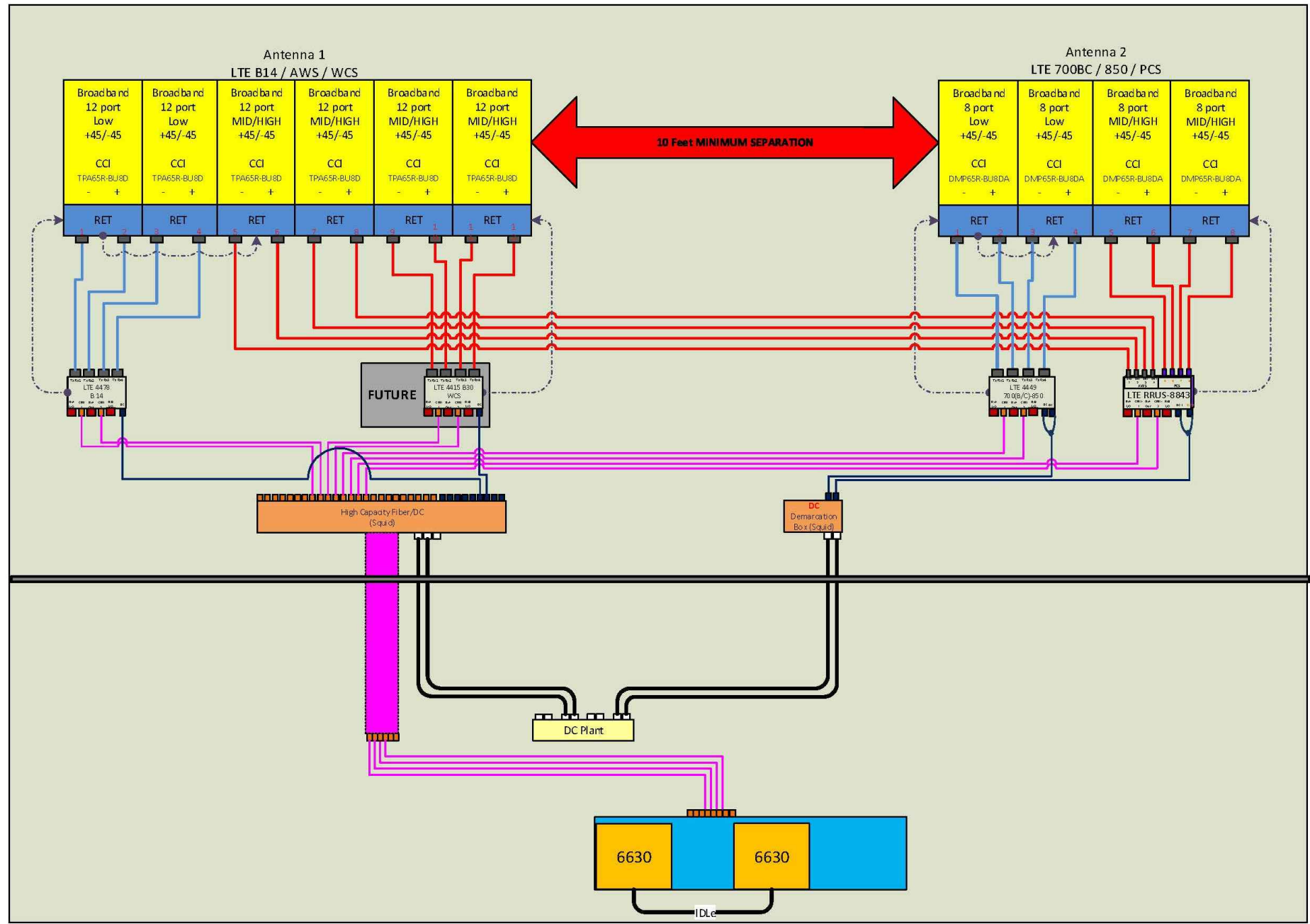
INSTALLATION OF GROUND WIRE TO GROUND BAR

SCALE: N.T.S.

7
G-1

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	02/12/21	ISSUED FOR REVIEW	CC	JC	DPH
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SCALE: AS SHOWN		DESIGNED BY: JC	DRAWN BY: CC		

SITE NUMBER	DRAWING NUMBER	REV
MA4795	G-1	1



RF PLUMBING DIAGRAM 1
 SCALE: N.T.S. RF-1

NOTE:
 1. CONTRACTOR TO CONFIRM ALL PARTS.
 2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.